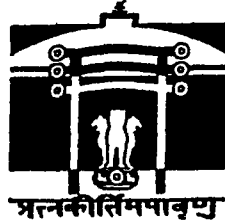


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That close relationship must have existed between Coorandel and the Far East during the earlier centuries of the Christian era is pretty certain. The part played by Tāmrakṣi or Tāmlūk as an important port in those days for the sea-borne trade between India and the Archipelago will similarly associate Bengal with the Far East. These Śailēndras were staunch Buddhists to whom all the magnificent Buddhist buildings which we find in Central Java, like the one which probably contained the Tārā image mentioned in the Chandī-Kalāsan inscriptions spoken of above, owe their origin. Now, the question is whether they were emigrants from India or were indigenous people of Java-Sumatra, who embraced Buddhism in preference to Hinduism. The Yūpa inscriptions of King Mūlavarmman from Koetei or East Borneo or other early epigraphical records, which have been brought to light from Champa, Cambodia or Indo-China by eminent French or Dutch savants, would show that India has had a considerable share in the colonization of the Far East. The Yūpa inscriptions, as Dr. Vogel has already pointed out in his very learned brochure,¹ inform us that the erection of the sacrificial posts on which they are engraved was due to the twice-born priests or Brahmans, who had carried their ancient civilization and religion to Borneo, as well as, to Java and Sumatra and that on these priests King Mūlavarmman conferred rich grants of gold and land; a fact showing that as early as about 400 A. D. high caste Brahmans or *Vīpias* migrated to the Far East and settled there. Fa-Hsien found Brahmans settled in Ye-poti (Java or perhaps Sumatra). Sumatran civilization and culture seem to be of Hindu origin. Sumatra was probably the first of all the Archipelago to receive emigrants from India.² The names like Coliya, Pandiya, Mēliyalā, by which some of the tribes that have settled in West Sumatra are known, and the fact that emigrants from India are designated by the term Kēling or Kling, which is clearly derived from Kalīnga, would show that Southern India, including the Telugu country, had ample share in the colonization of the island or the Far East, as Dr. Vogel has already stated in his paper.³ The matrimonial alliance mentioned in our Nālandā charter, which the father of Bālaputrāditya had with a mighty king of the Lunar race, would, perhaps, lead us to trace the origin of the Śailēndras of Java-Sumatra to India. If a conjecture can be hazarded, these Śailēndras were emigrants from Kalīnga or say Southern India. I am not aware if the term Śailēndra was ever applied to any of the dynasties which ruled in the south⁴ or any other part of India. It will be going too far to connect it with the Sailavamśa⁵ or the Śailōdbhavaśa⁶ or other dynasties like the Śilāhāra having somewhat similar appellations. It may be pointed out however, that the name of Malayamān, which is an exact Tamil rendering of the Sanskrit word *Śailēndra*, meaning 'the lord of mountain or mountains', is to be met with in some of the inscriptions discovered in the South Arcot and Salem districts of the Madras Presidency where it is applied to some chieftains, who flourished about the 10th century A. D. Tamil literature, however, knows of the Malaimāns, who might be attributed to the 7th and 8th centuries A. D. These chieftains were called Mīlādudaiyār or the rulers of Mīlādu, a contracted form of Malayā-nādu or hill-country, and they claimed

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connection with the Chēdi family¹ It is also noteworthy that sometimes their names end in *varman*² From the records noticed above we find that the names of the Śailēndras of Java-Sumatra or Śrīvijaya ended in *varman*³ The name of the Śailēndra ruler given in the Nālandā plate on the other hand ends in *dēva* This looks rather strange The name Bālaputra itself, signifying 'young son' is curious This ending of *dēva*, however, occurs only in the prose and formal portion but not in the other or metrical portion, which describes and eulogises these Śailēndras This would go to suggest that the suffix was left out because the metre did not require it, or possibly because it did not form an integral part of the name and would have been replaced by *varman*, a general suffix or surname of the ruling caste or the Kshatriyas The name, however, is pure Sanskrit as is the name of Tāiā the mother of Bālaputradēva, or Dharmasētu, her father, and would point to emigration from India Had the names of the two ancestors of Bālaputradēva, that is to say, his father and grandfather, been given, we could be definite in the matter, for, if these names were un-Indian, as in the case of Kundīnga, his son Asvavarman and grandson Mūlavarman of Borneo, we could conclude that the Sanskrit names must have been taken after conversion to Hinduism, or rather Buddhism But in none of the names of the Śailēndras do we find any foreign sound at all, suggesting that they were the natives of the islands originally and came into the fold of Buddhism afterwards.

The names of the Pāla kings and other personages mentioned in the introductory portion of this grant have been dealt with by Kielhorn or other scholars in connection with the contents of the Mungīr copper-plate inscription So I need not notice them here But, besides them and the Śailēndras, our record speaks of two more persons and they require special mention One of them is Dharmasētu whom the inscription describes as a scion of the Lunar race and the father of Bālaputradēva's mother, namely, Tāiā To our regret it does not supply any other particular regarding him and it is hardly possible to identify him or to say

¹ Mr K V Sabrahmanya Ayyar, to whom I am indebted for this information, has kindly given me the following note on the Malayamāns —

"Ancient Tamil works mention the names of a number of Malayamān chiefs, who might be attributed to the 7th and 8th centuries A D Some of these are —(1) *Malayamān* Irumudikkāi, (2) *Malayamān* Śēṭṭiya-Ēnādi Trukannaṅṅ, (3) Malādar-Kōmēṅ Meyppornā-Nāyṅṅ and Naraśinga-Munaiyaraṅṅ of Tirumūṅappādi Their capital was Trukolur, the head quarters of a *taluk* in the South Arcot district and a railway-station in the Kāṭṭpādi-Viṅṅṅuram section of the South Indian Railway It is said to have been situated within the Chēdi country

The Malayamān chiefs appear to have been rendering help to one or the other of the principal powers of the South, viz, the Chōla, Chōla, Pāndya and the Pallava. Naraśingamunaiyaraṅṅ was a contemporary of the Śaiva saint Sundara-Vūrti-Nayanār of the 8th century A D he is counted as one of the canonised 63 Śaiva devotees of the Tamil country In the account given of No 3, in the Tamil hagiology, *Peryapūṅṅam* figures a Tattan, whose name may be regarded as a variant of Datta. Besides, one of the poems of the Tamil anthology, *Pattupṅṅṅu* was composed in honour of a certain "Ārya King Piragadattan (Bhṛṅga-Datta)." It may be noted that the Malayamān chiefs belonged to the Bhṛṅga race as is evidenced by their inscriptions Epigraphical reference to Naraśingamunaiyaraṅṅ is found in the Tanjore inscriptions of the Chōla King Rājārāja I (A D. 985 1013) In an early stone record of Kājakēśarivarman found at Tiruṅṅēsvaram near Kumbackonam, of about the 9th century A D mention is made of Milādudaiyar-paṅṅ

It is interesting to note that the later members of the Malayamān family, who figure in numerous stone inscriptions, call themselves invariably Chēdiyarāṅṅas (Chēdirāṅṅas) and they are mostly subordinates of the Chōlas of the 10th to the 13th centuries A D The appellation *Chēdiyarāṅṅan*, assumed by almost all the chiefs, if it is not a mere accident, as it could not be, must indicate that they were the rulers of the Chēdi country This fact taken with the names like Datta would make one infer a colonisation at some remote past of a branch of the line of Chēdi Kings, in the South Arcot district, where we find them."

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³ Dr. Vogel in the aforesaid publication (page 194) remarks — "Considering that among the dynasties of India proper there is a great variety of such royal surnames, as *āditya*, *gupta*, *chandṛ*, *dēvapala*, *rāta*, *vardhana*, *śiṅha*, and *sēna*, the almost universal employment of names in *varman* in the Frx Fuet is certainly very remarkable" The instance of our Bālaputradēva will furnish an exception

That close relationship must have existed between Coromandel and the Far East during the earlier centuries of the Christian era is pretty certain. The part played by Tāmrāḥṭṭi or Tāmlūk as an important port in those days for the sea-borne trade between India and the Archipelago will similarly associate Bengal with the Far East. These Śailēndras were staunch Buddhists to whom all the magnificent Buddhist buildings which we find in Central Java, like the one which probably contained the Tārā image mentioned in the Chandī-Kalāsan inscriptions spoken of above, owe their origin. Now, the question is whether they were emigrants from India or were indigenous people of Java-Sumatra, who embraced Buddhism in preference to Hinduism. The Yūpa inscriptions of King Mūlavarmman from Koetei or East Borneo or other early epigraphical records, which have been brought to light from Champa, Cambodia or Indo-China by eminent French or Dutch savants, would show that India has had a considerable share in the colonization of the Far East. The Yūpa inscriptions, as Dr. Vogel has already pointed out in his very learned brochure,¹ inform us that the erection of the sacrificial posts on which they are engraved was due to the twice-born priests or Brahmans, who had carried their ancient civilization and religion to Borneo, as well as, to Java and Sumatra and that on these priests King Mūlavarmman conferred rich grants of gold and land; a fact showing that as early as about 400 A. D. high caste Brahmans or *Vīpīas* migrated to the Far East and settled there. Fa-Hian found Brahmans settled in Ye-poti (Java or perhaps Sumatra). Sumatran civilization and culture seem to be of Hindu origin. Sumatra was probably the first of all the Archipelago to receive emigrants from India.² The names like Coliya, Pandiṃya, Mēliṃyale, by which some of the tribes that have settled in West Sumatra are known, and the fact that emigrants from India are designated by the term Kēḷing or Kḷing, which is clearly derived from Kalīngā, would show that Southern India, including the Telugu country, had ample share in the colonization of the island or the Far East, as Dr. Vogel has already stated in his paper.³ The matrimonial alliance mentioned in our Nālandā charter, which the father of Bālaputrādēva had with a mighty king of the Lunar race, would, perhaps, lead us to trace the origin of the Śailēndras of Java-Sumatra to India. If a conjecture can be hazarded, these Śailēndras were emigrants from Kalīngā or say Southern India. I am not aware if the term Śailēndra was ever applied to any of the dynasties which ruled in the south⁴ or any other part of India. It will be going too far to connect it with the Śailavāmśa⁵ or the Śailōdbhavas⁶ or other dynasties like the Śilāhāra having somewhat similar appellations. It may be pointed out however, that the name of Malayamān, which is an exact Tamil rendering of the Sanskrit word *Śailēndra*, meaning 'the lord of mountain or mountains', is to be met with in some of the inscriptions discovered in the South Arcot and Salem districts of the Madras Presidency where it is applied to some chieftains, who flourished about the 10th century A. D. Tamil literature, however, knows of the Malaimāns, who might be attributed to the 7th and 8th centuries A. D. These chieftains were called Milādudaiyār or the rulers of Milādu, a contracted form of Malayā-nādu or hill-country, and they claimed

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whether he was an Indian king or some ruler in the Far East. The name whether it is read as Dharma or Varma-*śetu* appears to be new. The other interesting name occurring in the document is that of Balavarmman the ruler of Vyāghratatī-mandala, who acted as *dātaka* on behalf of the Magadhan king. As to why he was selected or what special connection he had with the ruler of such a remote island as Sumatra or Java, and whether he had been there or known personally to that king our inscription makes no mention. Apparently, there was no direct political relationship between the two; for, we know from the Khalimpur¹ plate of Dharmapālādēva that the Vyāghratatī-mandala lay within the *bhukti* of Pundravardhana, which was under the sway of the Pāla king Dharmapāla and, evidently, of Dēvapālādēva after him. Pundravardhana is the same as Paundravardhana—Pundra and Paundra being synonymous—which is the modern Rājshāhi district of Bengal². The use of the word *adhipatī* would indicate that in this instance at least the term *mandala* connotes a larger area than *vishaya*, which in the majority of cases seems to include a *maṇḍala*³. During the reign of Dēvapālādēva, Vyāghratatī was governed by a distinct ruler called Balavarmman. The way in which he is praised in this epigraph, as the right arm of the Emperor, would show that he had a high rank even though he was one of the feudatories of Dēvapālādēva. As, however, our plate gives no genealogy or particulars about him his personality is very vague. A few homonyms⁴ rulers are known to have flourished about that time but they appear to be quite different personages and even their dates will not agree with that of this plate. It looks curious that though the charter mentions the *dātaka* of the King of Magadha yet it leaves the ambassador or ambassadors of the Javanese King unnamed altogether.

The vague manner in which the inscription describes the rulers of the Far East or Sumatra-Java and their relative king of the lunar race would show that its author did not know much of them. He knew of Bālaputrādēva and his mother Tārā. The latter he compared to the goddess of that name. It is not improbable that the grant registered in the epigraph was made chiefly at her instance.

Our plate mentions several places calling for remarks. Out of these, I have already noticed three, namely, *Suvarunnadrīpa*, *Yacabhūmi*, and *Vyāghrataṣṭi*. Of the remaining ones Nālandā is the most important. The way, in which this record speaks of it, would show that it continued to be as important a centre of Buddhist lore as it was during the time of Hsien Tsang's visit. The spelling of the name given in this document is Nālandā which is the correct way of writing it. The same spelling is given in a votive inscription on the image of

¹ *Ep. Ind.*, Vol. IV, pp 243 ff. *J. B. E. A. S.*, LXIII (1894), pp. 89 ff.

² Smith *Early History of India*, p. 378. As has already been stated by Cunningham (*A. S. E.*, Vol. XV, pp. 112 ff.) Kāntāra is another name of Pundra or Paundra, i.e., sugarcane, and the Mahākāntāra of the Allahabad inscription of Samudragupta, the Great, was probably an older name of this province which, about the middle of the fourth century of the Christian era, was governed by a King Vyāghra. Thus it does not appear to be improbable that the district of *Vyāghrataṣṭi* or the tiger's precipice—unless of course *vyāghra* is taken in the sense of castor oil in which case the word *Vyāghrataṣṭi* would be the slope marked or overgrown with castor plants,—was named after this tiger king.

³ This would rather show that no mistake was made in the text of the Khalimpur grant and that Kielhorn's statement in the *Ep. Ind.*, Vol. IV, p. 258, footnote 3 that it was, will be omitted.

⁴ For instance we know of a Balavarman, the lord of Prāgyyōtīsha (Gauhati or Assam) from the Nowgong copper-plate (Dr. A. F. Hoernle, *J. B. A. S.* LXVI, pp. 285 ff.) and another of Kārūsha or rather Bṛhadgrīha (Kielhorn, *Ind. Ant.* Vol. XX, pp. 123 ff.). On palaeographic grounds the former of the two has been assigned to the last quarter of the 10th century or say nearly one century later than the date of Dēvapālādēva. The other is too little known to admit of identification. The third ruler of the name, who will synchronise with our document, was the father of Avanti-varman II, who was the feudatory of Mahēndrapāla of Kanauj (cir. 890 A. D.). To think of identifying him with the Balavarmman of the Nālandā plate will be altogether unreasonable, for he was the ruler of Kathiawar, or Saurashtra and a feudatory of the formidable rival of the monarch of Bengal.

Sankarshana which was dug out of the same site¹ and the newly discovered statue of Tārā. It again occurs not only in some Jaina writings but such an old work as the *Dighanikāya*². However, it seems to be noteworthy that none of these works called Nālanda a university but only a prosperous town though Huen Tsang describes it as if it were a University. The way in which it is described in our plate would show that it was really a centre of Buddhist learning.

As to the remaining place-names mentioned in this document, I think, Śrīnagara or Śrīnagara-bhukti must be identified with modern Patna, which as a district, includes Rājagṛiha (Rājgir) and, as a division or commissionership, comprises the district of Gayā, even now. It is true that in the Khalimpur grant of Dharmapālādēva, which has been referred to above, the name given for the city is Pāṭaliputra and not Śrīnagara or Nagara, still, I think, there were two designations, the one, *viz.*, Pāṭaliputra, which meant the whole town and the other, *viz.*, Śrīnagara, the main part of it, like the Bankipore of to-day. Nagara means the chief town generally, but in this case it meant *the town*, the prefix Śrī implying prosperity or wealth of the town. In other words Pāṭaliputra was the *pattana*³ and the seat of Government, especially in earlier days during the supremacy of the Mauryas or the Imperial Guptas,⁴ lay there, and Śrīnagara was its principal portion where the office of the *bhukti* or division was situated. One was concerned with the whole government but the other only with eight hundred⁵ villages coming in its jurisdiction or *bhukti*. Thus Śrīnagara must have been a part of the whole which was termed Pāṭaliputra⁶. That, apparently, is the reason why the latter and not the former appellation of the town is to be met with in literature.

That Rājagṛiha and Gayā are respectively the Rājgir and Gayā of to-day requires no demonstration. The latter is a district still, though the former has now dwindled into a ruined town of the Bihār subdivision of Patna.

Regarding the villages which formed the object of the grant or endowment registered in the charter, we are told that Nandivanāka and Manivātaka were situated in the Ajapura-naya subdivision, Natakā in the Pīlipinkā, and Hastigrāma in the Achalā-naya or subdivision of the Rājagṛiha *vishaya* or district, and that Pālāmaka was situated in the Kumudasūtra *vithi*, a subdivision of the Gayā district. If similarity of sound can be depended on, I would propose the following identifications to which proximity of Nālandā will lend a great support. The Ajapura 'naya' or subdivision of the inscription may possibly be represented by the Ajapur⁷ village in the Ajai Hisse Chahāram Mauzā in the Bihār Thānā and the two villages Nandivanāka and Manivātaka, granted in it, would be the Nediune or Naunvan and Manianwan villages of these days, which are included in the Bihār Thānā. Pīlipinkā I am inclined to identify with the Pīlkhī or Pīlkee Mauza and the Naṭikā village with the Nā Pokher of to-day, both lying in the Sīlā Thānā. Though I am unable to offer any identification for the ancient Achalā yet, I fancy, the village Hasti or Hastigrāma of the grant might be the Hethon Bighā village of the Bihār Thānā if not the Hathī Tolā of the Maner Police subdivision. The old village directory⁸ of the Gayā district available to me does not, apparently, give any name

¹ See my *Annual Report of the Central Circle, (Patna)*, for 1921, p. 5 and *J. B. B. O. R. S.*, Vol. X, pp. 30 ff.

² Vol. I pp. 1 & 211-12

³ Cf. 'प्रधानभूत नगरम्'; Bharata quoted in the *Śabdakalpadruma* under Nagara.

⁴ Cf. पद्मनं यत्नं राजधानी स्थिता and नगरनटप्रतयानस्यै तद्व्यवहारस्थानम्, Yasōdhara in his *Jayamāgalā* in the *Kāmasūtra* of Vātsyāyana (N. S. Edition), p. 44

⁵ Even in the Khalimpur grant the *śrīmujjvasakandhātāra*, or 'royal camp or headquarters' lay at Pāṭaliputra. For the meaning of this expression cf. V. Smith, *Early History of India*, p. 398 and footnote 3.

⁶ Similarly, I would identify the *nagara-bhukti* of the legend on the seal, which, Dr. Spooner discovered during his explorations of the site (see his *A. P. E. (E. C.)* for 1916-17, p. 43) with the Śrīnagara-bhukti of this document.

⁷ *Village Directory of the Presidency of Bengal*, Vol. XXVI (Patna District).

⁸ *Village Directory of the Presidency of Bengal*, Vol. XXVII (Gaya District).

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ष्टान्ते सति कृतिनां सुराङ्गि यस्मिन् अक्षेयाः पृथुसगरादयोप्यभूवन् ॥२॥^१
विजित्य येना जलधेर्व्वसुन्धरास्विमोचिता

7

मोघपरिश्रहा इति ।

सवाप्यसुद्वाप्यविलोचनान्पुनर्वनेषु व(ब)भ्रून्ददृशुर्मतङ्गजाः ॥३॥^२ चलत्स्व-
नन्तेषु व(ब)लेषु यस्य विश्वम्भरा-

8

या निचितं रजोभिः ॥^१

पादप्रचारक्षमन्तरिक्षस्विहृष्टमानां सुचिरम्ब(म्ब)भूव ॥४॥^३ शास्त्रार्थभाजा
चलतोनुशास्य वरुणाप्रतिष्ठापय-

9

ता स्वधर्मे[१*]

श्रीधर्मपालेन सुतेन सीभूत्स्वर्गस्थितानामनृणः पितृणाम्^२ ॥५॥^४ अचलै-
रिव जङ्गमैर्यदोयैर्विचलङ्गिर्हिरदैः कदर्थ्यमाना ।

10

निरूपप्लवमम्ब(म्ब)रं प्रपदे शरणं रेणुनिमेन भूतधात्रो ॥६॥^५ वेदारि
विधिनोपयुक्तपयसां गंगासमेते^३भ्रु(म्बु)धौ ।^४ गोकर्णादिषु चाप्यनुष्ठि-

11

तवतान्तीर्थेषु धर्म्याः क्रियाः [१*]

भृत्यानां सुखमेव यस्य सकलानुद्वय दुष्टानिमान्ग्लोकान्साधयतो[६*]नुषङ्गजिता
सिद्धिः परत्रा-

12

प्यभूत् ॥७॥^६

^५तैस्त्रैर्दिविजयावसानसमये संप्रेषिताणां परैः सत्कारैरपनीय खेदमखिलं स्वां
स्वां गतानां भुवम् [१*] कृत्यं भावयतां

13

यदीयमुचितं प्रीत्या नृपाणामभूत्

सोत्कण्ठं हृदयं दिवस्युतवतां जातिस्मराणामिव ॥८॥^७ श्रीपरव(ब)सस्व
दुहितुः क्षितिपतिना रा-

14

द्वकूट^६तिलकस्य ।

रणणादेव्याः पाणिर्जगृहे गृहमेधिना तेन ॥९॥^८ धृततनुरियं लक्ष्मीः
साक्षात्क्षितिनुं शरीरिणी ।^७ किमवनिपतेः कौर्त्तिर्म-

^१ Two strokes in place of one.

^२ Symbol for स् at the end of a pāda is peculiar.

^३ Kielhorn has समेता^०.

^४ This danda could be left out.

^५ Kielhorn has तैर् तैर् which cannot be correct.

^६ The way of writing the letter ट is peculiar.

This danda could be left out.

Page 108 — *Inscription B* — The missing second plate of this inscription has been discovered at Iyāveya by Mr D B. Diskalkar, M.A., Curator, Watson Museum of Antiquities, Raikot, and will shortly be published by him in this journal —
Ed

„ 108, f. n 2 — For *upadmāntya* read *upadmāntya*.

„ 109, l 10 — Dr. Sukthankar is not right in his guess, for the *dātaka* of the grant as found in the missing plate is Rudradhara. But the writer was Kikkaka, here spelt Kikaka — Ed

„ 109, f n 2. — For *Dhravasōna* read *Dhravasōna*

„ 110, l 3 — For *Rotghamitra* read *Rōtghamitra*.

„ „ 1. 5 — For *Āśvina* read *Āśvayuja*

„ „ Text l. 7 — For *-gitan* read *-gitau*

„ „ „ 8 — For *āchchhettā* read *āchchhettā*

„ „ „ 9 — To =vā, add the footnote 'Read =vā'. — Ed.

„ „ „ 11 — For *Kikkakena* read *Kikkakēna*

„ „ f n. 2 — For *āgamī* read *āgāmī*

„ * 111, l 3 — For '34' read '33'

„ „ „ 8. — For 'these two sets' read 'this set'.

„ „ „ 16 — For *Tirunalūr* read *Tirunālūr*.

„ „ „ „ — For *°nallūr* read *°nalūr*

„ „ „ „ — For 'Sunepuha°' read 'Sunapuha°'

„ „ „ 17. — Insert after 'Nārāyanāmbikā', "or Nāranadēvī-auva"

„ „ „ 11 from the bottom — For *Tirunalūi* read *Tirunālūi*

„ „ „ „ „ „ For *°perumā-nalūr* read *°perumā-nalūi*

„ „ „ 10 „ „ For *Sunē°* read *Sunai°*

„ „ „ 9 „ „ For *Mēlmurī* read *Mēlemurī*

„ „ „ „ „ „ For *Maḷa-nādu* read *Mala-nāḍu*

„ „ „ 8 „ „ Insert before 'villages', "first three"

„ „ „ 7 „ „ For *Tiruchchunāppalli* read *Tiruchchunāpalli*.

„ „ „ 5 „ „ Insert after 'twelve' the following " *haruānas* of food should be supplied, one "

„ „ „ „ „ „ For lamps read lamp

„ „ „ „ „ „ Insert after 'burned' "one"

„ „ „ „ „ „ For garlands read garland.

„ „ last line — For 1,82 read 1,823

„ 112, l 2 — Insert '*vāṅ-payir*' after '*punsey*'

„ „ „ „ For *°ppēru°* read *°pperu°*

„ „ „ 3 — Cancel (*tarī-kaḍamar*)

„ „ „ „ For *ālukku°* read *olukku°*

„ „ „ 4 — For *kattigar-arasaram* read *kathige-arasara*

„ „ „ „ For *padar-kānikkar* read *padar-kānikke*

„ „ „ 10 — For *Pēr°* read *Pēr*

„ „ „ 11. — Omit the passage from *Ālukku°* to *ntrānakkam* in l 13

„ „ „ 13 — For *Magamar* read *mahamar*

„ „ „ 17 — For *Kattigar-arasaram* read *Kathige-arasara* and add in a foot-note [This term does not indicate any tax on firewood as the author suggests but may have to be connected with *kattige-yara*, a mace-bearer or in this case the village servant who carries the staff of office with him — Ed.]

*[The following numerous corrections on pp 111 to 117 have been necessitated by the proof being put up by the office in the belief that it had been revised by the author.]

- Page 112, l 18.—For -kkānikkai read kānike
- ” ” ” 23 —For Ttuchchirāppalli read Tiruchchirāppalli
- ” ” ” 23 —For Tirunalūr read Tirunālūr
- ” ” ” 24 —For Śēranai° read Śēranai° and for °nallūr read °nalūr
- ” ” ” 24 —For M. Imuri read Mēlomuri
- ” ” ” 24 —For Maḷa-nādu read Mala-nādu
- ” ” ” 24 —For Sune° read Sunai°
- ” ” ” 26 —For Tiruchchirāppalli read Ttuchchirāppalli
- ” ” ” 29 —For Maḷa-nādu read Maḷa nādu
- ” ” ” 33 —For Ttunalūr read Tirunālūr and insert after it, [-Ttunallūr]
- ” ” ” 33 —For Śēranai° read Śēranai°
- ” ” ” 34 —For °ma-nallūr read °mā-nalūr
- ” ” ” 35.—For Śunopuha° read Śunapuha°
- ” ” Text, l 1 —Remove the unnecessary extra bracket after नम() and insert a hyphen at the end of the line
- ” ” ” 2 —For चु read चु
- ” 113 ” 3 —For खे read खै and cancel foot-note
- ” ” ” 6 —For °मनुधि° read मनुधि°
- ” ” ” 8 —For °यद्र° read °यदु°
- ” ” ” 14 —For °हारिहरि° read °हारी हरि°
- ” ” ” 23 —For °जन्म त° read °जन्मत°
- ” ” f n. 9 —For अस्मान read अस्मान.
- ” 114, Text l 29 —For सूक्ष्म° read सूक्ष्म° and add in a footnote “ [र is the letter] as generally transcribed in Nāgarī,—Ed]”
- ” ” ” 31.—For °ह्ये read °ह्ये and correct into °ह्ये.
- ” ” ” 34 —For मासि read मासौ and correct into मासि
- ” ” ” 36 —Insert after °[ञ्चि] the letter ‘द’ and correct °[राञ्चि]द into °रा[ञ्चि]द.
- ” ” ” 37 —Carry the footnote number 14 to भी of the preceding word
- ” ” ” ” —For तिरुनलू° read तिरुनलु° and correct into तिरुनलू
- ” ” ” 38 —Correct in a foot-note °नलुरपि into °नलूरपि Insert space after उत्तर and for ‘कन्या° read °कन्य°
- ” ” ” 39 —Insert “ [|| 23*] ” after °चि and add a foot-note “ read वडामिधे [कलामिधे] [This word which occurs in connection with Rājagambhira and Rājāraja, both in lines 36 and 38 f, has perhaps to be understood in the sense of the Tamil वडनाडु, a territorial subdivision, as suggested also by its use below, in ll. 52 and 56 f.—Ed]”
- ” ” ” —Insert as a foot-note on प्रहजपदे —“ [प्रहजपदे perhaps stands for प्रहजपद which is perhaps a Sanskritised form of Maḷmādu —l’l]”
- ” ” ” —Correct सुनेपुहनुरधा into सुनेपुहनुरधौ in a foot-note
- ” ” ” —Insert after उमौ ‘ [!*] ”
- ” ” ” 40 —Read श्रीरगराजगपि as one word
- ” ” ” 41 —After “ || ” insert [24*]
- ” ” ” —For स्वनि यी read स्व [य] and correct the same into स्व [य] [य].

- Page 114, Text l 42 —Insert a foot-note on सुध —“ Read शुद्ध”.
- ” ” ” ” 44 —For नारायण° read नारण°
- ” ” ” ” 46 —For परि° read हरि° and insert spaces after ष and णी
- ” ” ” ” —For वनमाले read वनमाले
- ” ” ” ” 47 —For तिरि° read तिरि° and correct into तिरि The letters दके को ought to be in []
- ” ” f n. 9 —Add at the end “ [Perhaps धकस्याद्दे was meant—Ed] ”
- ” ” ” 13 —For भिधकावेर्या° read भिधे कावेर्या°.
- ” ” ” 14 —Cancel the hyphen at the end and insert [|| 22*]
- ” ” ” 15 —For सत्यकन्याया read सद्यकन्याया
- ” ” ” 16 & 17 —[Perhaps metrical considerations would require some corrections like
श्रीरंगराट्सपर्यार्थं नागणास्वाभिधानत —Ed]
- ” ” ” 25.—For आन्दक read औदके
- ” 115, Text l 51 —For सुध read सुध
- ” ” ” ” 53 —Correct in a foot-note, °हीमलि° into °हीमलि°
- ” ” ” ” 54 —Correct तिरनालूर into तिरनालूर
- ” ” ” ” 55 —For नलू read नलु and correct into नलु°
- ” ” ” ” 56.—In १४०३ put the nought in square brackets with an asterisk.
- ” ” ” ” —For °कर read °करे
- ” ” ” ” —For °वळ° read °वल°
- ” ” ” ” 57.—For सुने° read सुने° and correct in a foot-note °नलुर into °नलूर
- ” ” ” ” 58 —For उमय(:) read उम९
- ” ” ” ” 59 —Insert a space after कद and add in a foot-note “ [कंद perhaps stands
for कण्ड i e, मल्लण्ड —Ed]”
- ” ” ” ” 64 —For श्री read श्री and correct the whole into श्रीदुक्कीर्याद्दे in a foot-note
- ” ” ” ” 67.—Carry foot-note No. 15 to the end of एनुक्तता.
- ” ” ” ” 71 —Insert space after the first letter in the line and correct in a foot-note
माच° into आच°.
- ” ” f n 4 —Omit से at the end of the correction
- ” ” ” 6.—Change the foot-note thus “ Read से नैवडपेरमानलूर as in the Sanskrit
portion in l 37 ”
- ” ” ” 9 —For आन्दके read औदके
- ” ” ” 14 —For पञ read पञ्जे
- ” ” ” 15 —For होमवति read एनुद्धा
- ” 116, Text l 75 —For 22 read 25 and for स्वदत्ता read स्वादत्ता and correct into स्वदत्ता
- ” ” ” ” 76 —For पटिवर्ष° read पटिवर्षु° and correct into पटिं वर्ष°
- ” ” ” ” 77 —For 23 read 26
- ” ” ” ” 79 —For 24 read 27
- ” ” ” ” 80.—For दत्ता° read दत्ता and correct into दत्ता°
- ” ” ” ” 82 —For °मा° read °मा°
- ” ” ” ” —For 26 read 29
- ” ” ” ” 83 —For °विठ° read °विठ° and correct into °विठ°
- ” ” Vv 6 7 —For laustabha read laustubha
- ” ” ” 10 12, last sentence —For °Lakshmi read °Śī and for ns read the

- Page 116, line 3 from the bottom —For Śēra° read Sēra°
 " " " " " " —For Śune° read Suna°.
 " , last line —For Monday read Sunday.
 " " f n 3 —Insert 'and' before हृत्वाणि
 " " " 6 —Insert चा before ह्र
 " " " 7 —Insert दत्ताप before हारण
 " " " 8 —Cancel °पहारण
 " 117, l 3 —For Sētanabenda-° read Seranaband-°
 " " " 4 —For Triśūāpalli read Tiruchchūāpalli.
 " " " 6 —Insert Sahyakanyā before Kāvēri and put the latter in round brackets and add
 " " " " " in the Pīrvīdjanapada 1 e, in the Maḷa-nādu district"
 " " para 2, l 3 —Insert at the end of the line " sacred food, of one "
 " " " " " 4 —For lamps read lamp and insert 'one' after the comma
 " " " " " 4 —For garlands read garland
 " " " " " 5 —For Nālāyan° read Nārana°
 " " " " " 5 —Insert after Pāṇḍamangalam " with its hamlets "
 " " " " " 6 —For Suno° read Suna°
 " " " " " 11 —For Chirichīāpalli read Tiruchchūāpalli.
 " " " " " 11 —For Sune° read Suna°.
 " " " " " 12 —For Mēlamuri read Mēlemuri
 " " " " " 12 —Mala read Mala.
 " " " " " 17 —Cancel taikkadumai at the end of the line.
 " " " " " 18 —For ālukumpāttam, read olūkkunipāttam
 " " " " " 18 —For verses 22-26 read verses 25-29
 " 118, text lls 5 & 6 —I would add a hyphen at the end of l. 5 and take mahōdaya—
 mahīdhairēndra as one word, thus altering the sense The chief who is
 described was a Sun on the Lord of mountains, viz, the great eminence of
 the Kadamba family.—Ed.
 " 130, l 40, for XIV read XVI.
 " 150, coll 6-7 for Śōchana read Śōbhana
 " 189, ,, 29, for nāme read name
 " 191, f n 3, for the letter व after च (?) read न after त्
 " " " " 12, insert length after °ञ°
 " 193, l 22, for Tōramāna read Tōiamāna
 " 194, para 5, l 4, for Karnāta read Karnāta
 " 196, ,, 2, ,, 13, for Śiddhaladēvi read Śiddhaladēvi
 " " " 3, ,, 2, for Kārttika read Kārttika
 " 197, ,, 1, ,, 2, for Hastināvati- read Hastināvati-
 " " " 3, ,, 1, for Duga-Bhaṭṭa read Dugū-Bhaṭṭa.
 " " f. n. 4, for °ङ् read °ङ°

- Page 108, text l 12, for सगम, read सगम
- „ 200, f n 8 for दात्र read दात्र, for see above, note 1 read see above, note 7.
- „ 203, trans of v 9 for Udaya- read Udaya-
- „ 204 l. 8, for kēic read kere.
- „ „ l 21, delete who received.
- „ 291, 4th line from the bottom, insert the word “after” after “and” in brackets
- „ 292, l 5, for kholīya read kholīya.
- „ 293, l 27, omit n of Kalabhran
- „ „ f n 4, last line for Sadaiyan read Śadaiyan
- „ 294, l 35, insert after orator “thus making it clear that Mangalāya Madhuratara is identical with Madavikalan Mārangāri mentioned in the previous paragraph”.
- „ „ l 38, insert after certain “Śuttakēśari-pPerumbanaikkāran the document was signed by”, and after Perumbanaikkāran “who seems to be identical with the engraver Śuttakēśari-pPerumbanaikkāran”
- „ 295, l 10, for Kadungōn read Kadungōn
- „ „ l 22, for Maduratura read Madhuratura
- „ „ l 27, for grove read drove.
- „ „ f n , for Epigraphia Indica read S I I., Vol. III, Pt IV
- „ 296, l 2, for inscriptions read inscription
- „ 297, l 29, for Malava read Malaya
- „ „ l 33, for Kurumadaī read Kurumadaī
- „ „ f. n 3, for °Valanādu read °valanādu.
- „ 308, l 15, insert “(?)” after Kurumbunādu.
- „ „ l 36, for Kulandevan read Kulandaivan
- „ 309, l 6, for race read people and omit °ttavar of Karavandapurattavar
- „ „ trans of v 19, remove the brackets of (learned) and use roman type
- „ „ trans. of l 152, for °pPerumbānaikkāran read °pPerumbanaikkāran.
- „ „ f n 1, for Pāndya read Pāndya
- „ 311, l 11, omit ‘made through an ambassador,’
- „ „ l 17, for Rajagriha read Rājagriha.
- „ „ para 2, 4th line from end, for Kalāsan read Kalasan.
- „ 312, l 11, from end, for Prambanam read Prambanan
- „ 313, l 6, for extending read governing
- „ „ l 6, from bottom, for a dūtaka or ambassador read dūtas or ambassadors
- „ „ f n 5, for Sailēndras read Śailēndras.
- „ 314, l 7, for Kalāsan read Kalasan
- „ 315, l. 14, for Kundinga read Kundinga
- „ 317, l. 26, insert -laja after Pilipinkā
- „ 317, f. n 6, after ‘document’ at the end, add “That Nagara by itself was used as a synonym of Kusumapura or Pātaliputra is evidenced by the Dhartava-
ṭasamvāda of Iśvaradatta (pp 3 f) published in the Chaturbhāṣī in 1922 by
M. M. Ramakrishna Kavi, M. A., Teacher’s College, Rajahmundry

- Page 320, text l. 24, for °समावाप्ति° read °समावाप्ति°
- „ 321, f n. 2, for *uparik*, read *uparika*
- „ 323, text l. 57, for °दीर्घर्ग° read °दीर्घर्ग° , for ञक° one should expect ञकः; or the poet might have used ञक as a derivative of ञन treating it as a stem like नीचक from नीच, and for °ः° read °ः°.
- „ 324, f n 1, for *Sakti* read Śakti (twice)
- „ 325 l 9, for *-mahishyadhakrita* read *-mahishyadhikrita*.
- „ „ l 13, for *Brabmanōttaras*, read *Brāhmanōttaras*
- „ „ l 14, for *Chāndālas* read *Ohandālas*.
- „ 324 l. 18, for *-Hiranyagarbha-* read *-Hiranyagarbha-*.
- „ „ l 28 beginning, for *gf* read *of*
- „ 335, l. 13, for *Guddādi-* read *Guddādi*.
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EPIGRAPHIA INDICA

VOLUME XVII

No 1—GUDIMALLAM PLATES OF THE BANA KING VIKRAMADITYA II

BY PROFESSOR E HULTZSCH, PH.D , HALLE (SAALE)

These plates were found at Gudimallam in the Kālahasti Zamindāri, and were forwarded to Rao Bahadur H Krishna Sastri by Mr K Raghaviah of Kālahasti. They have been acquired for the Government Central Museum, Madras.

The copper-plates are five in number and have nine faces of writing, the outer side of the first plate being left blank. The plates are not raised into rims for the protection of the writing, which is, however, in good preservation. They measure $7\frac{1}{4}$ " in length and $3\frac{3}{8}$ " in breadth, and are strung on a copper ring, which measures about $2\frac{3}{4}$ " in diameter, and the two ends of which are fixed in a circular seal. The hole through which the ring is passed was enlarged after the inscription had been already engraved. This led to the total or partial destruction of some letters, a few of which were subsequently engraved a second time below the ring-hole. The seal bears, in relief, the figure of a bull couchant, facing the proper right, and above it what looks like a lamp-stand and a crescent. The weight of the plates with ring and seal is 133 *tōlās*.

The alphabet is old Grantha (ll 1-53) and old Tamīḷ (l 53 f). In the Grantha portion the superscribed *i* is not always distinguished from *i*, nor the subscribed form of *r* from that of *r*. Final forms of *m* occur in lines 3, 7, 35, 48, 49, 53. In *-dhr̥ik* (l 30), *chēt* (l 37), and *°vān* (ll 26, 29, 47) the Virāma is expressed by a small dash at the right of the final consonant.

The Grantha portion consists of Sanskrit prose (ll 1, 14, 33, 37-47, 51-53) and of 22 verses in the Anuṣṭubh and Āryā metres. Both the language and the metre of some of the Āryā verses are incorrect. In the footnotes on the text I have suggested a few possible emendations, but am unable to furnish a fully satisfactory text and translation of the eight opening verses, which are addressed to Śiva. The remainder of the inscription is quite intelligible, but the wording of it is not always correct. The compounds *-nām-ākhyā* (l 23), *-ākhyā-nāmaka* (l 35), and *kidr̥g-vidhā* (l 37) are tautological. In lines 37-39 the author violates the rules of composition by comparing words in the dative plural to nominatives singular, cf. *Sāhityadarpana*, Translation, p 301, j. In line 50 the neuter *yuga* is used as a masculine, and in line 53 the neuter *likhitam* forms the predicate of the feminine *prastāh* (l 52). The record ends with a short postscript in the Tamīḷ language.

As regards orthography, *au* is expressed by *ō* in *-sō* (l 10) and *mōli* (l 12). The group *ksh* is replaced throughout by *tsh*, *dm* by *tm* in *patma* (ll 4, 37), *dh* by *th* in *narāthipa* (l 24), and perhaps *ddh* by *tth* in lines 5, 10, 11. The lingual *l* is used in *gala* (l 2). The

rules of Sandhi are neglected in *Nandivarmmā itī* (l 19), *nriparāt=bhujā-* and *prādāt-grāman-* (l 34), *chēt* (l 37), and *obhyak* (ll 39, 42 (twice), 52) In *-npunahsh=shadgunē* (l 30) and in four other cases (ll 38, 40, 41 (twice)) final Visarga is expressed both by its original form and by a sibilant Consonants are doubled throughout after *r*, and before *y* and *r* in *-maddhyr* (l 2), *-viddhyud-* (l 3), *-viddrā(dḍru)ma-* (l 3), *-mātrās-* (l 5), *Ruddrō* (l 9), *Giritrēna* (l 33), and *puttrē* (l 35), but not in *travidya* (l 41), *tsha(ḷsha)tra* (l 23), *putrēna* (l 32), *vēda-traya* (l 39), and *vikrama* (passim) The superscribed *r* of double consonants is often omitted through carelessness

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in the Punganūr Zamindāri of the North Arcot District¹ One of Venkayya's Gudimallam inscriptions² contains a Śaka date—820—which must be assigned to the reign of Vijayāditya-Prabhumēru, because it calls the Bāna king Vijayāditya, to whose reign it belongs, the son of a queen of Bānavidyādharma, *i e* of Vikramāditya-Jayamēru Another queen of Bānavidyādharma, named Kundavvai, was the daughter of Pratipati-Arayar, *i e* of the Ganga king Pṛithivipati I,³ who was a contemporary of the Rāshtrakūta king Amōghavarsha I⁴ and of the Pāndya king Varaguna.⁵ Two further inscriptions of Vijayāditya (Prabhumēru) furnish the Śaka dates 827 and 831.⁶

According to the Udayēndiram plates, Prabhumēru's great-grandson, Vikramāditya-Vijayabāhu, was a friend of Krishna-Rāja, who used to be identified with the Rāshtrakūta king Krishna II (about A D 900) This identification cannot be upheld, because we have now for Prabhumēru Śaka dates ranging about A D 900, but Vijayabāhu's friend Krishna-Rāja must have been the Rāshtrakūta king Krishna III (about A D 950), of whom we know from other sources that he made and held extensive conquests in the South The Ganga prince Pṛithivipati II Hastimalla, who received the title *Bānādhirāja* from the Chōla king Parāntaka I,⁷ and whose inscriptions are dated in the 9th and 15th years of the same king⁸ (*i e* A D 915 and 921), would thus have been a temporary usurper and a predecessor of Vikramāditya-Vijayabāhu He was the Chōla king's candidate for the Bāna throne, while the legitimate ruler Vijayabāhu was the *protégé* of the Rāshtrakūta invader. To facilitate reference, I subjoin a tabular statement of the two Bāna genealogies

Gudimallam plates	Udayēndiram plates	REMARKS
Nandivarman	Jaya-Nandivarman	
↓	↓	
Vijayāditya (I).	Vijayāditya (I)	
↓	↓	
Malla-dēva	Malla-dēva	
↓	↓	
Vikramāditya (I) Jayamēru	Bānavidyādharma	Son-in-law of the Ganga Pṛithivipati I, who was an adversary of the Pāndya Varaguna and of the Rāshtrakūta Amōghavarsha I
↓	↓	
Vijayāditya (II) Prabhumēru	Prabhumēru	Inscriptions dated in Śaka 820, 827, 831
↓	↓	
Vikramāditya (II) (heir-apparent)	Vikramāditya (II)	
	↓	
	Vijayāditya (III) Pugalvippavarganda	
	↓	
	Vikramāditya (III) Vijayabāhu	Friend of the Rāshtrakūta Krishna III

¹ See above, Vol. XI, p 285

² *Ibid*, pp 227 f

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⁴ *South-Ind Inscr*, Vol III, Nos 47 and 48

⁵ See above, Vol IX, p. 87.

⁶ Above, Vol XI, p 228, and *Ep. Carn.*, Vol X, Mulbāgal Tāluk, No 229

⁷ Above, Vol IV, p 225, verse 5

⁸ *Ibid*, p 224, and *South-Ind. Inscr.*, Vol II, p 589

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⁵ See above, Vol IX, p 87

⁶ Above, Vol XI, p 228, and *Ep Carn*, Vol. X, Mulbāgal Tāluk, No 229

⁷ Above, Vol IV, p 225, verso 5

⁸ *Ibid.*, p 224, and *South-Ind. Inscr.*, Vol II, p 589

TEXT.¹

First Plate, Second Side

- 1 Namaś=Śivāya svasti || Jayati sa saivva-vyāpi yat-ritā-pi-
 2 ruaddha-kandharā-maddhyāc [1*] gala-bhūshan-āhu-²pratibimbam-iva su-
 3 ra-dahana-visham || [1*] Jayati hutāsana-viddyud-viddrā(ddru)ma-samghāta-mi-
 4 bha-jatā-bhārah [1*] yach-chihvasi man-jatā-[bh]ā-rakta-sarit-pitma(dma)-māl-ē-
 5 va || [2*] Jayati pranavapyātthō³ lōkhā-mātraś=śikhā-sasi yacya [1*] dṛi-
 6 dha-nahana-khinna-vishadhara-van-ānala-dagdha iva latsyah(kshyah) | [3*]

Second Plate, First Side

- 7 Jayaty=abdhara-sankāśu-kandharañ=ch=āhu-kundalam [1*] lalāt-ētsha(ksha)nam-Ākāt-
 8 i[1]n-mālā-dharam vapuh || [4*] Jayati vish-ēśō dēśō lalāta-nayan-āgni-
 9 niva(pa)tit-Ānamgah [1*] asua-pui-āu(ri) Ruddrō jagad-udaya-layambarō bhittah || [5*]
 10 Jayati sa-nād-ātthō=sō⁴ śakti-dvaya-⁵gun-ākarō vibhu-
 11 ś=Śambhuh [1] samvrita-mantr-ātth-ātthas=śabd-ādi-gunair-anupalabhyah || [6*]
 12 Jayati jatā-dhara-mō(mau)lu=Mmandākini-pūrta-⁷mahā-makut-ēśah [1*] Śi(Gi)-
 13 ritanay-ārppita-bhāgō guna . rahitō⁸ vibhu[r*]=vvyāpih(pi) || [7*]

Second Plate, Second Side

- 14 Namaś=Śivāya svasti(sti) śi [1*] Jayati sa Kām-ānga-dahanō⁹
 15 mastaka-nyasta-mugdh-ēnduh [1*] k-ādī(di)-trin-āntasy=ēśō¹⁰ gupty-u-
 16 tpatti-laya-hētuh- [1] [8*] Bal[r*]=Vvairōchanō¹¹ nāma Dāna-
 17 v-ēndiō mahā-balah [1*] prādāt=sa gām=makha-vaē Kriśhnāy=āmi-
 18 ta-tējasēh¹² [1] [9*] Tasy=ānvayō samu[d]bhūtah prthivi(vi)pāla-sa-
 19 ttamah [1*] Nandivarm[m]ē itī¹³ khyātah praśamsita-mahā-balah || [10*]

Third Plate, First Side

- 20 Jayati¹⁴ sa Nandiva[r]mmē narapati-manī-makuta-l(1)dha-pāda-
 21 yugah [1] tēna nirākrita-kalinā samprati rājanvati(ti) prithi-
 22 vi[h]¹⁵ || [11*] Tasya sūnu=mmahā-virō vėlā-paryyanā-dīpakah [1*] Vi-
 23 jayāditya-nām-ākhyō dharmma-tsha(ksha)trabhritām varah || [12*] Tasy=ābhava-
 24 n=mahā-bāhur-Mmalla-dēvō narāthi(dh)pah [1*] Bāna-vamśasya tilaka-
 25 s=samasta-vasudh-ādhipah [1] [13*] Tasya jajñē mahā-sūrō Ja-

¹ From two sets of ink-impressions supplied by Rao Bahadur H. Krishna Sastri

² For the sake of the metre, a word like *bhōga* may have to be inserted after *-āhi*.

³ Read perhaps *pranavasy=ārdhō*

⁴ Read perhaps *°dā rddhō* [or *rittho*?—F. W. T.] =sau

⁵ For the sake of the metre, *śakti arddha* may have to be read ⁶ Read perhaps *-ārdhās*

⁷ For the sake of the metre, *-pūrta* may have to be replaced by its synonym *-bhritā* [and perhaps *mañu-
 ēśah* for *makutah*. But the scansion seems too irregular in many places.—F. W. T.]

⁸ Read perhaps *gunatva-rahitō* [or *guna-gana*, since *gunatra* is found only in *gunas*?—F. W. T.]

⁹ The metre is wrong here

¹⁰ For the sake of the metre, *yō* may have to be inserted here

¹¹ The second half of the *ō* of *°nō* is very faintly seen

¹² The correct Sandhi *°varmm=ēti* is precluded by the metre

¹³ Read *V. jayati*, on account of the metre

¹⁴ Cancel the Visarga

¹⁵ Cancel the Visarga

11 a.

8
 10
 12

8
 10
 12

111 a

20
 22
 24

20
 22
 24

110 a

34
 36
 38

34
 36
 38

11 b

2
 4
 6

2
 4
 6

112 b

14
 16
 18

14
 16
 18

111 b

26
 28
 30
 32

26
 28
 30
 32

10 b

40 யந் துமிகுமெயு: யுத்தகாசுமபுயுத
 42 யுதகாசுமபுயுத: யுதகாசுமபுயுத
 44 யுதகாசுமபுயுத: யுதகாசுமபுயுத
 46 யுதகாசுமபுயுத: யுதகாசுமபுயுத

11 a

48 யுதகாசுமபுயுத: யுதகாசுமபுயுத
 50 யுதகாசுமபுயுத: யுதகாசுமபுயுத
 52 யுதகாசுமபுயுத: யுதகாசுமபுயுத

12 b

54 யுதகாசுமபுயுத: யுதகாசுமபுயுத

Third Plate, Second Side

- 26 yamēruh pratāpavān [1*] samasta-nipu-chakrānām=bhōtt-āchintya-pa-
 27 rākramah || [14*] Samasta-dhānīpāla-kūit-āmkita-sāsanaḥ [1*] sa jiyāt=shu(kshu)-
 28 tipāl-ēndrō Vikramāditya-bhūpatih || [15*] Vikramāditya-bhūpasya sū-
 29 [n]uh parama-vīyyavān [1*] dōr-ddaṇḍ-ōddhṛita-srisht-ārī =¹Vvijayāditya-
 30 nāma-dhrikh² || [16*] Pañchānga-mantia-nipunahsh=²shadgunō sakta-chinta-
 31 kah [1*] nay-ōpayukta-sachivah Prabhūmērur=mmahā-yasāh || [17*]
 32 Tasya putrēna mahatā Vikramādityava[r]mmanā [1*] prasādita-

Fourth Plate, First Side

- 33 Giritrēna dhvasta-dukkhēna dhimatā [|| 18*] Api cha³ [||*] Nandō nāma mahā-sa-
 34 tvō(ttvō) nripa-rāt=⁴bhuja-vikramah [1*] piādāt=⁵giāman=dvij-ōndrānām Vi-
 35 prapīth-ākhyā-nāmakamh⁶ || [19*] Tasya prādāt=sa ratshā(kshā)n=tu pittāō vijñā-
 36 [pya] sah⁷ prabhuh [1*] Vijayāditya-sūnus=sō⁸ Vikramādityasrētah⁹ [|| 20*]
 37 Kī(ki)drig-vidhēbhyō ratshā(kshā)n=dattavān=itī chēt(d=) Brahm=ēva patm(dm)-āspa-
 38 dēbhyō Nārāyana iva bhṛita-sach-chakrēbhyahs=¹⁰Śiva iva sita-bhūti-
 39 priyēbhya[h*] Kumāra iva Śiv-āmk-āsrayēbhyaḥ(bhyō) vēda-tray-ādhyā-

Fourth Plate, Second Side

- 40 yana-mukhara-mukhēbhyahs=¹⁰sushthū-krit-ānushtāna-Pai amōshthi-
 41 charitēbhyahs=¹⁰traividya-vridhēbhyahs=¹⁰samasta-sāstia-pā-
 42 ragēbhyah(bhyō) brahmādēy-ānusantānēbhyah(bhyō) dharmma-vi[d*]bhyō=
 43 [v]ichchhinnā-somapīthēbhyah [||*] Paraśurāmēśvara-bhattāa-
 44 ka-var-āvāpti-nimitād=Vijayāditya-sūnu[1*]=Vvikramāditya-
 45 s=sva-pitū[1*]=nmyōgād=Viprapīth-ākhyā-nivāsān=dvi-
 46 j-ēndīānam samasta-[pā]ūlāra-samanvitām ratshā(kshā)n=datta-

Fifth Plate, First Side

- 47 vān || Sa[r*]vvāms=tu prthivipālān=bhāvīnah prā[r*]tthaya-
 48 ty=ayam [1*] Prabhūmērōs=suta[h*] śrīmān=ari-marddana-karṁma-krita¹¹ [||] [21*]
 49 Yō tu ratshā(kshā)m=imām=pānti vipr-ēndrēshu sama[r*]ppitām [1*] tē-
 50 [sh]ām=pāda-yugā mūnni(rdhni)¹² tishthantu mama sa[1*]vvadā || [22*] Śiva-bhattā-
 51 raka-sūnōs=Śivatamasy=tyam kritih [||*] Svasti gō-brā-
 52 hmanēbhyah(bhyō) namah || Iyam=prasasti[h] Parahit-āchā-
 53 rinā likhitam[h](tā) || A[yu]nuru=¹³kkādī nellu[m] pat-

¹ Read -drīpt-ārīr= [Read ढ्रिप ?—F W T]

² Cancel the Visarga

³ These two words are entered below the line, and the place at which they have to be inserted is marked by a cross or caret (*kākapada*), cf Sir Aurel Stein's Translation of the *Rājataranginī*, IV, 117 and note

⁴ Read rād=

⁵ Read prādāt=

⁶ Cancel the Visarga

⁷ The syllable *sa* is entered below the line, read perhaps *sat-prabhuh*

⁸ Read perhaps *sūnur=yyō*

⁹ Read perhaps *tya i tī utāh*.

¹⁰ Cancel the Visarga

¹¹ Read -kṛit

¹² After this word the syllable *ka* is written below the line.

¹³ Read *ainnūru=*.

Fifth Plate, Second Side.

54 tu ponnaṃ idaṃ puravaṃ [||*]

TRANSLATION.

(Line 1) Obeisance to Śiva¹ Hail¹

[Verses 1-7 are addressed to Śiva]

(Line 14) Obeisance to Śiva¹ Hail¹ Prosperity¹

[Verse 8 is again addressed to Śiva]

(Verse 9) (There was) a powerful lord of demons (*Dānava*), Bali by name, the son of Viṛchana. He presented at an excellent sacrifice the earth to Krishna of immeasurable lustre¹

(Verse 10) In his lineage was born the best of kings, called Nandivarman, whose great power was praised.

(Verse 11) Victorious is that Nandivarman, whose pair of feet was kissed by the diadems, (set) with jewels, of princes. Through him, who drove away (the sins of) the Kali (age), the earth is now (1) provided with a just king

(Verse 12) His son (was) a great hero, illuminating (the earth) as far as the coast (of the ocean), called Vijayāditya by name, the best of just rulers

(Verse 13) His (son) was the long-armed king Malla-dēva, the ornament of the Bāna race (and) the lord of the whole earth.

(Verse 14) To him was born the powerful great hero Jayamēru, the breaker of the circle of all enemies, (and) whose valour was inconceivable

(Verse 15) Let that king Vikramāditya be victorious, the lord of princes, whose orders were marked (i.e. bowed to) by the diadems of all rulers of the earth¹

(Verse 16) King Vikramāditya had a very brave son, who bore the name Vijayāditya, (and) who uprooted proud enemies by (his) strong arm

(Verse 17) The renowned Prābhūmēru knew the spell of five members², his thoughts were occupied with the six measures of politics; (and) his ministers were employed with polity.

(Verse 18) By his great wise son Vikramādityavarman, who propitiated Gṛitra (Śiva), (and) who removed distress, (this grant was made)

(Line 33) Moreover —

(Verse 19) The noble ruler of princes, Nanda by name, whose arms were powerful, (had) presented to chiefs of Brāhmaṇas the village called Viprapīṭha by name

(Verse 20.) But Vijayāditya's son, that virtuous lord who was celebrated (by the name of) Vikramāditya, granted a confirmation (of the former grant) to this (village), after having submitted (this matter) to (his) father

(Line 37) If (you ask) to what kind (of people) he granted the confirmation —to those who were abodes of prosperity (*padmā*), as Brahmā dwells on a lotus-flower (*padma*), who supported a circle (*chakra*) of virtuous men, as Nārāyaṇa (Viṣṇu) holds an excellent discus (*chakra*), who were beloved by bright welfare (*bhūti*), as Śiva is fond of white ashes (*bhūti*), who resided near (the temple of) Śiva, as Kumāra rests on Śiva's lap, whose mouths resounded with the recital of the three Vēdas, who practised in a suitable manner the conduct of

¹ Cf verse 3 of the Udayēndiram plates, above, Vol III, p 78

² *V*: the five syllables *namaś-Śivāya*, "obeisance to Śiva¹" Cf II 1, 14. [*Pañcāṅga-mantra* is 'counsel (consisting) of five subdivisions'; see Monier Williams s.v. *anga* —H K. 5]

Paramēshthin (Brahmā); who had advanced in (the study of) the three Vēdas, who had mastered all sciences, who (possessed) a series of gifts to Brāhmanas, who knew the (sacred) law, (and) whose draughts of Sōma were uninterrupted

(Line 43) Because he had obtained a boon from the god Paraśurāmēśvara, Vijayāditya's son Vikramāditya granted, at the direction of his father, the confirmation, accompanied by all exemptions (*parihāra*), to the chiefs of Brāhmanas residing in (the village) called Viprapītha.

(Verse 21) But the destroyer of enemies, that glorious son of Prabhumēru, requests all future rulers of the earth —

(Verse 22) "Let there rest for ever on my head the pairs of feet of those (kings) who protect this confirmation granted to chiefs of Brāhmanas!"

(Line 50.) This is the composition of Śivatama, son of Śiva-bhattāraka. Hail! To cows and Brāhmanas obeisance! This eulogy (*praśasti*) was written by Parahit-āchāri¹

(Line 53) The revenue assessment² of this (village amounted to) five hundred *kāḍi*³ (of) paddy and ten (*kaḷaṅṅu* of) gold.

No 2—TUMBAGI INSCRIPTION OF THE REIGN OF SATYASRAYA SAKA 926

By LIONEL D BARNETT

Tumbagi, or, as the name was anciently spelt, Tumbige, is a village lying in lat 16° 34' and long 76° 20', in the Muddebihal taluka of Bijāpūr District, and formerly was included in the Pagalatti Three-hundred. The name is given as "Toombgee" on the Indian Atlas sheet 57 and as "Tumbgi" on the Bombay Survey sheet 350. It contains a monastery known as "Polayya's Maṭh," at the well of which there is (or was) a stone inscribed with the present record. A bad copy was made by Elliot's pandit, and appears in Vol I, fol 17a of the Elliot Collection (Royal Asiatic Society's copy). I now edit the text from good ink-impressions prepared for the late Dr Fleet, which are now in the British Museum⁴—The stone is a long narrow block, with an upper compartment in front containing sculptures, viz in the centre a *linga* on a stand, with an upright figure of a votary facing it on the proper right of it, and still further to the right a cow with sucking calf. Underneath this is the inscribed area, which seems to include three faces of the slab. The first face, containing ll 1-17, is about 1 ft 1 in wide and 3 ft high, the second, containing ll 18-40, is about 10 in wide and 3 ft 7 in high, the third, containing ll 41—end, is about 3 ft 8½ in high and 6 in wide, except at the bottom, where it runs out towards the right to a width of 10¼ in, enclosing the last two lines—The character is far Kanarese, somewhat inclined to angularity, with letters varying from 1 in to 1½ in in height. Its whole tendency is towards the later type, rather than the archaic. The cursive *v* is found only in the ligature *ruva* (ll 51, 58)—The language is Old Kanarese, except for the concluding Sanskrit verses. We may note the sporadic change of *m* to *v* in *-āchchhādanatan* (l 32) and *mahājanavuv* (ll 43-4), and the conditionals *ādade* (l 37) and *appade* (l 45), which all shew a tendency towards the medieval dialect.

The record opens (ll 1-8) by referring itself to the reign of Akalankacharita Irva-bedanga Satyāśraya (*Dynast Kanar Distr*, p 432), while his officer Setti Brahmayya was administering Tumbagi (ll 8-15), and registers gifts to local religious foundations by the latter and a lady named Āyachakabbe, with rules for their management (ll 15 ff.).

¹ *āchāri*, 'an artisan,' is a Tamil form of *āchārya*

² *Puratu* occurs also in *South-Ind Inscr*, Vol. II, p 386, text line 99, and above, Vol. IV, p 224, text line

19. For its meaning see the Madras Epigraphical Report for 1920, p 96.

³ The same measure is mentioned in *South-Ind Inscr*, Vol I, pp. 117, 140

⁴ A notice of the inscription has been given by Dr Fleet above, Vol. XII, p. 306.

The date is specified on ll 11-15 as Śaka 926 (expired), Krōdhi; Āshāḍha *amāśyā*, an eclipse of the sun This is quite regular The Southern cycle is used, and according to the *Sūrya-siddhānta* (true system) the *tithi* quoted was connected with Thursday, 20 July, A.D. 1004, ending 3 h 33 m after mean sunrise (for Ujjain) On that day there was an eclipse of the sun at 3 h 18 m after sunrise by Lankā time Mr R Sewell, who has kindly examined this date at my request, remarks that by the true system of the *Ārya-siddhānta* the result is the same, but that by the mean system of the *Ārya-siddhānta* the *tithi* was connected with the previous Wednesday, 19 July

The place-names mentioned are: the Pagalattī Three-hundred (l 10), the Tumbige Agrahāra (l 11), and Kalkere (ll 23-4) On Pagalattī I may refer to the remarks of Dr Fleet above, Vol XII, p 306 ff, where he identifies it with the district variously called Hagaritṭage, Hagaritṭage, or Hagaratage and connected with the village formerly designated Hagaritage, Hagahṭṭage, or Hagaritṭage, and now known as Hagarattagi, Hagaritṭage, Hagaritṭage, or Hagaritṭagi, in the Shōrāpūr *tāluka* of Gulbarga District in the Nizam's Territories Kalkere cannot be identified with certainty, there are several places of the name.

TEXT 1

- 1 Svasti samasta-bhuvan-āśra-
- 2 ya Śri-Prī(pri)thvi-vallabha
- 3 mahārājādhirāja para-
- 4 mēśvara paramabhatṭāarakam
- 5 Satyaśraya-kula-talaka-
- 6 n=Akalankacharitan=Iṛiya-
- 7 beḍamgam śrīmat Satyā-
- 8 śraya-dēvara pāda-padm-ō-
- 9 pajivi Setti Brahmayyam
- 10 Pagalattī 300raṣa bah-
- 11 ya Tumbige-agrahāra Sa-
- 12 kha-varisha² 926neya Krō-
- 13 dhi-samvatsarad=Āshāda(dha)d=amā-
- 14 vāsyeya[m]duve sūryya-gra[ha*]-
- 15 nadandu Setti Brahmayyam Bra-
- 16 h[m]śva(śva)ra-dēvargge bitta ke-
- 17 y=matta 200 ada * * *
- 18 parekēra-sūle-
- 19 yargge kottā key=ma-
- 20 tta 30 maṭa(ṭha)kke kotta ke-
- 21 y=matta 50 dēvālaya-
- 22 nimittam kottā ke-
- 23 y=matta 120 [*] Kalke-
- 24 ṛeya Gennayyana
- 25 magal=Āyachakabbe ta-
- 26 mma mēnyad=olage ma-
- 27 ta(ṭha)kke kotta key=matta
- 28 50 antu mata(ṭha)kke ma-
- 29 tta 100 [*] Inn-aḷhya pha-
- 30 ladalu brahmacharyya-

¹ From the ink-impressions.

² Read Śaka varsha.

- 31 m=ulla tapaśviya 5
 32 rgge¹ aśan-āchchhādanavam
 33 nadeyisuvar=alli-
 34 y=orvvar=pradhānar=appa-
 35 vargge uttamāgra[m*] na-
 36 deyisuva[r*] brahmacha-
 37 ryy-ādi-lōpam=ādade
 38 poṛa-vadisuvar=[u]-
 39 ttamar=appar=amt=appa-
 40 r=i sthityol=i dharmmamam
 41 pratipālisuva-
 42 r=ūr-odeyarum
 43 mahājanavu-
 44 v=īdan=upēkshi-
 45 sīdar=appade gu-
 46 na-dōsham=ava-
 47 [ra]n=ōṛugum ||
 48 ūr-oḍeyara-
 49 l=akke mahāja-
 50 nadol=akke ā-
 51 van-orvvan=i sthi-
 52 tiyol=allade
 53 perat=ondu sthi-
 54 tiyol kīdi-
 55 suv-avam śvāna-
 56 gā(ga)rdabha-chēndēlam
 57 same(ma)ya-bāhīram [||*]
 58 Sarvvathā pālanīya-
 59 m tta(tu) tad-dēśas=tais=tu
 60 bhūmipai[h*] [i*] ya-
 61 sya yasya ya-
 62 dā bhūmi[s*]=tasya
 63 tasya tadā phalam [||] [1*]
 64 Sva-dattām para-da-
 65 [t]tā[m v]ā yō ha-
 66 rēta vasumdhara[ām] [i*]
 67 shashthim varisha²-sa-
 68 hasrāṇi viśthā-
 69 [y]ām jēyatō kṛmih [||* 2*]
 70 [Ma]ngala mahā-śrī ||

TRANSLATION.

(Lines 1-9) *Setti Brahmaya*, who finds sustenance at the lotus-feet of—hail!—the refuge of the whole world, darling of Fortune and Earth, great Emperor, supreme Lord supreme Master, ornament of *Satyāśraya*'s race, *Akaṣāṅkacharita* *Iṣṭivabedanga* *Satyāśraya-dēva* —

(Lines 10-23) (*While governing*) the *Agrahāra* of *Tumbige*, forming part of the *Pagalatti* Three-hundred, during the last lunar day of *Āshāḍha* in the cyclic year *Krōdhi*,

¹ Read *ṣ tapasvīyargge*.² Read *śhashṭiṣ-varsha*.

the 926th (year) of the Śaka era, during an eclipse of the sun, Setti Brahmayya granted for the god Brahmēśvara a field, 200 *mattar*, for the drummers and public women he granted a field, 30 *mattar*, for the monastery he granted a field, 50 *mattar*, for the benefit of the temple he granted a field, 120 *mattar*.

(Lines 23-29) Āyachakabbe, daughter of Gonnayya of Kalkore, granted for the monastery out of her own honorary estate a field, 50 *mattar* Thus (there are) for the monastery 100 *mattar*

(Lines 29-47) Likewise out of the revenues of this land they shall provide food and clothing for the 5 ascetics living in celibacy In the case of any superiors of this place, if there should be committed a breach of celibacy or the like in conducting the highest offices, they shall expel (them)¹ The leading men shall be such They shall preserve this pious foundation, under this constitution If the mayors of the town and the burgessees should have neglected it, guilt shall accrue to them Any person, whether of the mayors of the town or of the burgessees, who should violate this constitution or any other constitution, (will become) a dog, an ass, or a Chāndāla, an outcast from society

(Verses 1 and 2 Sanskrit formulæ)

(Line 70) Happiness¹ great fortune¹

NO 3—A NAGA FIGURE IN THE MATHURA MUSEUM

By Y R GUPTA, B A

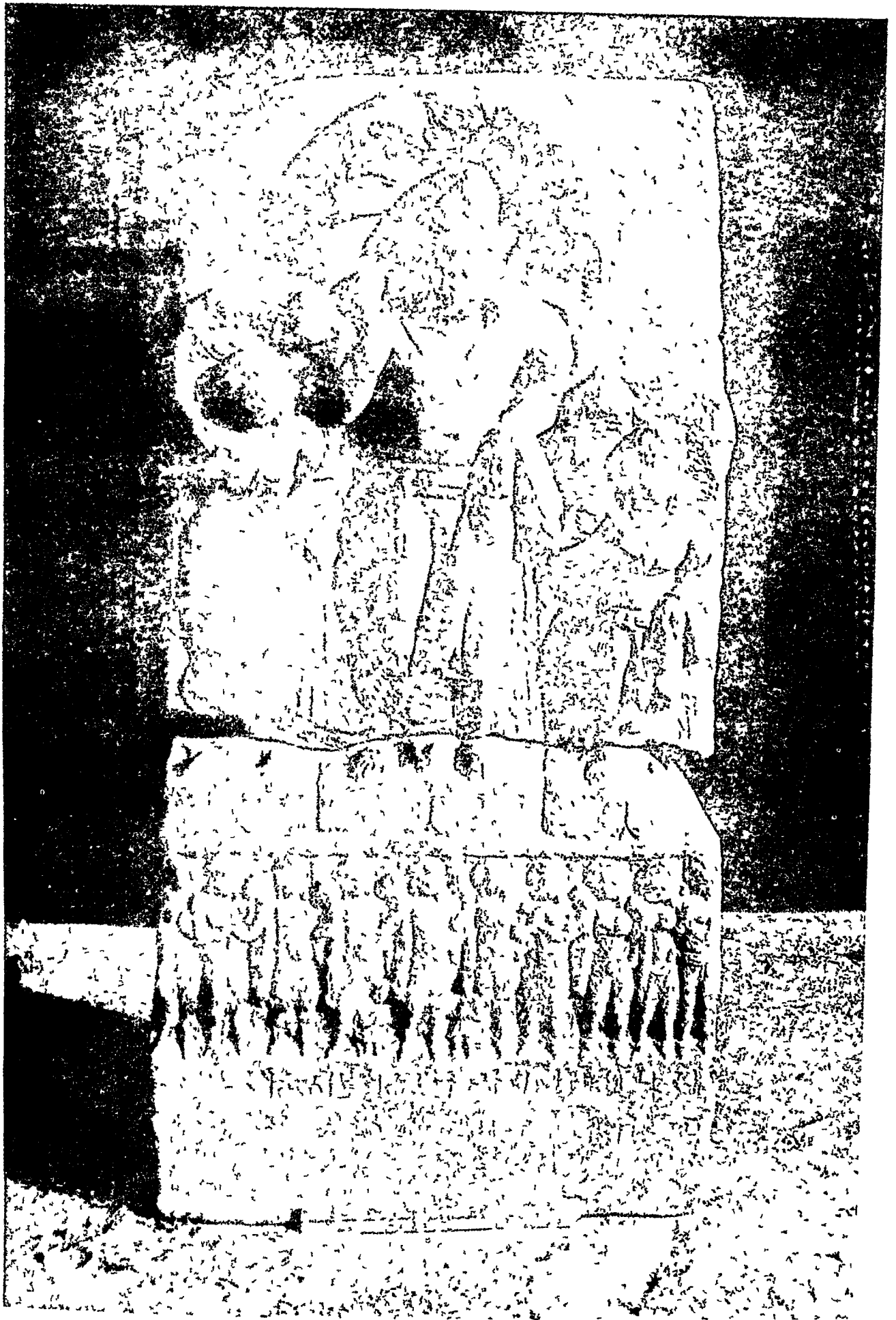
On page 18 of the Annual Progress Report of the Archaeological Survey of India, Northern Circle, for the year 1908-1909 an inscribed pedestal from Rāl (No 45) is mentioned The upper part of the image must have been found since I examined the sculpture at Mathura It represents a Nāga standing between two Nāgis The height of the sculpture is 4' 2' The inscription measures about 2 ft in breadth and 7 in in height

The image came from a mound near the village of Bhadāl about six miles from Mathura. From local enquiries it appeared that people from the neighbouring villages used to visit the spot and vows were made to the deities by barren women When they got sons, they resorted to the place for tonsuring their hair

The Nāga in the centre has a canopy of seven hoods with forked tongues, as is usually the case with the other Nāga images of Mathura, and is similarly dressed The threefold triangular necklace is a little damaged on the breast We can see the bracelet on the right wrist, and a similar one on the left is hidden by the upper garment The position of the hands is similar to that of the Nāga figure from Mathura city of the Kushāna year 52 (A S R for 1908-9, Plate LIV) The left hand holds a small vessel; and a lotus bud is visible in the right The Nāgis are dressed in garments of the same stuff as the Nāga and have the same appurtenances in their hands Beneath the feet of the deities were short inscriptions, now much defaced, which probably contained their names. The vestiges that remain favour this view.

On the pedestal are five males and five females and also two boys with folded hands They are worshippers The right hand of the man to the extreme proper right is gone The male to the left and the female to the extreme proper left have their hands folded, the others holding lotus stalks in their right hands. On the lower part of the pedestal is an interesting inscription

¹ [*Uttamāgram* means 'sumptuous meal', see *South Indian Inscriptions*, Vol III, Part III, p 256, footnote 1. (The meaning is One of the superior members of these will be provided with a sumptuous meal'.—H. K S]



From a photograph kindly supplied by Mr H Hargreaves

SCALE ONE-SIXTH



of three lines, of which the second and third are much damaged, making the decipherment of a part of the third line impossible

Several images of Nāga deities, both inscribed and without inscriptions, have been found in Mathura. Of these the following are dated —

Image of Dadhikarna, of Samvat 26 va 3 di 5 (*Ind Ant*, Vol. XXXIII, p 102, and *Ep Ind*, Vol I, pp 380 f and 390, No. XVIII, and Dr. Vogel's paper in the *Arch Survey Report* for 1908-9, pp 159 ff)

Nāga image of the year 40 of Huvishka, in the second month of winter, the 23rd day (Dr. Vogel's catalogue of the Arch Museum at Mathura, No. C 13, pp 88-9, *A S R.* for 1908-9, p 161)

Nāga image of sa 52 va 3 di 25 (Dr Vogel's catalogue of the Arch. Museum at Mathura, p. 91), *Arch Survey Report* for 1908-9, p 161

Besides, there is a fragment which Dr Vogel assigned to the 3rd century of the Christian era (Dr Vogel's catalogue of the Arch Museum at Mathura, p 90, *A. S. R.* for 1908-9, p 162)

The image described in this note dates from the year 8 of the Kushāna era and is the earliest dated Nāga one at Mathura

The palæography does not call for many remarks. The general characteristics are dealt with in Dr Bühler's *Indian Palæography*, edited by Dr J F Fleet, p 41. The peculiarities observable in the present inscription are these —(1) The *kha* is triangular below, but its hook is large, (2) the upper horizontal stroke of *ra* is turned into a curve, while the lower is split up into lines; (3) *ta* in the 3rd line shows a loop, (4) the lower part of *da* is more slanting than in all examples given by Dr Buhler, (5) *va* is rounded on the left, (6) the left limb of *sa* is never turned into a loop

TEXT.

- L 1 Mahārājasya rāj-[ā]trājasya [Shāhi] Kānikkhasya Sa² 8 grī 4 di 5
 L 2 as[yā]m p[ūrva]āy[ā]m bhagavatah [Bhūmi-nāga]sya (1) pukshirini ār[ā]mō
 cha pra[ti]-
 L 3 [shṭhāpitō] . putras[y]a . turasya niya[mada]kīsyā [sarvva]sat[v]a hi(hita)-su
 (sukhārtham) (2)

REMARKS

(1) There can be little doubt about the reading *Siāmi-nāgasya*. I have examined the stone in all lights and shades. (2) *Hi* and *su* at the end of the third line stand for *hita-sukhārtham*. This abbreviation is due to want of space

TRANSLATION.

In the year 8 of the great king, the king of kings the Shāhi Kānikkha in the fourth (month of) summer, on the 5th day on that (date specified as) above, a tank and a garden of the holy Bhūmi naga was founded tura, son of . . . for the welfare and happiness of all sentient beings

The Prakritized form *Kānikkha* deserves notice. The form with the long *ā* in the first syllable has already been observed in two inscriptions, namely those on the statue of Kāmshka

¹ From the original

² It appears that the engraver first cut *sya*, but afterwards found out his mistake and deeply engraved only *sa*.

himself and the Bodhisattva statue of the Kushāṇa year 3, in the Sārnāth Museum Bhūmānāga is first met with in this record.

No 4—A VAKATAKA INSCRIPTION FROM GANJ.

By V S SUKTHANKAR, PH D

This inscription, which is now brought to notice for the first time, was discovered by my friend Babā Rakhaldas Banerji, Superintendent, Archaeological Survey of India, Western Circle, in 1919, during one of his tours of inspection in Central India. The excellent estampages from which the accompanying blocks have been prepared were made under his direct supervision, and very kindly placed by him at my disposal for publication.

The inscription, Mr Banerji tells me, is engraved on a detached slab of stone which he found lying at the bottom of a *dongā*, adjoining a hill called Maluhā-ṭongī near Ganj in the Ajayagaḍh (Ajaygarh) State in Bundelkhand. Close by is a ruined stone structure, probably a dam to hold the waters of the stream passing along the *dongā*. The find-place of the record is not far removed from the ruined city of Kuṭhārā, where Cunningham discovered in 1883-84 the Nāchanē-ki-talāi inscription, which was first brought to notice by him, in 1885, in *Archæological Survey of India*, Vol XXI, pp 97 f, and re-edited by Fleet in *Gupta Inscriptions*, pp 233 ff and Pl xxxii B. The Ganj inscription, like the one discovered by Cunningham, is one of the oldest records of the Vākātaka dynasty, and as such is worthy of being carefully preserved.

From the subjoined transcript it will be seen that the text of our inscription is practically identical with that of the Nāchanē-ki-talāi record of the reign of Mahārāja Prthivishēna, edited by Fleet in *Gupta Inscriptions*, it differs from the latter only in the length and the number of lines, and in the spelling of a couple of words. But our inscription is in a much better state of preservation than that edited by Fleet, at all events the stone has yielded an impression far superior to the one from which the block accompanying Fleet's article was prepared. Consequently we can study the forms of the letters in the subjoined facsimile much better than in that of the Nāchanē-ki-talāi version. Moreover, the writing of this inscription being perfectly distinct, we can give a transcript which is more reliable, and which at the same time discloses certain minor inaccuracies in Fleet's transcript, errors which even then could have been avoided by a more patient study of the available material.

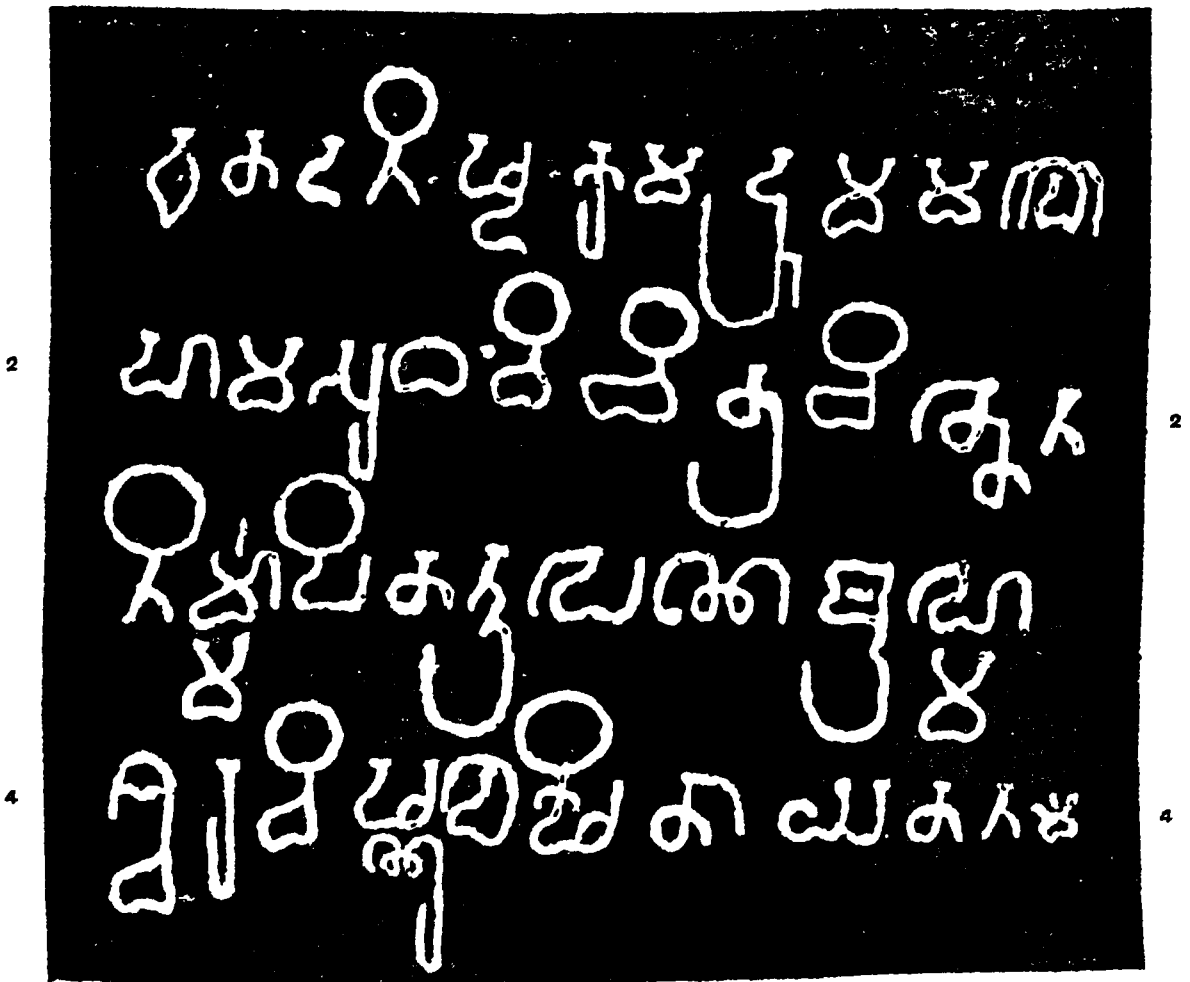
The writing covers a space about 25" broad by 12" high. In the centre of the first line of the inscription there is a sculpture of a wheel, of which only a part is visible in the facsimile. The average size of such letters as *m*, *p* and *v* is about 2"—The characters belong to the 'southern' variety of alphabets, of which the distinguishing features, in our inscription, are the hooks at the lower ends of the verticals of *l* and *r*. In particular, we may say that the letters are a specimen of the Central Indian alphabet of the period, which on account of the peculiar 'box-headed' tops of the letters is known as the 'box-headed' sub-variety of the southern alphabet¹. In our specimen the boxes are very conspicuous, and uniformly hollow. The letters are unequal in size and uncouth in appearance. It may be added that they betray a conscious effort to substitute angles for curves in the configuration of letters. The letters *t* and *n* are sharply distinguished from each other—the latter has always a knot at its lower end.—The language is Sanskrit, and the inscription is in prose.—As regards the orthography the only point calling for remark is the phonetic doubling of the *d* of *dh*, in °*d-ā(m)nuddhyātō* (l 2), before *γ*, and of the *t* of *th*, before *r*, in *punyā-rtthē* (l 3).

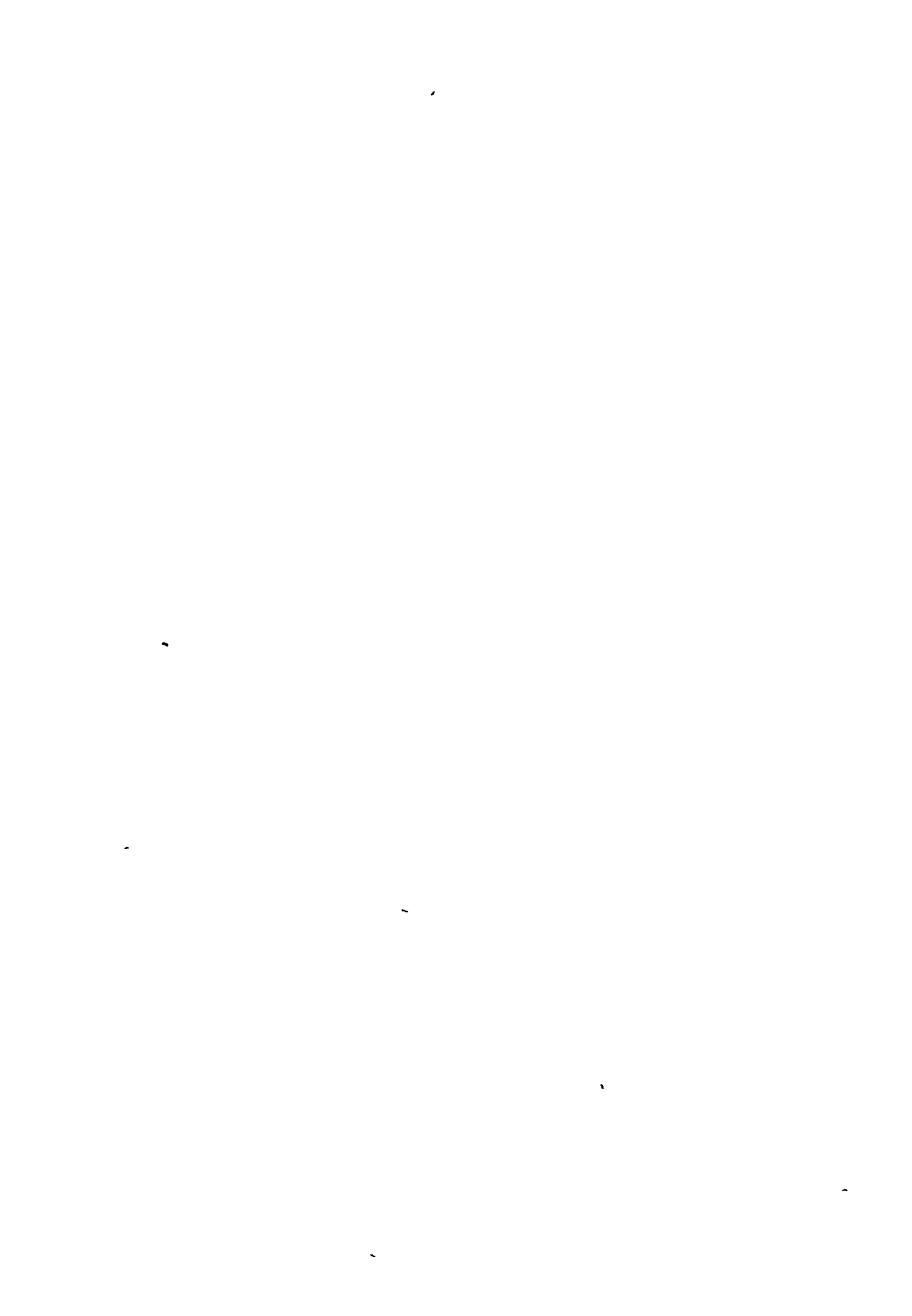
¹ See Bühler, *Indische Paläographie*, p. 62.

1. A Vakataka Inscription from Ganj.



2 Mandagappattu Inscription of Vichitrachitta





The inscription, which is a record of the reign of *Mahārāja Prithivishēna* [I] of the Vākātaka family, states merely that a feudatory of his, Vyāghradēva by name, had made something or other for the sake of the religious merit of his parents. The exact nature of this act of piety has been left unspecified, just as in the other version discovered by Cunningham. The silence of these records on the point leads us to infer that the slabs on which the inscriptions are inscribed must have been built into that the making of which they were intended to record.

Our information regarding the Vākātaka dynasty is unfortunately very scrappy. All the important events in its history known to us have been succinctly summarized by Kielhorn¹ in his article on the Bālāghāt plates of Prithivishēna II, we can even now add nothing of consequence to what has been said there. We do not possess exact dates for any of the kings of this family, nor can we form any clear idea of the extent of the country ruled over by them. Regarding Prithivishēna I we know that he was the son of Rudrasēna I and the great-grandson of Pravarasēna I, the latter being either the very first king or one of the early kings of this house. It should seem that the Vākātaka king at whose hands the 'lord of Kuntala' had suffered defeat, as recorded in the Vākātaka stone inscription at Ajantā,² was this same Prithivishēna. Beyond these few facts we know nothing of much consequence regarding the king referred to in our record.

About Vyāghradēva, the feudatory of Prithivishēna, we know still less. Indeed, Vyāghra appears as the name of chieftains in several well-known inscriptions,³ but it is not possible to identify our Vyāghradēva with any of them.

Bühler⁴ assigns the copper-plates of the Vākātaka Pravarasēna II., the grandson of Prithivishēna I, to the fifth or sixth century A.D., it is not known to me on what grounds. I have examined the inscriptions of the Vākātaka dynasty and compared them with the allied inscriptions engraved during the time of the Guptas,⁵ of the kings of Śarabhapura,⁶ of Tivara,⁷ of Kōsala and of the early Kadamba kings,⁸ without being able to arrive at any definite conclusion regarding the age of the Vākātaka inscriptions. Bühler's date, however, appears to me to be far too early. My impression is that there can be no objection, on palaeographic grounds, to assigning this record of the Vākātakas to as late an epoch as the seventh century A.D. I conclude this short notice by drawing attention here to the remark of Kielhorn that the Bālāghāt plate of Prithivishēna II, who was the son of the great-grandson of the Prithivishēna of our inscription, "may be assigned with probability to about the second half of the eighth century A.D."⁹

TEXT.¹⁰

- 1 ¹¹Vākātakānā mahārāja-śm¹².
- 2 Prithivishēna-pād-ā(m)nuddhyātō Vyāghradē.
- 3 vō mātāpitrō[h*] ¹³puny-ārthō ¹⁴kṛitam=ita [||*]

¹ Above, Vol IX, pp 268 f

² *Arch Surv. West Ind*, Vol. IV, p 124, verse 8.

³ Kielhorn's *List of Inscriptions of Northern India*, Nos. 270, 387 and 509

⁴ *Indische Palaeographie*, pp 62 f

⁵ *Corpus Inscriptionum Indicarum*, Vol I, Nos. 2-3.

⁶ *Gupta Inscriptions*, Nos 40 41

⁷ *Ibid*, No. 81

⁸ *Ind Ant*, Vol VII, pp 35-7

⁹ Above, Vol IX, p 270

¹⁰ From a set of estampages prepared and kindly lent to me by Mr R D Banerji

¹¹ Read *Vākātakānām* Fleet in his transcript has wrongly spelt this word with the dental *n* in *Gupta Inscriptions*, Nos 53 54

¹² Read *śm*

¹³ Read *puny ārtthō*. Here also Fleet has wrongly transcribed the word, both as regards the dental *n* and the case ending. In Cunningham's version the word is spelt exactly as here.

¹⁴ The construction is faulty. The verb should be in the active voice.

TRANSLATION.

Vyāghradēva, who meditates on the feet of the *Mahārāja* the illustrious Pṛthivishēpa, (of the family) of the Vākātakas, has made (this) for the sake of the religious merit of (his) parents.

No 5—MANDAGAPPATTU INSCRIPTION OF VICHITRA-CHITTA

By T A GOPINATHA RAO, M A, TRIVANDRAM

The small village of Mandagappattu is situated in the Villupuram Taluka of the South Arcot District and is about five miles south-west of Pēranai, a station on the main line of the South Indian Railway. In a small hill near Mandagappattu is cut out a shrine, on the façade of which is engraved the inscription which is edited below. The shrine has at its back end three niches, which are dedicated to the gods Brahmā, Īsvara and Vishnu respectively. On the panels on either side of this shrine is carved a *dvāra-pālaka*; the figure on the right very much resembles those which are found in the rock-cut shrines attributable to the Pallava king Mahēndravarmān I. From this and other considerations based upon its architectural peculiarities Mons G Jouveau-Dubreuil has attributed its excavation to Mahēndravarmān I. A photograph of the front view of this rock-cut shrine is given by him in his *Pallava Antiquities*, Vol I, Pl XXVIII. The cave was visited by the staff of the office of the Madras Epigraphist, and the inscription was copied in 1905. Regarding this cave Mr. Venkayya wrote in his *Annual Report on Epigraphy* for that year thus —“The cave at Dalavāṅṅūr in the Tindivanam Talukā consists of a shrine and a *mandapa* in front of it, thus resembling to a certain extent the upper cave at Trichinopoly, while that at Mandagappattu (mentioned in Mr Sewell's *List of Antiquities*, Vol I, p. 209) is a smaller one, which looks as if it had been left unfinished.

There is only one inscription in the Mandagappattu cave, which is so much damaged that the name of the king cannot be made out. To judge from what remains of it, we may say that it must also belong to the Pallava period. And, as we know that it was Mahēndravarmān I of that dynasty that excavated almost all the hitherto known monolithic caves in the Tamil country, we may not be altogether wrong, if we suppose that the one at Mandagappattu also came into existence during his reign. Depending upon probability, Mr Venkayya hazarded a guess which has now turned out to be quite correct. It is true that the shrine was excavated during the reign of Mahēndravarmān I, but no serious attempts were made by the Madras Government Epigraphists at deciphering this epigraph. The credit of having made out the name of the king belongs to the French Professor, Mons G Jouveau-Dubreuil, of Pondicherry. He has visited Mandagappattu more than once to obtain eye-copies and mechanical impressions, as also to acquire any further knowledge by studying the inscription directly from the stone. His zeal and perseverance have been richly rewarded by his discovery of the name of the king in whose reign the shrine was excavated. At this stage he sent me the impression of the inscription and his eye-copy, so that I might complete the reading of the document, translate and annotate it. When my notes, translation, etc, went to him, it had become impossible for him to edit the inscription himself, for he had to proceed to Cochīn China on military duty. He therefore sent me a good photograph of a very carefully prepared eye-copy and asked me to edit the epigraph as early as possible. From the mechanical impression kindly lent to me by Mons Jouveau-Dubreuil and the photograph of the eye-copy prepared jointly by me and that gentleman I edit this important inscription below.

The record consists of four lines of writing in Grantha characters of the first half of the 7th century A D, and is a Sanskrit verse in the *Giti* metre. As has been remarked by Messrs. Venkayya and Jouveau-Dubreuil, the inscription is somewhat badly damaged, and it is only with difficulty that one can read it successfully, but one need not on this score imagine that the

reading is fanciful. The inscription states that the shrine was caused to be made by the king Vichitra-chitta for the accommodation of the three deities Brahmā, Īśvara and Viṣṇu, without using in its construction bricks, timber, metal or mortar. This short record is of importance in more ways than one. The most important information conveyed by it is that before the time of Vichitra-chitta bricks, timber, metal and mortar were the common temple building materials. Evidently the basement and walls of the buildings were of brick work, plastered with chunam, and the superstructures were composed of wood work held in position by the use of metallic nails and bands. This, in fact, is even to this day the mode of construction of temples on the Malabar Coast. It is difficult to find a single temple in Southern India which belongs to a date prior to the 7th century of the Christian Era. One would naturally be inclined, therefore, to surmise that temple building was never in vogue before that century. But immediately after this period we see a number of temples which have sprung into existence, and this also seems to lend weight to the surmise that no temples were built before the time of Mahēndravarma I in Southern India. The statement made in this inscription that Mahēndravarma did not employ bricks, timber, metals and mortar clearly warrants us in drawing the conclusion that the temples built before his time were all of such easily perishable materials as bricks, etc., that they were all ruined in course of time, and that this is the first rock-cut shrine of his. This is clear from the special mention of *avishṭaka*, etc., in the case of this shrine. It is impossible for a number of temples to have come suddenly into existence from the beginning of the 7th century, unless the building of temples had been practised long before.

We know from the inscriptions of the cave temple at Pallāvaram that Vichitra-chitta was one of the *birudas* of Mahēndravarma I (see Pl. XXI in the *Pallava Antiquities* of Mons G. Jouveau-Dubreuil, wherein the name Vichitra-chitta is clearly legible, vide also for the *biruda* Vichitra-chitta, p. 74, para 14, of *Ep. An. Rep.* for 1909). It is, therefore, patent that the shrine was caused to be excavated by Mahēndravarma I.

Again, the *biruda* Vichitra-chitta means 'the curious or inventive-minded one'. One can easily concede to the king Mahēndravarma the title 'inventive-minded,' in so far as he avoided bricks, etc., commonly used by all in the construction of their buildings, and devised quite a new path, namely the cutting out of rock-temples, which needed neither bricks, timber nor mortar. His country extended far north of the river Kṛṣṇā, where he must necessarily have seen some of the earlier rock-cut temples and so have introduced into Southern India the new style of cutting temples in rock. That he was the first to introduce into Southern India the method of excavating temples in the solid rock is certain; for we do not find even a single rock-cut shrine which belongs to a time before the reign of Mahēndravarma. We know of no less than fifty rock-cut shrines in Southern India, not one of which is earlier than the time of this Pallava king. In fact, the art of cutting temples out of rock was contemporaneous with the Pallava dynasty and disappeared after them.¹

The *birudas* of Mahēndravarma are not mere boasts, each of them has a meaning which is based upon some act done by him. We have seen that the *biruda* Vichitra-chitta is assumed by him for his invention of a new method of raising temples. Similarly, the *biruda* Matta-vilāsa is, in fact, indeed due to his having composed the pleasant little burlesque the *Mattavilāsa-prahasana*, in which he ridicules an actual *matta* or madman, a drunken Kāpālīka and meat eating Buddha Bhikṣu.² Mention is made of this burlesque in his inscription found in Māmandūr,

¹ [See *South-Indian Images*, Introduction, pp. 1 f.—H. K. S.]

² The following extracts from this work will show that it was the composition of Mahēndravarma

सूत्रधार — भवति । श्रुयताम् । पद्मवकुलधरश्चिमखलकुलपर्वतस्य सर्वजयविजितसमस्तसामन्तखलस्य आखलस्य
समपराक्रमयियः श्रीमद्दिमानुरूपदानविभूतिपरिभूतराजराजस्य श्रीसिद्धविणुवर्मणः पुत्रः शत्रुपङ्कग्निसिद्धपर
परहितपरतन्त्रतया महाभूतसधर्मा महाराज श्रीमद्वेन्द्रविक्रमवर्मा नाम ।

The *birudas* Avani-bhājana, Guna-bhara, Matta-vilāsa and Śātra-malla are also introduced ingeniously in the play, these, we know, are the *birudas* of Mahēndravarma I.

the portion where it occurs is somewhat damaged, but the name of the work is not broken, the passage runs thus *Mattavilāsādi-padam=prahasan-ōttamam*¹ and in the other fragments of the inscription we see that mention is made of poets like Vyāsa and Vālmiki, as also of *tālas*, etc., of music Thus then each *biruda* of Mahēndravarman appears to have been bestowed on him or assumed by him for some ostensible reason The *biruda* Sankirna jāti² of this king is rather curious, it means 'of mixed caste.' Perhaps the parents of Mahēndravarman were of different castes. The significance of the other *birudas* will become patent as further researches are made

It is interesting to note that at the time of Mahēndravarman the three deities Brahmā, Śiva and Vishnu were enshrined together in the same temple in adjacent niches Such a group consisting of Brahmā, Vishnu and Śiva is called Hari-Hara-Pitāmaha or Dattātrēya (See my *Elements of Hindu Iconography*, Vol I, pp 251-256, as also Pl LXXII, fig. 1 of the same volume) At Mahābalipuram also there exists a Trīmūrti cave, but, strangely enough, the cell which is supposed to have been dedicated to Brahmā is occupied by a figure which has only one face The figure of Brahmā ought, according to the *āgamas*, to be always shaped with four faces, and in practice also we find that three faces are always shown in sculpture, the fourth being supposed to be at the back of the figure In spite of the fact that the figure in the Mahābalipuram rock-cut shrine has only one face Dr Vogel in his *Iconographic Notes on the Seven Pagodas*, contributed to the Director-General of Archaeology's Annual Report for 1910-11, identifies the figure with Brahmā (see page 58) Prof Jouveau-Dubreuil has sent me a note containing his own explanation concerning this image for publication here, which I reproduce below "The Trīmūrti cave at Mahābalipuram is formed of three cells, the one on the right contains an image of Vishnu, and the middle one an image of Śiva It is, therefore, but natural to suppose that the left cell contains an image of Brahmā I was the first author to remark (vide *Archéologie du Sud de l'Inde*, Vol II, Pl XVIII B) that the god in the left cell has only one head and so could not be identified with Brahmā I have thought fit to affirm that this unknown god is Subrahmanya, who is represented also on the ground-floor of the Dharmarāja Ratha³ (*Archéologie du Sud de l'Inde*, Vol II, Pl XVIII B) However, the problem why the trinity Subrahmanya, Śiva and Vishnu is found in place of the usual trinity Brahmā, Vishnu and Śiva has remained till now unsolved I believe I shall be able to explain why Subrahmanya is substituted for Brahmā in the group of the trinity at Mahābalipuram Mr. T A Gopinatha Rao says in his *Elements of Hindu Iconography*, Vol II, Part II, page 439, 'Brahma-śāstā: This is the aspect of Subrahmanya in which he put down the pride of Brahmā by exposing his ignorance of the Vēdas He should be represented with a single face and four arms; he should have only two eyes In the back hands there should be the *akshamālā* and the *kamandalu*,⁴ and the front hands should be held in the *varada* and *abhaya* poses The colour of Brahma-śāstā should be the red of the lotus flower' If we note that the image of Subrahmanya in the Trīmūrti cave wears on its breast a double chaplet of *rudrāksha* beads, and that at the entrance to the sanctuary there are two personages dressed as Sannyāsins and having pointed beards, we shall conclude that the sculptors of Mahābalipuram have put Subrahmanya in the place of

¹ This fact was also discovered by Prof Jouveau-Dubreuil see his *Pallavas*, p 38

² [*Sankirna-jāti* is the name of a variety of musical time Perhaps Mahēndravarman I held this *biruda* as an inventor of this method of keeping musical time.—H. K S J]

³ Behind the rock bearing the Trīmūrti shrine are executed the figures of a peacock, an elephant and a monkey, carved in half relief We know that the peacock is the characteristic vehicle (*rāhana*) of Subrahmanya. The elephant is generally associated with the temple of Śāstā, and is here perhaps intended to show that the image is that of Brahma śāstā [Temples of Traipurushadēva are found dedicated to Sun, Śiva and Vishnu. Why should not the Brahma śāstā figure represent the Sun?—H. K S J]

⁴ Dr Vogel takes the objects in the back hands as a flower and a ring, neither of which is right. The hands carry only a *kamandalu* and an *akshamālā*, as required by the *āgamas*.

Brahmā because they have placed there Brahma-sāstā, a deity superior to Brahmā in his knowledge of the Vēdas I think fit to draw attention to the existence of the trinity consisting of Subrahmanya, Śiva and Vishnu and also to explain it with the help of the above-mentioned excellent work of M R Ry T A Gopinatha Rao ¹

TEXT.²

- 1 एतदनिष्टकमद्भुतम[मली]-
- 2 ह्यमसुधं[विचित्रचि]त्तेन [I*]
- 3 निर्मापितसुपे[ण] ब्रह्मे-
- 4 श्वरविष्णुल[क्षि]तायतनम् [II*]

TRANSLATION.

This brickless, timberless, metalless and mortarless temple, which is a mansion for (the Gods) Brahmā, Īśvara and Vishnu was caused to be created by the king Vichitra-chitta.

No 6 —THE FIRST ARYA-SIDDHANTA.

MEAN SYSTEM

(A continuation of the author's "Indian Chronography")

By ROBERT SEWELL, I C S (RETIRED).

303 It has long been known that in earlier years the Pañchāᅅg Brahmins in India framed their local almanacs on calculations made by the use of the mean, as opposed to the true or apparent, motions of the sun and moon The change from the mean to the true systems of calculation was advocated by Śripaᅇu (A D 1040), and the latter system may have been adopted in some places about that time, becoming more general from about A D 1100 onwards India, however, is a very conservative country, and the late Dr Fleet was of opinion that the mean system may have been adhered to, in some tracts at least, till a far later date

304 With this opinion in mind I have prepared the Tables which follow, so as to cover the period of nine centuries from Āryabhaᅇa's date, K Y 3600 (A D 499-500), to 4500 (A D 1399-1400) It would be well if all dates of inscriptions that have hitherto been set aside as irregular by epigraphists could be re-examined, seeing that the difference between the two systems of the *Ārya Siddhānta* constantly leads to differences in the computed positions of the sun and moon on the same civil day, and consequently to differences in the almanac, let alone the differences caused by the use of different Siddhāntas

Thus, to give an example The civil day, Monday, 21 October A D 1090, was by the *Ārya Siddhānta* true system described as "Monday, 25 Tulā, nija Āśvina kr 10," while by the mean system it was "Monday, 27 Tulā, Kārttika kr 10" Thursday, 31 Oct, in the same year was by the true system "Thursday, 5 Vᅇśchika, Kārttika śukla 6," while by the mean system it was "Thursday, 7 Vᅇśchika, Mārgaśira śukla 5"

305 The present Tables are based on the First *Ārya Siddhānta* as amended by Lalla The principal Table LXXVI is framed on the lines of the *Indian Calendar*, Table I, so as to meet the convenience of epigraphists who have become accustomed to the use of that work The numbers of the columns are made to correspond in both Tables

Results of calculation carried out by the present Tables will be found to correspond with those worked by use of Professor H Jacobi's skeleton Tables published in Vol XI above There is no need for me to dwell on the great services he has rendered to the cause of Indian history and epigraphy These are well known All I have done is to follow in his footsteps,

¹ This note is reproduced here exactly as it was sent by Mons G. Jouveau Dubreuil, no corrections have been effected in it

² [For Plate see the article on 'A Vākātaka Inscription from Ganj.'—F W T]

verify his figures to the best of my ability and apply the results to practical use. Any little differences that exist between us have been fully set forth and their cause explained

Elements Ārya Siddhānta, mean system

306 (i) The length of the mean sidereal solar year is $365^d 6^h 12^m 30^s$, or $365^d 258680\frac{1}{2}$
(ii) For the sun's mean motion per day, hour, etc., see Tables XLIII, XLIV, above,

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(iii) The distance of mean moon from mean sun (our a), measured in 10,000ths of the circle, i.e. 10,000ths of the mean synodical revolution of the moon and excluding 12 whole revolutions, increases, during one sidereal solar year, from 0 to $3088\cdot231484714$. That is the advance of a in the year. Table LXIV A above, col 3, shews this advance per day, and Table LXV the advance per hour, etc.

(iv) The value of a in mean reckoning corresponds to that of t , the tithi-index, in true reckoning. It shews what mean tithi was current at the moment in question¹. In general calculation by the Tables this moment is the moment of mean sunrise at Lankā, taken as 6 A.M.

(v) In reckoning by 10,000ths of the circle the advance of a in one mean solar month is $307\ 352623726$

(vi) Each mean solar month consists of $30^d 10^h 31^m 2\frac{1}{2}^s$. The collective duration from the moment of mean Mēsha-samkrānti (the beginning of the mean solar year when the mean sun is at celestial long 0°) to each separate samkrānti, or the moment when the mean sun enters each of the signs, is given in Table LXXVII

(vii) The length of each mean lunar month is $29^d 12^h 44^m 2^s 79$ or $29^d 530587946$, during which the mean moon's distance from mean sun increases, in our circle reckoning, from 0 to 10,000. The length of one mean tithi, or one-thirtieth of the mean lunar synodic month, is $23^h 37^m 28^s 09$, or $0^d 984352931$, during which, in circle reckoning, the increase of a is $333\ 3$

(viii) The *sōdhyā*, or time-difference between the moments of arrival at celestial long 0° of the true and mean suns, which moments are known respectively as the true and mean Mēsha-samkrāntis, is $2^d 3^h 32^m 30^s$, true Mēsha-samkrānti being the earlier

The time of occurrence of mean Mēsha-samkrānti in every year is given in Table LXXVI, cols. 13 to 17

(ix) The samvatsara name of the solar year is the same by both true and mean reckonings, except in the years A D 564-5, 905-6, 990-1, 1246-7 and 1331-2. A special footnote is appended to the main Table LXXVI in each case

(x) There can be no suppression of a lunar month when calculation is made by the mean system, for the length of a mean solar month is greater than that of a mean lunar month, so that two mean solar samkrāntis cannot take place within the limits of one mean lunar month

(xi) Let it be noted that no intercalation of a lunar month can take place unless, at mean sunrise of the day on which mean Mēsha-samkrānti took place, the value of a is more than 6280 4892, or unless at the moment of mean Mēsha-samkrānti the value of a is more than 6619 1211, the latter value being 10,000—3380 8789, the total increase of a from Mēsha- to Mīna-samkrānti, and the former being 6619 1211—338 6319, the latter value being the increase of a in 24-hours

The 19-year intercalation cycle

307 (See Indian Calendar, § 50, p 29) By the mean system the cycle-sequence is found to work with almost perfect regularity. After four successive intercalations at intervals of 19 years each the intercalated lunar month gives way to the month preceding it. But there are

¹ The equations of sun and moon are not taken into account in mean reckoning.

two exceptions in the nine centuries embraced in Table LXXVI. Between A.D. 751 and 827 there is a run of five intercalary mean Pausha months, and between A.D. 1242 and 1318 there is a run of five intercalary mean Āśvina months.

In eleven instances the names of the mean intercalary months given in Table LXXVI differ from those stated in the *Indian Calendar*. These differences are due to the former calculations having been based on Professor Jacob's earliest Tables published 30 years ago, while the present ones agree with the results of calculation made by his more recent elementary fixtures. Each difference is specially noted at foot of Table LXXVI.

The nakshatra.

308 In the mean system the position at any moment of the mean moon in the ecliptic circle, i.e. the mean moon's nakshatra, is found by adding her mean distance from the mean sun to the latter's longitude, that is to say, by adding to the value of s (the mean sun's longitude) the value of a at the same moment as found by calculation for the mean tithi. All work by the Tables being in the first instance for the mean positions of sun and moon at mean sunrise of any day, Table LXXX provides the sun's mean long., s , in 10,000ths of the circle, for each period of 24-hours measured from the moment of mean Mēsha-samkrānti, while Table LXXXI states the same increase for fractions of the day. To obtain the value of s for mean sunrise of any day it is necessary to note first its value after the interval of days between the day of Mēsha-samkrānti and the given day (Table LXXX), and, since that value is measured from the moment of Mēsha-samkrānti and not from mean sunrise, afterwards to deduct from the value so obtained the increase during that fraction of the day (Table LXXXI). The result is the required s , or the mean sun's long. at mean sunrise of the given day. Then $s+a=n$, the nakshatra index required, or the mean moon's place in the ecliptic circle at mean sunrise of that day.

The Rule for work, then, is as follows. Find the value of a ($=t$), the mean tithi-index at mean sunrise of the given day (*Example 2 below*). Note the serial number of the day as measured from Jan 1. Deduct from this the serial number of the day of mean Mēsha-samkrānti (Table LXXVI, col 13, in brackets). This gives the number of intervening days. Turn to Table LXXX and note the value of s against that interval of days. Deduct from this the mean sun's movement given in Table LXXXI during the hours and minutes stated in Table LXXVJ, col. 17. The result is the required value of s at mean sunrise of the given day. Add s to a . This $= n$, the required nakshatra-index. Table LXVIII above, or Table VIII, *Indian Calendar*, gives the name of the nakshatra.

The Tables.

309. Table LXXVI corresponds to Table I *Indian Calendar* in formation and is to be used in the same way. Here the value of a is the value of t . It gives the tithi-index direct without further calculation.¹

Table LXXVII shows the duration and collective duration of mean solar months, and the increase in the moon's phase, a , during each such month.

Table LXXVIII gives the value of a at the beginning of each Kalyuga century.

Table LXXIX corresponds, with a necessary shift of position, to Table LXXIV above; the use of which is fully explained in my former papers, §§ 279, 301.

¹ To find the value of a , or t , i.e. the exact moon's phase, in 10,000ths of the circle, at any moment of any day, note its value at mean sunrise of the first civil day of the lun-solar year, as given in Table LXXVI (col 23), and add its value for intervening days, hours, etc. (Tables LXIV, LXV under heading a).

Tables LXXVIII and LXXIX, with Table LXXIII above (under heading *a*), which gives the value of *a* at the beginning of each year of the Kaliyuga century, enable us to find the value of *a* at mean sunrise of the civil day Chaitra śukla 1 at the beginning of each luni-solar year. Tables LXXVIII and LXXIII yield the value of *a* at mean sunrise of the day on which mean Mēsha-samkrānti occurred, and Table LXXIX enables, by addition, the *a* for the interval of days between that day and the day Chaitra śukla 1 to be ascertained. [The same can be found by subtracting from the sum of the values obtained from Tables LXXVIII and LXXIII (col *a*) the value for those intervening days given in Table LXIV above (see Example 1).]

The use of Tables LXXX and LXXXI is explained above (§ 308). They correspond, *mutatis mutandis*, with Tables XLVIII A, XLIX above used in calculation for the sun's true longitude.

310 The century-Table LXXVIII requires some further explanation. Its object is to determine the mean moon's phase, *a*, at mean sunrise of the opening civil day of each Kaliyuga century, i.e. the day on which mean Mēsha-samkrānti occurred at some time later on that day. Reference to Table LXXVI shows that this opening day occurred at the beginnings of centuries 36 and 37 KY on a Sunday, and in centuries 38 to 45 on a Saturday. From Table I, *Indian Calendar*, by adding the *sādhya* interval (above, § 306, viii) to the date and time there given for the moment of true Mēsha-samkrānti, we find that in centuries 46 to 48 it fell on a Friday. In the mean system, therefore, centuries 37 and 45 were defective centuries, while the rest were common.

Table LXXVIII corresponds to Table LXXII above, which concerns true solar years, and by the true system, i.e. calculation by the movements of true sun, the only defective century was century 42. This accounts for the difference between the two Tables.

It has been shown above (§ 299, 1) that the actual value of *a* at mean sunrise of Sunday, 21 March A.D. 499, on which day, 6 hours later, occurred the moment of mean Mēsha-samkrānti (mean sun at 0°) at the beginning of Kaliyuga century 36, was, in notation in 10,000ths of the circle, 7715 352496330. The values of *a* for later century-beginnings are found by addition to this of the century-increases of *a*, common and defective as required.

EXAMPLES

Example 1 To find the European day, week-day, and phase of mean moon, i.e. the mean tithi-index *a* (which = *t*, the index) at mean sunrise of the first civil day of the luni-solar year, that is to say, of the day called "Chaitra śukla 1" of the year in question.

[This example is given in order to enable any student to verify the entries in Table LXXVI, cols 19-23. For ordinary date work the entries themselves afford all information.]

The mean new moon which marks the astronomical beginning of any mean lunar year is the new moon at the end of the lunar month Phālguna of the previous year. The moment of its occurrence is always earlier than the moment in the current year of mean Mēsha-samkrānti, the beginning of the mean solar year. The civil day next following the moment of the initial mean new moon of the year is called "Chaitra śukla 1," that tithi being current at mean sunrise of that civil day. Our tabular calculations being for mean sunrise, the value of *a* in Table LXXVI, col 23, must always be between 0 and 333 3, the last being the limit of the tithi.

To find its value for any year we must first calculate the value of *a* at mean sunrise on the day of occurrence of mean Mēsha-samkrānti from Tables LXXVIII and LXXIII (above) under heading *a*.

This done there are two processes by which the mean sunrise value of *a* on the day Chaitra śukla 1 can be obtained. One is to use Table LXIV, which, by deducting from the *a* of mean Mēsha-samkrānti-day mean sunrise (already found) the next lower value of *a* in the Table as given for the first 30 days, yields at once the interval of days between Chaitra śukla 1 and

Mēsha-samkrānti, the value of a at mean sunrise of the former, and the required week-day. The second process is, using Table LXXIX, to find such earlier day as by adding its a to the a of Mēsha-samkrānti, already found, will yield a result between 0 and 333 3. The Table then shows the interval of days between the two sunrises, and the week-day corresponding to Chaitra śukla 1.

A. Take for instance the year K.Y. 3725 expired, A D 624-25. Mean Mēsha-samkrānti occurred in that year (Table LXXVI, cols. 13-17) on Wed 21 Mar, —serial day 81, from Jan. 1. We take the value of a at mean sunrise at the beginning of the Kaliyuga century and at the beginning of the expired year from Tables LXXVIII and LXXIII respectively. The result gives the value of a at mean sunrise of Mēsha samkrānti day in the given year

	<i>w-d</i>	<i>a</i>
(Table LXXVIII). K Y cent 37	(1)	6583 1816
(Table LXXIII above) K.Y year 25	(8)	2047 6413
<hr/>		
At mean sunrise on Wed 21 Mar, the day of occurrence of mean Mēsha-samkrānti	(4)	8630 8229

Process 1

(Table LXIV above). Next lower value of a in the first 30 days of the Table, i.e. that for 25 days

At mean sunrise of the day Chaitra śukla 1

This Chaitra śukla 1 civil day was (81-25=) Day 56, or (Table IX, Indian Calendar, or LXIX above) Sat 25 Feb A D 624

Process 2

At mean sunrise on Wed 21 Mar, the day of mean Mēsha-samkrānti (as above)

(Table LXXIX) The only value of a which yields result between 0 and 333 3

At mean sunrise of the day Chaitra śukla 1

Table LXXIX shows that the interval of days was 25, and the result is in all respects the same as the former

B Calculation for the mean sunrise value of a on the day of mean Mēsha-samkrānti, the first step shewn in the above, by use of Tables LXXVIII and LXXIII sometimes results in the day found being not the actual day on which Mēsha-samkrānti took place but the day next to it. This is inevitable, seeing that only one Table has to stand for the odd years of all centuries. In such case the necessary adjustment must be made for one day's difference. The entries in Table LXXVI, cols 13 to 17, are conclusive as to the actual day.

Take the year A D. 625-26, K Y. 3726 expired, In that year mean Mēsha-samkrānti occurred on Thurs 21 Mar, serial day 80

	<i>w-d</i>	<i>a</i>
(Table LXXVIII) K Y century 37	(1)	6583 1816
(Table LXXIII) K Y year 26	(5)	5986 9072
<hr/>		
At mean sunrise of Friday, 22 Mar	(6)	2570 0888
Deduct value for one day (Table LXIV)	-(1)	-338 6319
<hr/>		
At m. sunrise of Thurs 21 Mar, the day of mean Mēsha-samkrānti	(5)	2231 4569

For the a of Chaitra śukla 1 and its day and week-day, we use either of the two processes.

<i>Process 1</i>	<i>w-d</i>	<i>a</i>
At m sunrise of m M. S-day, Thurs 21 Mar	(5)	2231 4569
(Table LXIV above) Next lower value of a in the first 30 days of the Table, viz for 6 days' interval	-(6)	-2031 7912
At mean sunrise of Fri. 15 Mar, being the day Chaitra śukla 1	(6)	199 6657
<i>Or, Process 2</i>	<i>w-d</i>	<i>a.</i>
At m sunrise of m Mēsha-samk day (as above)	(5)	2231 4569
Add (Table LXXIX for 6 days earlier)	+(1)	+7968 2088
Result (same as above)	(6)	199 6657

Example 2. To find the mean tithi-index a for any day in the year, or any moment of any day

Table LXXVI, cols 19-23, states the civil day, Chaitra śukla 1, for each year, its serial number from Jan 1, its week-day, and its tithi-index a at mean sunrise. Calculate, from Table III *Indian Calendar* or Table LXIII above, the interval of whole days to mean sunrise on the given day, and, if necessary, the fraction of day subsequent to that sunrise. Add the increment of a for whole days from Table LXIV, and for fractions of the day from Table LXV, to the a given in Table LXXVI

Whole numbers may always be used for whole days, the decimals being only resorted to for close cases and when the calculation includes a fraction of a day

Eg Required the tithi-index at mean sunrise on Āshādha śukla 4 in the year corresponding to A D 625-26, and at 8^h 20^m 15^s after m sunrise on that day.

	<i>d₁</i>	<i>w-d.</i>	<i>a.</i>
Table LXXVI Chait śuk 1, mean sunrise	(74)	(6)	199 6657
Tables LXIII A, LXIV Interval to Āsh. śuk. 4, and increase of a	(91)	(0)	815 5005
At mean sunrise on Āsh śuk. 4 day	(165)	(6)	1015·1662
Day 165 was (Table IX, <i>Indian Calendar</i> , or Table LXIX above) 14 June A D 625 (6)=Friday $a=1015$ shews (Table VIII or LXVIII) that śukla 4 was current at mean sunrise of that day			
For the specific hour mentioned—			
At mean sunrise on that day			1015·1662
(Table LXV)	8 ^h		112·8773
	20 ^m		4 7032
	15 ^s		0 0588
At 8 ^h 20 ^m 15 ^s after mean sunrise	$a=$		1132 8055

Example 3 To find a (the tithi-index, or phase of mean moon) at each of the solar saṁkrāntis in the year (the moments of the mean sun's entrance into the several signs), and to determine whether an intercalation of a lunar month took place during the year

Table LXXVI, cols 13, 14, 17, shews the day and time of occurrence of mean Mēsha-samkrānti (mean sun at long 0°) in each year, and Example 1 shows how to find the value of a at mean sunrise of that day. To that value must be added from Table LXV the increment of a during the interval from mean sunrise to moment of samkrānti. The advance of a during each mean solar month, i.e. from each mean samkrānti to the next (Table LXXVII, col 4) is 307 3526. The work may be carried out by use of whole numbers, except when a case is very close. This occurs when a waning moon is very near 10,000, or when a waxing moon is very near 0.

Required the above details for the years noted in Examples 1, 2, viz A D 624-5 and 625-6

In A.D 624-25 mean Mēsha-samkrānti took place $14^h 2^m 30^s$ after mean sunrise. In A.D 625-26 it took place $20^h 15^m 0^s$ after mean sunrise (Table LXXVI, cols 13-17)

A D 624-25	Value of a at m. sunrise on mean Mēsha-sam-	a
	krānti-day, as already found (Example 1)	8630 8229
(Table LXV).	Increase of a in 14^h	197 5358
	Ditto 2^m	0 4703
	Ditto 30^s	0 1176
		<hr/>
	Exact value of a at moment of mean Mēsha-samkrānti	8828 9461
		<hr/> <hr/>
A D 625-26	Value of a at m. sunrise of mean Mēsha-sam-	
	krānti-day as found	2231 4569
(Table LXV).	Increase of a in 20^h	282 1932
	Ditto 15^m	3 5274
		<hr/>
	Exact value of a at moment of mean Mēsha-samkrānti	2517 1775
		<hr/> <hr/>

For the several samkrāntis in each year we work here roughly with whole numbers only, adding successively the increase of a in 1 solar month

	A D 624-25	A D 625-26
At Mēsha-samkr	$a=8829$	2517
	307	307
At Vṛishabha-samkr.	9136	2824
	307	307
At Mithuna-samkr	9443	3131
	307	307
At Kaika-samkr.	9750	3438
	307	307
At Simha-samkr	57	3745
	etc.	etc

In A D 624-25 it is seen that the mean moon was waning at the Kaika-samkrānti and waxing at the Simha-samkrānti, proving an intercalation of a lunar month, which month (see Table LXXVII, col 1) was Śrāvṇa. Actually a at Simha samkrānti was 58 36.

In A.D. 625-26 the small value of a at the moment of Mēsha-samkrānti shews that there could have been no intercalation in that year (*see above*, § 306, x_1)

Example 4 To find the mean moon's nakshatra, or her place in the ecliptic circle at any moment

(*See § 308 above*) We have to find the value of s , the sun's mean long, at the given moment and the value at the same moment of a , the index of the mean tithi. $s + a = n$, the index of the nakshatra. I assume that, as usual, the values wanted are those at mean sunrise on the given day, for later moments they can easily be found, from Table LXV for a , and from Table LXXXI for s . The example here given will shew the process of work.

Required the nakshatra at mean sunrise on the day referred to in Example 2, viz Āshādha śukla 4 in K Y 3726, which was proved to be 14 June A.D. 625, and on which day at mean sunrise the value of a was found to be 1015 1662. The day, measured from Jan 1, was serial number 165. In that year mean Mēsha-samkrānti took place (*Table LXXVI*) on Day 80 at 20^h 15^m after mean sunrise. The interval of whole days between 20^h 15^m after mean sunrise on the day of Mēsha-samkrānti and 20^h 15^m after mean sunrise on the given day is (165 - 80 =) 85.

	s
(Table LXXX) Interval of 85 days	2327 1179
Less (Table LXXXI) for 20 ^h	22 8149
for 15 ^m	0 2852
	23-1001
	-23 1001
At mean sunrise on the day Āshādha śuk 4,	$s=2304 0178$
Add a , as found for that mean sunrise	1015-1662
	-23 1001
At mean sunrise on that day (=14 June)	$n=3319 1840$

Table VIII *Indian Calendar*, or Table LXVIII above, shews that the moon was then in the nakshatra Āślēshā by the equal-space system and by Garga, but in Maghā by the Brāhma Siddhānta¹

The value of n , 3319 1840, in 10,000ths of the circle, can be converted into degrees, if required, by Table XLV B, above. It = 119° 29' 26". That was the mean moon's place

Example 5 The lagna. (*See Indian Chronography*, § 193, p 74, and *Example 63*, p 127) Required to ascertain at what hour on the day Āshādha śuk 4 K Y 3726, or 14 June A.D. 625, the sign Tulā became lagna

At mean sunrise the sun's mean long s was (*Example 4*) 2304 0178, roughly (*Table XLV above*) 82° 57'. The first point of Tulā (Libra) (*Indian Chronography*, *Table XXII*) is 180°. 180° - 82° 57' = 97° 3'. 97° × 4 = 388^m, or 6^h 28^m. 3' × 4 = 12". Therefore, was lagna at 6^h 28^m 12" after mean sunrise on the day in question. It lasted for 2 hours, when Vṛśchika (Scorpio) became lagna

¹ As to these systems see *Indian Calendar*, § 38, p. 21; *Indian Chronography*, § 112 etc.

TABLE LXXVI.

Mean System Table, First Arya Siddhanta.

TABLE

MEAN SYSTEM TABLE,

Numbers of columns conform

(Cols. 1 to 4)—The years herein stated are the *current* years corresponding(Cols. 6 and 7)—*Samvatsara*-names of mean solar years in italics shew where

CONCURRENT YEAR.								Mean Intercalated (adhika) lunar month
Kal	Saka	Chaitrjdi Vikrama	Mēshjdi solar year in Bengal.	Kollam	A.D.	JOVIAN SAMVATSARA		
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
3601	422	557			499-500	9 Yuvan . . .		9 Mārgaśira .
3602	423	558			*500-01	10 Dhātri . . .		..
3603	424	559			501-02	11 Isvara . . .		..
3604	425	560			502-03	12 Bahudhānya . . .		5 Śrāvana .
3605	426	561			503-04	13 Pramāthin . . .		...
3606	427	562			*504-05	14 Vikrama . . .		.
3607	428	563			505-06	15 Vṛsha . . .		2 Vaiśākha .
3608	429	564			506-07	16 Chitrabhānu . . .		.
3609	430	565			507-08	17 Subhānu . . .		10 Pausha .
3610	431	566			*508-09	18 Tārana . . .		.
3611	432	567			509-10	19 Pārthiva . . .		...
3612	433	568			510-11	20 Vyaya . . .		7 Āśvina .
3613	434	569			511-12	21 Sarvajit . . .		.
3614	435	570			*512-13	22 Sarvadhāru . . .		..
3615	436	571			513-14	23 Virōdhin . . .		3 Jyēshtha .
3616	437	572			514-15	24 Vikṛta . . .		.
3617	438	573			515-16	25 Khara . . .		12 Phālguna .
3618	439	574			*516-17	26 Nandana . . .		..
3619	440	575			517-18	27 Vijaya . . .		..
3620	441	576			518-19	28 Jaya . . .		8 Kārttika .

LXXVI.

FIRST ARYA SIDDHANTA

to Table I, "Indian Calendar."

to the A D years in col 5, as in Table I, "Indian Calendar."

differences exist from Sūrya Siddhanta nomenclature in true solar years.

1 Arya Siddhanta, mean system.

COMMENCEMENT OF THE						
MEAN SOLAR YEAR			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS).			Kali year.
Day and month, A D	Week day	Time of mean M̄chha-samkrānti.	Day and month, A D.	Week day	a (here= <i>t</i> , the index of the tithi)	
13	14	17	19	20	23	1
		H. M S				
21 Mar (80) . .	1 Sun. .	0 0 0	27 Feb (58)	0 Sat. .	205 4513	3601
20 Mar (80) . .	2 Mon . .	12 12 30	17 Mar (77)	6 Fri . .	300 0909	3602
20 Mar. (70) . .	3 Tues . .	18 25 0	6 Mar (65)	3 Tues	175 7743	3603
21 Mar (80) . .	5 Thur . .	0 37 30	23 Feb (54)	0 Sat . .	51 4577	3604
21 Mar (80)	6 Fri . .	6 50 0	14 Mar (73)	6 Fri . .	86 0973	3605
20 Mar. (80) . .	0 Sat. . .	13 2 30	3 Mar (63)	4 Wed . .	300 4125	3606
20 Mar (79) . .	1 Sun . .	19 15 0	20 Feb (51)	1 Sun	176 0959	3607
21 Mar (80)	3 Tues . .	1 27 30	11 Mar (70)	0 Sat. . .	210 7356	3608
21 Mar (80) . .	4 Wed . .	7 40 0	28 Feb. (59)	4 Wed. . .	86 4189	3609
20 Mar (80) . .	5 Thur . .	13 52 30	18 Mar (78)	3 Tues . .	121 0586	3610
20 Mar (79) . .	6 Fri . .	20 5 0	7 Mar (66)	0 Sat . .	9996 7419†	3611
21 Mar (80)	1 Sun . .	2 17 30	25 Feb (56)	5 Thur . .	211 0572	3612
21 Mar (80) . .	2 Mon . .	8 30 0	16 Mar (75)	4 Wed . .	245 6968	3613
20 Mar (80)	3 Tues . .	14 42 30	4 Mar (64)	1 Sun . .	121 3802	3614
20 Mar (79) . .	4 Wed . .	20 55 0	21 Feb (52)	5 Thur	9997 0635†	3615
21 Mar (80) . .	6 Fri . .	3 7 30	12 Mar (71)	4 Wed . .	31 7031	3616
21 Mar (80) . .	0 Sat . .	9 20 0	2 Mar. (61)	2 Mon	246 0185	3617
20 Mar (80) . .	1 Sun . .	15 32 30	20 Mar (80)	1 Sun	280 6581	3618
20 Mar (79) . .	2 Mon. . .	21 45 0	9 Mar (68)	5 Thur . .	156 3414	3619
21 Mar (80)	4 Wed. . .	3 57 30	26 Feb (57)	2 Mon . .	32 0248	3620

† As a mean year Chaitra Sukla 1 was suppressed. The civil day corresponding to it, i.e., the first day of the mean luni solar year, was as given in cols. 19, 20.

TABLE

CONCURRENT YEAR								Mean Intercalated (adhika) lunar month
Kalī	Saka	Chaitrādi Vikrama	Mśāhādi solar year in Bengal	Kollam	A. D.	JOVIAN SAMVATSARA		
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
3621	442	577			519 20	29 Manmatha		
3622	443	578			*520 21	30 Durmukha		
3623	444	579			521 22	31 Hōmalamba		5 Śrāvana
3624	445	580			522 23	32 Vilamba		
3625	446	581			523 24	33 Vikārin		
3626	447	582			*524 25	34 Śarvarin		1 Chaitra
3627	448	583			525 26	35 Playa		
3628	449	584			526 27	36 Subhakrit		10 Pausa
3629	450	585			527-28	37 Sōbhana		
3630	451	586			*528 29	38 Krōdhin		
3631	452	587			529 30	39 Viśvāsu		7 Āṣvina
3632	453	588			530 31	40 Parābhava		
3633	454	589			531 32	41 Plavaṅga		
3634	455	590			*532 33	42 Kilaka		3 Jyēshtha
3635	456	591			533 34	43 Saumya		
3636	457	592			534 35	44 Sādharana		12 Phālguna
3637	458	593			535 36	45 Virōdhakrit		
3638	459	594			*536 37	46 Paridhāvin		
3639	460	595			537 38	47 Pramādin		8 Kārttika
3640	461	596			538 39	48 Ānanda		
3641	462	597			539 40	49 Rākshasa		
3642	463	598			*540 41	50 Anala		5 Śrāvana
3643	464	599			541-42	51 Pingala		
3644	465	600			542 43	52 Kālayukta		
3645	466	601			543 44	53 Siddhārthin		1 Chaitra

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I Arya Siddhanta, mean system.

COMMENCEMENT OF THE						
MEAN SOLAR YEAR			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			Kali year.
Day and month, A D	Week day	Time of mean Vīśā-samkrānti	Day and month, A D	Week-day	a (here= t , the index of the tithi)	
13	14	H M S	19	20	23	1
21 Mar (80)	5 Thur	10 10 0	17 Mar (76)	1 Sun	06 0644	3621
20 Mar (80)	6 Fri	16 22 30	6 Mar (66)	6 Fri	280 9797	3622
20 Mar (79)	0 Sat	22 35 0	23 Feb (54)	3 Tues	156 6631	3623
21 Mar (80)	2 Mon	4 47 30	14 Mar (73)	2 Mon	191 3027	3624
21 Mar. (80)	3 Tues	11 0 0	3 Mar (62)	6 Fri	66 9800	3625
20 Mar (80)	4 Wed	17 12 30	21 Feb (52)	4 Wed	281 3013	3626
20 Mar (79)	5 Thur	23 25 0	11 Mar (70)	3 Tues	315 9409	3627
21 Mar (80)	0 Sat	5 37 30	28 Feb (59)	0 Sat	191 0243	3628
21 Mar (80)	1 Sun	11 50 0	19 Mar (78)	6 Fri	226 2640	3629
20 Mar (80)	2 Mon.	18 2 30	7 Mar (67)	3 Tues	101 9473	3630
21 Mar (80)	4 Wed	0 15 0	25 Feb (56)	1 Sun	316 2626	3631
21 Mar (80)	5 Thur	6 27 30	14 Mar (74)	6 Fri	12 2703	3632
21 Mar. (80)	6 Fri	12 40 0	5 Mar (64)	4 Wed	226 5856	3633
20 Mar (80)	0 Sat	18 52 30	22 Feb (53)	1 Sun	102 2690	3634
21 Mar (80)	2 Mon	1 5 0	12 Mar (71)	0 Sat	136 9086	3635
21 Mar (80)	3 Tues	7 17 30	1 Mar (60)	4 Wed	12-5920	3636
21 Mar (80)	4 Wed	13 30 0	20 Mar (79)	3 Tues	47-2316	3637
20 Mar (80)	5 Thur	19 42 30	9 Mar (69)	1 Sun	261 5409	3638
21 Mar. (80)	0 Sat	1 55 0	26 Feb (57)	5 Thur.	137 2303	3639
21 Mar (80)	1 Sun	8 7 30	17 Mar (76)	4 Wed	171 8699	3640
21 Mar (80)	2 Mon	14 20 0	6 Mar (65)	1 Sun	47 5533	3641
20 Mar (80)	3 Tues	20 32 30	24 Feb (55)	6 Fri	201 8686	3642
21 Mar (80)	5 Thur.	2 45 0	14 Mar (73)	5 Thur	206 5082	3643
21 Mar (80)	6 Fri	8 57 30	3 Mar (62)	2 Mon	172 1916	3644
21 Mar (80)	0 Sat.	15 10 0	20 Feb (51)	6 Fri	47 8749	3645

TABLE

CONCURRENT YEAR							Mean Intercalated (adhika) lunar month		
Kali	Saka	Chaitrādi Vikrama	Mēshādi solar year in Bengal	Kollam	A D	JOVIAN SAMVATSARA.			
						Southern system		Northern system	
1	2	3	3a	4	5	6	7	8a	
3646	467	602			*544 45	54 Raudra	.	.	
3647	468	603			545 46	55 Durmati	.	.	10 Pausha
3648	469	604			546 47	56 Dundubhi	.	.	
3649	470	605			547-48	57 Rudhrōdgārn	.	.	
3650	471	606			*548 49	58 Raktiksha	.	.	6 Bhādrapada
3651	472	607			549 50	59 Krōdhana	.	.	
3652	473	608			550 51	60 Kshaya	.	.	
3653	474	609			551-52	1 Prabhava	.	.	3 Jyēshtha
3654	475	610			*552-53	2 Vibhava	.	.	
3655	476	611			553 54	3 Śukla	.	.	11 Māgha
3656	477	612			554 55	4 Pramōda	.	.	..
3657	478	613			555 56	5 Prajāpati	.	.	
3658	479	614			*556-57	6 Angiras	.	.	8 Kārttika
3659	480	615			557 58	7 Śrimukha	.	.	
3660	481	616			558 59	8 Bhāva	.	.	
3661	482	617			559 60	9 Yuvan	.	.	4 Āshādha
3662	483	618			*560 61	10 Dhātri	.	.	
3663	484	619			561 62	11 Isvara	.	.	
3664	485	620			562 63	12 Bahudhānya	.	.	1 Chaitra
3665	486	621			563-64	13 Pramāthun†	.	.	
3666	487	622			*564 65	15 Vṛiṣha	.	.	10 Pausha
3667	488	623			565 66	16 Chitrabhānu	.	.	
3668	489	624			566 67	17 Subhānu	.	.	
3669	490	625			567 68	18 Tārana	.	.	6 Bhādrapada.
3670	491	626			*568 69	19 Pārthiva	.	.	..

† By I Ārya Siddhānta mean system 14 Vikrama was expunged, and A D 564 65 corresponded to 15 Vṛiṣha. By the same authority true system A D 564 65 corresponded to 14 Vikrama, and 15 Vṛiṣha was expunged. A.D. 565 66 was 16 Chitrabhānu by both systems

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I Ārya Siddhānta, mean system.

COMMENCEMENT OF THE							Kal: year.
MEAN SOLAR YEAR			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			1	
Day and month, A.D.	Week-day	Time of mean Mēṣa-samkrānti	Day and month, A.D.	Week day	<i>a</i> (here= <i>t</i> , the index of the tithi)		
13	14	17	19	20	23	1	
		H M S					
20 Mar (80)	1 Sun.	21 22 30	10 Mar (70)	5 Thur	82 5145	3646	
21 Mar (80)	3 Tues	3 35 0	28 Feb (59)	3 Tues	296 8298	3647	
21 Mar (80)	4 Wed	9 47 30	19 Mar (78)	2 Mon	331 4694	3648	
21 Mar (80)	5 Thur	16 0 0	8 Mar (67)	6 Fri	207 1528	3649	
20 Mar (80)	6 Fri	22 12 30	25 Feb (56)	3 Tues	82 8361	3650	
21 Mar (80)	1 Sun	4 25 0	15 Mar (74)	2 Mon	117 4757	3651	
21 Mar (80)	2 Mon	10 37 30	5 Mar (64)	0 Sat	331 7910	3652	
21 Mar (80)	3 Tues	16 50 0	22 Feb (53)	4 Wed	207 4744	3653	
20 Mar (80)	4 Wed	23 2 30	12 Mar (72)	3 Tues	242 1140	3654	
21 Mar (80)	6 Fri	5 15 0	1 Mar (60)	0 Sat	117 7974	3655	
21 Mar (80)	0 Sat	11 27 30	20 Mar (79)	6 Fri	152 4370	3656	
21 Mar (80)	1 Sun.	17 40 0	9 Mar (68)	3 Tues	28 1204	3657	
20 Mar (80)	2 Mon.	23 52 30	27 Feb (58)	1 Sun	242 4357	3658	
21 Mar (80)	4 Wed.	6 5 0	17 Mar (70)	0 Sat	277-0753	3659	
21 Mar (80)	5 Thur.	12 17 30	6 Mar (65)	4 Wed	152 7587	3660	
21 Mar (80)	6 Fri	18 30 0	23 Feb (54)	1 Sun	28 4421	3661	
21 Mar (81)	1 Sun	0 42 30	13 Mar (73)	0 Sat	63 0817	3662	
21 Mar. (80)	2 Mon.	6 55 0	3 Mar (62)	5 Thur	277 3970	3663	
21 Mar. (80)	3 Tues	13 7 30	20 Feb (51)	2 Mon	153 0803	3664	
21 Mar (80)	4 Wed.	19 20 0	11 Mar (70)	1 Sun	187 7200	3665	
21 Mar (81)	6 Fri.	1 32 30	28 Feb (59)	5 Thur	63 4034	3666	
21 Mar (80)	0 Sat	7 45 0	18 Mar (77)	4 Wed	98-0430	3667	
21 Mar (80)	1 Sun.	13 57 30	8 Mar (67)	2 Mon	312 3582	3668	
21 Mar (80)	2 Mon.	20 10 0	25 Feb (56)	6 Fri	188 9416	3669	
21 Mar (81)	4 Wed.	2 22 30	15 Mar. (75)	5 Thur	222 6813	3670	

TABLE

CONCURRENT YEAR							Mean Intercalated (adhika) lunar month	
Kali	Saka	Chaitrādi Vikrama	Mēshādi solar year in Bengal	Kollam	A D.	JOVIAN SAMVATSARA.		
						Southern system		Northern system
1	2	3	3a	4	5	6	7	8a
3671	492	627			569-70	20	Vjaya . . .	
3672	493	628			570 71	21	Sarvajit . . .	3 Jyēshtha .
3673	494	629			571-72	22	Sarvadhārin . . .	
3674	495	630			*572-73	23	Virōdhan . . .	11 Māgha .
3675	496	631			573 74	24	Vikrita . . .	
3676	497	632			574-75	25	Khara . . .	
3677	498	633			575 76	26	Nandana . . .	8 Kārttika .
3678	499	634			*576 77	27	Vijaya . . .	
3679	500	635			577-78	28	Jaya . . .	
3680	501	636			578 79	29	Manmatha . . .	4 Āshādha .
3681	502	637			579 80	30	Durmukha . . .	
3682	503	638			*580-81	31	Hēmalamba . . .	
3683	504	639			581-82	32	Vilamba . . .	1 Chaitra .
3684	505	640			582-83	33	Vikārin . . .	
3685	506	641			583-84	34	Sārvarin . . .	9 Mārgaśira .
3686	507	642			*584 85	35	Plava . . .	
3687	508	643			585 86	36	Śubhakṛit . . .	
3688	509	644			586 87	37	Śobhana . . .	6 Bhādrapada
3689	510	645			587-88	38	Krōdhan . . .	..
3690	511	646			*588 89	39	Viśvāvasu . . .	...
3691	512	647			589 90	40	Parābhava . . .	2 Vaiśākha .
3692	513	648			590-91	41	Plavanga . . .	...
3693	514	649			591-92	42	Kilaka . . .	11 Māgha .
3694	515	650			*592-93	43	Saumya
3695	516	651			593 94	44	Śādhāraṇa

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1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE						
MEAN SOLAR YEAR.			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			Kali year.
Day and month, A D	Week day.	Time of mean M̄csha samkrānti	Day and month, A D	Week day	a (here= <i>l</i> the index of the tithi)	
13	14	17	19	20	23	1
		H M S				
21 Mar (80)	5 Thur	8 35 0	4 Mar (63)	2 Mon	98 3646	3671
21 Mar (80)	6 Fri	14 47 30	22 Feb (53)	0 Sat	312 6799	3672
21 Mar (80)	0 Sat	21 0 0	12 Mar (71)	5 Thur	8 6876	3673
21 Mar (81)	2 Mon	3 12 30	1 Mar (61)	3 Tues	223 0029	3674
21 Mar (80)	3 Tues	9 25 0	20 Mar (79)	2 Mon	257 6425	3675
21 Mar (80)	4 Wed	15 37 30	9 Mar (68)	6 Fri	133 3259	3676
21 Mar (80)	5 Thur	21 50 0	26 Feb (57)	3 Tues	9 0092	3677
21 Mar (81)	0 Sat	4 2 30	16 Mar (76)	2 Mon	43 6488	3678
21 Mar (80)	1 Sun	10 15 0	6 Mar (65)	0 Sat	257 9641	3679
21 Mar (80)	2 Mon	16 27 30	23 Feb (54)	4 Wed	133 6476	3680
21 Mar (80)	3 Tues	22 40 0	14 Mar (73)	3 Tues	168 2871	3681
21 Mar (81)	5 Thur	4 52 30	2 Mar (62)	0 Sat	43 9705	3682
21 Mar (80)	6 Fri	11 5 0	20 Feb (51)	5 Thur	258 2857	3683
21 Mar (80)	0 Sat	17 17 30	11 Mar (70)	4 Wed	292 9254	3684
21 Mar (80)	1 Sun	23 30 0	28 Feb (59)	1 Sun	168 6087	3685
21 Mar (81)	3 Tues	5 42 30	18 Mar (78)	0 Sat	203 2484	3686
21 Mar (80)	4 Wed	11 55 0	7 Mar (66)	4 Wed	78 9317	3687
21 Mar (80)	5 Thur	18 7 30	25 Feb (56)	2 Mon	293 2470	3688
22 Mar (81)	0 Sat	0 20 0	16 Mar (75)	1 Sun	327 8867	3689
21 Mar (81)	1 Sun	6 32 30	4 Mar (64)	5 Thur	203 5700	3690
21 Mar (80)	2 Mon	12 45 0	21 Feb (52)	2 Mon	79 2534	3691
21 Mar (80)	3 Tues	18 57 30	12 Mar (71)	1 Sun	113 8930	3692
22 Mar (81)	5 Thur	1 10 0	2 Mar (61)	6 Fri	328 2083	3693
21 Mar (81)	6 Fri	7 22 30	19 Mar (79)	4 Wed	24 2160	3694
21 Mar (80)	0 Sat	13 35 0	9 Mar (68)	2 Mon	238 5313	3695

TABLE

CONCURRENT YEAR								
Kal.	Saka	Chaitradī Vikrama	Mēshādi solar year in Bengal	Kollam	A D.	JOVIAN SAMVATSARA.		Mean Intercalated (adhika) lunar month.
						Southern system.	Northern system	
r	2	3	3a	4	5	6	7	8a
3696	517	652	1		594-95	45 Virōdhakṛit . . .		7 Āsvina
3697	518	653	2		595 96	46 Paridhāvin . . .		...
3698	519	654	3		*596 97	47 Pramādin . . .		..
3699	520	655	4		597-98	48 Ānanda . . .		4 Āshādha .
3700	521	656	5		598 99	49 Rākshasa . . .		.
3701	522	657	6		599 600	50 Anala . . .		12 Phālguna .
3702	523	658	7		*600-01	51 Piṅgala . . .		..
3703	524	659	8		601 02	52 Kālayukta . . .		..
3704	525	660	9		602 03	53 Siddhārthun . . .		9 Mārgasīra .
3705	526	661	10		603 04	54 Raudra . . .		...
3706	527	662	11		*604 05	55 Durmati . . .		..
3707	528	663	12		605-06	56 Dundubhi . . .		6 Bhādrapada.
3708	529	664	13		606 07	57 Rudhirōdgārīn. . .		..
3709	530	665	14		607-08	58 Raktāksha . . .		...
3710	531	666	15		*608 09	59 Krōdhana . . .		2 Vaiśākha .
3711	532	667	16		609-10	60 Kshaya . . .		...
3712	533	668	17		610-11	1 Prabhava . . .		11 Māgha .
3713	534	669	18		611-12	2 Vibhava . . .		..
3714	535	670	19		*612-13	3 Śakla . . .		...
3715	536	671	20		613-14	4 Pramōda . . .		7 Āsvina .
3716	537	672	21		014-15	5 Prajāpati . . .		...
3717	538	673	22		015-16	6 Aṅgras . . .		..
3718	539	674	23		*616-17	7 Śtimukha . . .		4 Āshādha
3719	540	675	24		617-18	8 Bhāva . . .		...
3720	541	676	25		618-19	9 Yuvan . . .		12 Phālguna

LXXVI—Contd.

1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE						
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			Kali year.
Day and month, A D	Week-day.	Time of mean Mēsha-samkrānti	Day and month, A D.	Week-day.	α (here= t , the index of the tithi)	
13	14	17	19	20	23	1
		H M S.				
21 Mar (80) . .	1 Sun . .	19 47 30	26 Feb (57) . .	6 Fri. . .	114 2147	3696
22 Mar. (81) . .	3 Tues . .	2 0 0	17 Mar. (76) . .	5 Thur. . .	148 8543	3697
21 Mar. (81) . .	4 Wed . .	8 12 30	5 Mar (85) . .	2 Mon. . .	24 5377	3698
21 Mar (80) . .	5 Thur . .	14 25 0	23 Feb (54) . .	0 Sat. . .	238 8530	3699
21 Mar. (80) . .	6 Fri. . .	20 37 30	14 Mar. (73) . .	6 Fri . .	273 4926	3700
22 Mar (81) . .	1 Sun. . .	2 50 0	3 Mar (82) . .	3 Tues. . .	149 1760	3701
21 Mar (81) . .	2 Mon. . .	9 2 30	21 Mar (81) . .	2 Mon. . .	183 8156	3702
21 Mar. (80) . .	3 Tues . .	15 15 0	10 Mar (89) . .	6 Fri. . .	59 4990	3703
21 Mar. (80) . .	4 Wed. . .	21 27 30	28 Feb. (59) . .	4 Wed. . .	273 8142	3704
22 Mar. (81) . .	6 Fri. . .	3 40 0	19 Mar. (78) . .	3 Tues. . .	308 4539	3705
21 Mar. (81) . .	0 Sat. . .	9 52 30	7 Mar (67) . .	0 Sat. . .	184 1373	3706
21 Mar. (80) . .	1 Sun. . .	16 5 0	24 Feb (55) . .	4 Wed . .	59 8207	3707
21 Mar. (80) . .	2 Mon. . .	22 17 30	15 Mar. (74) . .	3 Tues. . .	94 4603	3708
22 Mar. (81) . .	4 Wed. . .	4 30 0	5 Mar (64) . .	1 Sun. . .	308 7756	3709
21 Mar (81) . .	5 Thur . .	10 42 30	22 Feb. (53) . .	5 Thur. . .	184 4589	3710
21 Mar. (80) . .	6 Fri . .	16 55 0	12 Mar. (71) . .	4 Wed. . .	219 0985	3711
21 Mar (80) . .	0 Sat. . .	23 7 30	1 Mar. (60) . .	1 Sun. . .	94-7819	3712
22 Mar (81) . .	2 Mon. . .	5 20 0	20 Mar. (79) . .	0 Sat. . .	129-4215	3713
21 Mar. (81) . .	3 Tues . .	11 32 30	8 Mar. (68) . .	4 Wed. . .	5 1049	3714
21 Mar (80) . .	4 Wed. . .	17 45 0	26 Feb (57) . .	2 Mon. . .	219-4201	3715
21 Mar. (80) . .	5 Thur . .	23 57 30	17 Mar (76) . .	1 Sun. . .	254-0597	3716
22 Mar (81) . .	0 Sat . .	6 10 0	6 Mar (65) . .	5 Thur. . .	129 7432	3717
21 Mar. (81)	1 Sun. . .	12 22 30	23 Feb (54) . .	2 Mon . .	5-4266	3718
21 Mar (80) . .	2 Mon . .	18 35 0	13 Mar (72) . .	1 Sun. . .	40-0661	3719
22 Mar. (81) . .	4 Wed . .	0 47 30	3 Mar. (62) . .	6 Fri. . .	254 3814	3720

TABLE

CONCURRENT YEAR								Mean Intercalated (adhika) lunar month
Kal	Saka	Chaitrādi Vikrama	Mēshādi solar year in Bengal	Kollam	A.D	JOVIAN SAMVATSARA		
						Southern system.	Northern system	
1	2	3	3a	4	5	6	7	8a
3721	542	677	26		619 20	10 Dhātṛi . . .	..
3722	543	678	27		*620-21	11 Ivara . . .	..
3723	544	679	28		621-22	12 Bahudhānya . . .	9 Mārgaśira .	
3724	545	680	29		622-23	13 Pramāthun	
3725	546	681	30		623-24	14 Vikrama	
3726	547	682	31		*624-25	15 Vṛisha . . .	5 Śrāvana .	
3727	548	683	32		625-26	16 Chitrabhānu . . .	..
3728	549	684	33		626 27	17 Subhānu . . .	..
3729	550	685	34		627-28	18 Tārāṇa . . .	2 Vaiśākha .	
3730	551	686	35		*628-29	19 Pārthiva . . .	..
3731	552	687	36		629 30	20 Vyaya . . .	10 Pauṣa	
3732	553	688	37		630 31	21 Sarvajit . . .	..
3733	554	689	38		631-32	22 Sarvadhārin . . .	..
3734	555	690	39		*632 33	23 Virōdhun . . .	7 Āvina .	
3735	556	691	40		633-34	24 Vikṛta . . .	..
3736	557	692	41		634-35	25 Khara . . .	..
3737	558	693	42		635 36	26 Nandana . . .	3 Jyēshṭha .	
3738	559	694	43		*636 37	27 Vijaya	
3739	560	695	44		637-38	28 Jaya . . .	12 Phālguna .	
3740	561	696	45		638-39	29 Manmatha . . .	..
3741	562	697	46		639 40	30 Durmukha . . .	..
3742	563	698	47		*640-41	31 Hēmalamba . . .	9 Mārgaśira .	
3743	564	699	48		641-42	32 Vilamba . . .	..
3744	565	700	49		642-43	33 Vikārin	
3745	566	701	50		643-44	34 Śārvarin . . .	5 Śrāvāṇa .	

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I Ārya Siddhānta, mean system.

COMMENCEMENT OF THE						
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS).			Kali year
Day and month, A.D	Week-day.	Time of mean Mēsha-samkrānti	Day and month, A.D	Week-day	a (here= <i>t</i> , the index of the tithi)	
13	14	17	19	20	23	1
		H M. S				
22 Mar. (81) . .	5 Thur. . .	7 0 0	22 Mar (81) . .	5 Thur.	289 0209	3721
21 Mar (81) . .	6 Fri. . .	13 12 30	10 Mar. (70)	2 Mon. . .	164 7044	3722
21 Mar (80) . .	0 Sat . .	19 25 0	27 Feb (58) . .	6 Fri.	40 3877	3723
22 Mar (81) . .	2 Mon. . .	1 37 30	18 Mar (77)	5 Thur . .	75 0274	3724
22 Mar (81) . .	3 Tues . .	7 50 0	8 Mar (67) . .	3 Tues	289 3427	3725
21 Mar. (81) . .	4 Wed. . .	14 2 30	25 Feb (56) . .	0 Sat.	165 0261	3726
21 Mar. (80) . .	5 Thur. . .	20 15 0	15 Mar (74) . .	6 Fri	199 6657	3727
22 Mar (81) . .	0 Sat . .	2 27 30	4 Mar (63) . .	3 Tues.	75 3491	3728
22 Mar (81) . .	1 Sun . .	8 40 0	22 Feb (53) . .	1 Sun . .	289 6643	3729
21 Mar (81) . .	2 Mon. . .	14 52 30	12 Mar (72) . .	0 Sat . .	324 3039	3730
21 Mar. (80) . .	3 Tues . .	21 5 0	1 Mar (60) . .	4 Wed.	199 9873	3731
22 Mar. (81) . .	5 Thur. . .	3 17 30	20 Mar (79) . .	3 Tues . .	234 6269	3732
22 Mar (81) . .	6 Fri . .	9 30 0	9 Mar (68) . .	0 Sat. . .	110 3103	3733
21 Mar (81) . .	0 Sat . .	15 42 30	27 Feb (58) . .	5 Thur . .	324 6256	3734
21 Mar (80) . .	1 Sun . .	21 ^a 55 0	16 Mar (75) . .	3 Tues . .	20 6333	3735
22 Mar (81) . .	3 Tues. . .	4 7 30	6 Mar (65) . .	1 Sun . .	234 9486	3736
22 Mar (81) . .	4 Wed . .	10 20 0	23 Feb (54) . .	5 Thur.	110 6320	3737
21 Mar (81) . .	5 Thur. . .	16 32 30	13 Mar. (73) . .	4 Wed	145 2716	3738
21 Mar (80) . .	6 Fri. . .	22 45 0	2 Mar (61) . .	1 Sun . .	20 9550	3739
22 Mar (81) . .	1 Sun. . .	4 57 30	21 Mar (80) . .	0 Sat . .	55 5946	3740
22 Mar (81) . .	2 Mon. . .	11 10 0	11 Mar (70) . .	5 Thur. . .	269 9099	3741
21 Mar. (81) . .	3 Tues. . .	17 22 30	28 Feb (59) . .	2 Mon . .	145 5933	3742
21 Mar. (80) . .	4 Wed. . .	23 35 0	18 Mar. (77) . .	1 Sun . .	180 2329	3743
22 Mar. (81) . .	6 Fri. . .	5 47 30	7 Mar. (66) . .	5 Thur . .	55-9163	3744
22 Mar. (81) . .	0 Sat. . .	12 0 0	25 Feb (56) . .	3 Tues . .	270 2316	3745

TABLE

CONCURRENT YEAR								
Kalī	Saka	Chaitrādī Vikrama	Mēshādī solar year in Bengal	Kollam	A.D.	JOVIAN SAMVATSARA.		Mean Intercalated (adhika) lunar month
						Southern system	Northern system.	
1	2	3	3a	4	5	6	7.	8a
3746	567	702	51		*644 45	35 Plava . . .		..
3747	568	703	52		645-46	36 Subhakṛt . . .		...
3748	569	704	53		646 47	37 Sōbhana . . .		2 Vaiśākha .
3749	570	705	54		647-48	38 Krōdhan . . .		.
3750	571	706	55		*648 49	39 Viśvāvasu . . .		10 Pausha .
3751	572	707	56		649-50	40 Parābhava† . . .		...
3752	573	708	57		650 51	42 Kṣāla . . .		...
3753	574	709	58		651 52	43 Saumya . . .		7 Āśvina .
3754	575	710	59		*652 53	44 Sādhāraṇa . . .		..
3755	576	711	60		653 54	45 Vīrōdhakṛt . . .		...
3756	577	712	61		654 55	46 Paridhāvin . . .		3 Jyēṣṭha .
3757	578	713	62		655 56	47 Pṛamādin . . .		..
3758	579	714	63		*656 57	48 Ānanda . . .		12 Phālguna .
3759	580	715	64		657-58	49 Rākshasa . . .		..
3760	581	716	65		658 59	50 Ānala . . .		.
3761	582	717	66		659 60	51 Pingala . . .		8 Kārttika .
3762	583	718	67		*660 61	52 Kālayukta . . .		...
3763	584	719	68		661-62	53 Siddhārthīn . . .		..
3764	585	720	69		662-63	54 Raudra . . .		5 Śrāvāṇa .
3765	586	721	70		663 64	55 Durmatī . . .		...
3766	587	722	71		*664 65	56 Duṇḍubhi . . .		...
3767	588	723	72		665 66	57 Rudhirōdgāma . . .		1 Chaitra .
3768	589	724	73		666 67	58 Raktāksha . . .		..
3769	590	725	74		667-68	59 Krōdhana . . .		10 Pausha .
3770	591	726	75		*668-69	60 Kṣhaya

† By the mean system 41 Plavāṅga was expunged, as also by the true system.

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1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE						Kali year.
MEAN SOLAR YEAR			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			
Day and month, A D	Week day	Time of mean Mēsha-samkrānti	Day and month, A D	Week day	a (here= <i>i</i> , the index of the tithi)	
13	14	17	19	20	23	1
		H M S				
21 Mar (81) .	1 Sun .	18 12 30	15 Mar (75)	2 Mon	304 8711	3746
22 Mar (81) . .	3 Tues	0 25 0	4 Mar (63)	6 Fri	180 5545	3747
22 Mar (81) . .	4 Wed	6 37 30	21 Feb (52)	3 Tues	56 2378	3748
22 Mar (81) .	5 Thur.	12 50 0	12 Mar. (71)	2 Mon .	90 8775	3749
21 Mar (81) . .	6 Fri .	19 2 30	1 Mar (61) .	0 Sat	305 1927	3750
22 Mar. (81) . .	1 Sun .	1 15 0	19 Mar. (78)	5 Thur .	1 2005	3751
22 Mar (81) . .	2 Mon .	7 27 30	9 Mar (68) .	3 Tues	215 5167	3752
22 Mar (81) .	3 Tues	13 40 0	26 Feb (57) .	0 Sat	91 1991	3753
21 Mar (81) . .	4 Wed.	19 52 30	16 Mar (70) .	6 Fri	125 8387	3754
22 Mar (81) . .	6 Fri	2 5 0	5 Mar (64) .	3 Tues	1 5221	3755
22 Mar (81) . .	0 Sat .	8 17 30	23 Feb (54) .	1 Sun	215 8374	3756
22 Mar (81) . .	1 Sun .	14 30 0	14 Mar (73) .	0 Sat	250 4770	3757
21 Mar (81) . .	2 Mon .	20 42 30	2 Mar (62) .	4 Wed .	126 1604	3758
22 Mar (81) . .	4 Wed	2 55 0	21 Mar (80) .	3 Tues.	160 8000	3759
22 Mar (81) . .	5 Thur .	9 7 30	10 Mar (69) .	0 Sat.	36 4834	3760
22 Mar (81) . .	6 Fri .	15 20 0	28 Feb (59) .	5 Thur	250 7987	3761
21 Mar (81) . .	0 Sat .	21 32 30	18 Mar (78)	4 Wed .	285 4383	3762
22 Mar (81) . .	2 Mon. .	3 45 0	7 Mar (66)	1 Sun	161 1217	3763
22 Mar. (81) . .	3 Tues	9 57 30	24 Feb (55) .	5 Thur .	36 8051	3764
22 Mar. (81) . .	4 Wed .	16 10 0	15 Mar (74)	4 Wed.	71 4447	3765
21 Mar (81) . .	5 Thur .	22 22 30	4 Mar (64) .	2 Mon	285 7599	3766
22 Mar (81) . .	0 Sat .	4 35 0	21 Feb (52) .	6 Fri .	161 4433	3767
22 Mar (81) . .	1 Sun .	10 47 30	12 Mar (71) .	5 Thur	196 0830	3768
22 Mar (81) . .	2 Mon .	17 0 0	1 Mar (60) .	2 Mon .	71 7663	3769
21 Mar (81) . .	3 Tues	23 12 30	18 Mar (78) .	1 Sun	106 4060	3770

TABLE

CONCURRENT YEAR								
Kalī	Saka	Chaitradī Vikrama	Mēshidi solar year in Bengal	Kollam	A.D	JOVIAN SAṂVATSARA		Mean Intercalated (adhika) lunar month
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
3771	592	727	76		669-70	1 Prabhava .	.	--
3772	593	728	77		670 71	2 Vibhava . .	.	6 Bhādrapada
3773	594	729	78		671 72	3 Śukla .	.	
3774	595	730	79		*672-73	4 Pramōda .	.	--
3775	596	731	80		673-74	5 Prajāpati . .	.	3 Jyēshtha .
3776	597	732	81		674 75	6 Angiras . .	.	.
3777	598	733	82		675 76	7 Śrīmukha .	.	11 Māgha .
3778	599	734	83		*676-77	8 Bhāva . .	.	
3779	600	735	84		677-78	9 Yuvan		
3780	601	736	85		678 79	10 Dhātṛi . .	.	8 Kārttika .
3781	602	737	86		679-80	11 Īsvara		
3782	603	738	87		*680 81	12 Bahudhānya .	.	.
3783	604	739	88		681-82	13 Pramāthun		5 Śrāvana
3784	605	740	89		682 83	14 Vikrama .		
3785	606	741	90		683-84	15 Vṛisha . .	.	...
3786	607	742	91		*684 85	16 Chutrabhānu .	.	1 Chaitra .
3787	608	743	92		685 86	17 Subhānu . .	.	.
3788	609	744	93		686 87	18 Tāraṇa . .	.	10 Pausha
3789	610	745	94		687-88	19 Pārthiva .	.	
3790	611	746	95		*688 89	20 Vyaya . .	.	
3791	612	747	96		689 90	21 Sarvajit . .	.	6 Bhādrapada
3792	613	748	97		690 91	22 Sarvadhārn .	.	
3793	614	749	98		691 92	23 Virōdhun .	.	.
3794	615	750	99		*692 93	24 Vikrita . .	.	3 Jyēshtha
3795	616	751	100		693 94	25 Khara . .	.	

LXXVI—Contd

1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE						Kali year.
MEAN SOLAR YEAR			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA SUKLA 1 LINDS)			
Day and month, A D	Week day	Time of mean M̄śha samkrānti	Day and month, A D	Week day	α (here= t , the index of the tithi)	
13	14	17	19	20	23	1
		H M S				
22 Mar (81)	5 Thur	5 25 0	9 Mar (68)	6 Fri	320 7213	3771
22 Mar (81)	6 Fri	11 37 30	26 Feb (57)	3 Tues	196 4016	3772
22 Mar (81)	0 Sat	17 50 0	17 Mar (76)	2 Mon	231 0442	3773
22 Mar (82)	2 Mon	0 2 30	5 Mar (65)	6 Fri	106 7276	3774
22 Mar (81)	3 Tues	6 15 0	23 Feb (54)	4 Wed	321 0429	3775
22 Mar (81)	4 Wed	12 27 30	13 Mar (72)	2 Mon	17 0506	3776
22 Mar (81)	5 Thur	18 40 0	3 Mar (62)	0 Sat	231 3058	3777
22 Mar (82)	0 Sat	0 52 30	21 Mar (81)	6 Fri	266 0054	3778
22 Mar (81)	1 Sun	7 5 0	10 Mar (69)	3 Tues	141 6888	3779
22 Mar (81)	2 Mon	13 17 30	27 Feb (58)	0 Sat	17 3723	3780
22 Mar (81)	3 Tues	19 30 0	18 Mar (77)	6 Fri	52 0118	3781
22 Mar (82)	5 Thur	1 42 30	7 Mar (67)	4 Wed	266 3271	3782
22 Mar (81)	6 Fri	7 55 0	24 Feb (55)	1 Sun	142 0105	3783
22 Mar (81)	0 Sat	14 7 30	15 Mar (74)	0 Sat	176 6501	3784
22 Mar (81)	1 Sun	20 20 0	4 Mar (63)	4 Wed	52 3334	3785
22 Mar (82)	3 Tues	2 32 30	22 Feb (53)	2 Mon	266 6487	3786
22 Mar (81)	4 Wed	8 45 0	12 Mar (71)	1 Sun	301 2684	3787
22 Mar (81)	5 Thur	14 57 30	1 Mar (60)	5 Thur	176 9717	3788
22 Mar (81)	6 Fri	21 10 0	20 Mar (75)	4 Wed	211 6114	3789
22 Mar (82)	1 Sun	3 22 30	8 Mar (68)	1 Sun	87 2948	3790
22 Mar (81)	2 Mon	9 35 0	26 Feb (57)	6 Fri	301 6100	3791
22 Mar (81)	3 Tues	15 47 30	16 Mar (75)	4 Wed	9997 6177†	3792
22 Mar (81)	4 Wed	22 0 0	6 Mar (65)	2 Mon	211 9330	3793
22 Mar (82)	6 Fri	4 12 30	23 Feb (54)	6 Fri	87 6104	3794
22 Mar (81)	0 Sat	10 25 0	13 Mar (72)	5 Thur	122 2560	3795

† As a mean tithi Chaitra Sukla 1 was expunged. The civil day corresponding to it, i.e., the first day of the mean luni solar year, was as given in cols 19, 20

Year	Month	Day	Gregorian Date	Indian Date	Notes
3796	717	718	1 1		
3797	718	719	1 1		
3798	719	720	1 1		
3799	720	721	1 1		
3800	721	722	1 1		
3801	722	723	1 1		
3802	723	724	1 1		
3803	724	725	1 1		
3804	725	726	1 1		
3805	726	727	1 1		
3806	727	728	1 1		
3807	728	729	1 1		
3808	729	730	1 1		
3809	730	731	1 1		
3810	731	732	1 1		
3811	732	733	1 1		
3812	733	734	1 1		
3813	734	735	1 1		
3814	735	736	1 1		
3815	736	737	1 1		
3816	737	738	1 1		
3817	738	739	1 1		
3818	739	740	1 1		
3819	740	741	1 1		
3820	741	742	1 1		

† By the "Indian Calendar" 7 Aavina was intercalated but the case was a close one

LXXVI—Contd.

1 Arya Siddhanta, mean system.

COMMENCEMENT OF THE						Kal year.
MEAN SOLAR YEAR			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS)			
Day and month, A D	Week-day	Time of mean Māsa-samkrānti	Day and month, A D	Week-day.	<i>a</i> (here= <i>t</i> , the index of the tithi)	
13	14	17	19	20	23	1
		H M S				
22 Mar (81)	1 Sun .	16 37 30	2 Mar. (61)	2 Mon. .	9997 0394†	3796
22 Mar (81) .	2 Mon	22 50 0	21 Mar (80)	1 Sun. .	32 5790	3797
22 Mar (82)	4 Wed.	5 2 30	10 Mar (70) .	6 Fri .	246 8943	3798
22 Mar (81)	5 Thur .	11 15 0	27 Feb (58)	3 Tues	122 5777	3799
22 Mar (81)	6 Fri .	17 27 30	18 Mar (77) .	2 Mon. .	157 2173	3800
22 Mar (81)	0 Sat .	23 40 0	7 Mar (66)	6 Fri .	32 9006	3801
22 Mar (82)	2 Mon .	5 52 30	25 Feb (56)	4 Wed .	247 2159	3802
22 Mar (81)	3 Tues .	12 5 0	15 Mar. (74) .	3 Tues. .	281 8555	3803
22 Mar (81)	4 Wed. .	18 37 30	4 Mar (63)	0 Sat .	157 5389	3804
23 Mar (82)	6 Fri .	0 30 0	21 Feb (52)	4 Wed	33 2223	3805
22 Mar (82)	0 Sat	6 42 30	11 Mar (71)	3 Tues	67 8619	3806
22 Mar (81)	1 Sun	12 55 0	1 Mar. (60)	1 Sun.	282 1771	3807
22 Mar (81)	2 Mon	19 7 30	20 Mar (79)	0 Sat. .	316 8168	3808
23 Mar. (82)	4 Wed	1 20 0	9 Mar. (68) .	4 Wed. .	192 5002	3809
22 Mar (82)	5 Thur	7 32 30	26 Feb (57) .	1 Sun. .	68 1835	3810
22 Mar (81)	6 Fri	13 45 0	16 Mar (75)	0 Sat .	102 8231	3811
22 Mar (81)	0 Sat. .	19 57 30	6 Mar (65)] .	5 Thur .	317 1384	3812
23 Mar. (82) .	2 Mon	2 10 0	23 Feb (54) .	2 Mon. .	192 8218	3813
22 Mar (82)	3 Tues	8 22 30	13 Mar (73) .	1 Sun .	227 4614	3814
22 Mar (81)	4 Wed. .	14 35 0	2 Mar (61) .	5 Thur .	103 1447	3815
22 Mar (81)	5 Thur	20 47 30	21 Mar. (80) .	4 Wed	137 7843	3816
23 Mar (82) .	0 Sat .	3 0 0	10 Mar (69)	1 Sun .	13 4678	3817
22 Mar (82)	1 Sun. .	9 12 30	28 Feb (59)	6 Fri.	227 7831	3818
22 Mar (81) .	2 Mon .	15 25 0	18 Mar (77) .	5 Thur. .	262 4226	3819
22 Mar (81)	3 Tues .	21 37 30	7 Mar (66) .	2 Mon .	138 1060	3820

As a mean tithi Chaitra Sukla 1 was suppressed The civil day corresponding to it, i.e., the first day of the mean luni-solar year, was as given in cols. 19, 20

TABLE

CONCURRENT YEAR								Mean Intercalated (adhika) lunar month
Kalī	Saka	Chaitrādī Vikrama	Mēshādī solar year in Bengal	Kollam	A D	JOVIAN SAMVATSARA		
						Southern system	Northern system	
1	2	3	3a	4	5	6	8	8a
3821	642	777	126		719 20	51 Pingala		4 Āshādha
3822	643	778	127		*720 21	52 Kālayukta . . . .		.
3823	644	779	128		721 22	53 Suddhārthun . . . .		.
3824	645	780	129		722 23	54 Raudra		1 Chaitra
3825	646	781	130		723 24	55 Durmatī . . . .		.
3826	647	782	131		*724 25	56 Dundubhi		9 Mārgasīra
3827	648	783	132		725-26	57 Rudhirōdgārīn . . . .		.
3828	649	784	133		726 27	58 ¹ Raktāksha . . . .		.
3829	650	785	134		727-28	59 Krōdhana		6 Bhādrapada
3830	651	786	135		*728 29	60 Kshaya . . . .		.
3831	652	787	136		729-30	1 Prabhava . . . .		.
3832	653	788	137		730 31	2 Vibhava		2 Vaiśākha
3833	654	789	138		731 32	3 Sukla . . . .		.
3834	655	790	139		*732 33	4 Pramōda		11 Māgha
3835	656	791	140		733 34	5 Prajāpati . . . .		.
3836	657	792	141		734 35	6 Angiras† . . . .		.
3837	658	793	142		735 36	8 Bhāva		7 Āśvina
3838	659	794	143		*736 37	9 Yuvan . . . .		.
3839	660	795	144		737-38	10 Dhātṛ . . . .		.
3840	661	796	145		738 39	11 Īvara		4 Āshādha
3841	662	797	146		739 40	12 Bahudhānya . . . .		.
3842	663	798	147		*740 41	13 Pramāthun		12 Phālguna
3843	664	799	148		741-42	14 Vikrama . . . .		..
3844	665	800	149		742-43	15 Vrisha . . . .		.
3845	666	801	150		743 44	16 Chitrabhān		9 Mārgasīra

† By the mean system, as well as by the true system, 7 Śrimukha was expunged.

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1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE						
MEAN SOLAR YEAR			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			Kali year
Day and month, A D	Week day	Time of mean Mēsha samkrānti	Day and month, A D,	Week day	α (here= t , the index of the title)	
13	14	17	19	20	23	1
		H M S				
23 Mar (82) . . .	5 Thur	3 50 0	24 Feb (55)	6 Fri	13 7894	3821
22 Mar (82) . . .	6 Fri.	10 2 30	14 Mar (74)	5 Thur	48 4290	3822
22 Mar (81)	0 Sat .	16 15 0	4 Mar (63)	3 Tues	262 7443	3823
22 Mar (81)	1 Sun	22 27 30	21 Feb (52)	0 Sat .	138 4276	3824
23 Mar (82) . . .	3 Tues .	4 40 0	12 Mar (71) .	6 Fri .	173 0073	3825
22 Mar (82)	4 Wed.	10 52 30	29 Feb (60) .	3 Tues	48 7506	3826
22 Mar (81)	5 Thur.	17 5 0	10 Mar (78) .	2 Mon	83 3003	3827
22 Mar (81) . . .	6 Fri	23 17 30	9 Mar (68) . .	0 Sat	297 7055	3828
23 Mar (82) . . .	1 Sun	5 30 0	26 Feb (57)	4 Wed .	173 3800	3829
22 Mar (82)	2 Mon .	11 42 30	16 Mar (76) .	3 Tues .	208 0286	3830
22 Mar (81) . . .	3 Tues	17 55 0	5 Mar (64)	0 Sat.	83 7119	3831
23 Mar (82) . . .	5 Thur	0 7 30	23 Feb (54)	5 Thur	208 0272	3832
23 Mar (82)	6 Fri	6 20 0	14 Mar (73) .	4 Wed. .	332 6669	3833
22 Mar (82)	0 Sat	12 32 30	2 Mar (62)	1 Sun	208 3502	3834
22 Mar (81) . . .	1 Sun .	18 45 0	21 Mar (80)	0 Sat .	242 9898	3835
23 Mar (82) . . .	3 Tues	0 57 30	10 Mar (60)	4 Wed .	118 6732	3836
23 Mar (82) . . .	4 Wed	7 10 0	28 Feb (59)	2 Mon	332 9885	3837
22 Mar (82)	5 Thur .	13 22 30	17 Mar (77)	0 Sat .	28 9962	3838
22 Mar (81) . . .	6 Fri .	19 35 0	7 Mar (66)	5 Thur .	243 3115	3839
23 Mar (82) . . .	1 Sun	1 47 30	24 Feb (55) .	2 Mon	118 9949	3840
23 Mar (82) . . .	2 Mon .	8 0 0	15 Mar (74) .	1 Sun. .	153 6345	3841
22 Mar (82) . . .	3 Tues .	14 12 30	3 Mar (63)	5 Thur	29 3179	3842
22 Mar (81) . . .	4 Wed	20 25 0	22 Mar (81)	4 Wed .	63 9575	3843
23 Mar (82)	6 Fri	2 37 30	12 Mar (71) .	2 Mon .	278 2728	3844
23 Mar (82)	0 Sat .	8 50 0	1 Mar (60)	6 Fri. .	153 9561	3845

TABLE

CONCURRENT YEAR.								Mean Intercalated (adhika) lunar month
Kali	Saka	Chaitrādi Vikrama	Mūshādi solar year in Bengal	Kollam	A D	JOVIAN SAMVATSARA		
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
3846	667	802	151		*744 45	17 Subhānu	.	
3847	668	803	152		745 40	18 Tārana	.	...
3848	669	804	153		746 47	19 Pārthiva	.	5 Śrāvapa .
3849	670	805	154		747 48	20 Vjaya	.	..
3850	671	806	155		*748 49	21 Sarvajit	.	...
3851	672	807	156		749 50	22 Sarvadhārin	.	2 Vaiśākha .
3852	673	808	157		750 51	23 Virōdhun	.	
3853	674	809	158		751-52	24 Vikrita	.	10 Pausha .
3854	675	810	159		*752 53	25 Khara	.	...
3855	676	811	160		753 54	26 Nandana	.	
3856	677	812	161		754 55	27 Vijaya	.	7 Āsvina .
3857	678	813	162		755 56	28 Jaya	.	..
3858	679	814	163		*756 57	29 Manmatha	.	..
3859	680	815	164		757 58	30 Durmukha	.	4 Āshādha .
3860	681	816	165		758 59	31 Hēmalambā	.	..
3861	682	817	166		759 60	32 Vilamba	.	12 Phālguna .
3862	683	818	167		*760 61	33 Vikārin	.	...
3863	684	819	168		761 62	34 Śārvarin	.	..
3864	685	820	169		762 63	35 Plava	.	9 Mārgāśara .
3865	686	821	170		763 64	36 Śubhakit	.	...
3866	687	822	171		*764 65	37 Śobhana	.	...
3867	688	823	172		765 66	38 Krōdhan	.	5 Śrāvapa .
3868	689	824	173		766 67	39 Viśvāvasu	.	..
3869	690	825	174		767-68	40 Parābhava	.	.
3870	691	826	175		*768 69	41 Plavanga	.	2 Vaiśākha .

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1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE						
MEAN SOLAR YEAR			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			Kali year.
Day and month, A D	Week day.	Time of mean M̄śha-samkrānti	Day and month, A D	Week-day	<i>a</i> (here= <i>t</i> , the index of the tithi)	
13	14	17	19	20	23	1
		H M S				
22 Mar (82)	1 Sun.	15 2 30	19 Mar (79)	5 Thur	188 5957	3846
22 Mar (81)	2 Mon.	21 15 0	8 Mar (67)	2 Mon	64 2790	3847
23 Mar (82)	4 Wed.	3 27 30	26 Feb (57)	0 Sat	278 5044	3848
23 Mar (82)	5 Thur.	9 40 0	17 Mar (76)	6 Fri	313 2341	3849
22 Mar (82)	6 Fri.	15 52 30	5 Mar (65)	3 Tues	188 9173	3850
22 Mar. (81)	0 Sat.	22 5 0	22 Feb (53)	0 Sat	64 6007	3851
23 Mar (82)	2 Mon.	4 17 30	13 Mar (72)	6 Fri	99 2404	3852
23 Mar. (82)	3 Tues	10 30 0	3 Mar (62)	4 Wed	313 5556	3853
22 Mar (82)	4 Wed.	16 42 30	20 Mar. (80)	2 Mon	9 5633	3854
22 Mar (81)	5 Thur.	22 55 0	10 Mar (69)	0 Sat	223 8786	3855
23 Mar (82)	0 Sat.	5 7 30	27 Feb (58)	4 Wed	99 5620	3856
23 Mar (82)	1 Sun	11 20 0	18 Mar (77)	3 Tues	134 2016	3857
22 Mar (82)	2 Mon	17 32 30	6 Mar (66)	0 Sat	9 8850	3858
22 Mar (81)	3 Tues	23 45 0	24 Feb (55)	5 Thur	224 2003	3859
23 Mar (82)	5 Thur.	5 57 30	15 Mar (74)	4 Wed	258 8399	3860
23 Mar (82)	6 Fri.	12 10 0	4 Mar (63)	1 Sun	134 5233	3861
22 Mar (82)	0 Sat	18 22 30	22 Mar (82)	0 Sat	169 1026	3862
23 Mar (82)	2 Mon	0 35 0	11 Mar (70)	4 Wed	44 8463	3863
23 Mar (82)	3 Tues	6 47 30	1 Mar (60)	2 Mon	259 1616	3864
23 Mar (82)	4 Wed.	13 0 0	20 Mar (79)	1 Sun.	293 8612	3865
22 Mar (82)	5 Thur.	10 12 30	8 Mar (68)	5 Thur	169 4846	3866
23 Mar (82)	0 Sat.	1 25 0	25 Feb (56)	2 Mon.	45 1680	3867
23 Mar (82)	1 Sun.	7 57 30	16 Mar (75)	Sun	79 8076	3868
23 Mar (82)	2 Mon.	13 50 0	6 Mar (65)	0 Fri	294 1228	3869
22 Mar. (82)	3 Tues	20 2 30	23 Feb (54)	3 Tues	169 8062	3870

TABLE

CONCURRENT YEAR								Mean Intercalated (adhika) lunar month
Kalī	Saka	Chaitrādi Vikrama	Māhādī solar year in Bengal	Kollam	A D	JUVIAN SAMVATSARA		
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
3871	692	827	176		769 70	42 Kīlā a		
3872	693	828	177		770 71	43 Saumya .	10 Pausha .	
3873	694	829	178		771-72	44 Sidhārana .		
3874	695	830	179		*772-73	45 Virōdhakrit .		
3875	696	831	180		773 74	46 Paridhāvin	7 Āsina	
3876	697	832	181		774 75	47 Pramādin		
3877	698	833	182		775 76	48 Ānanda		
3878	699	834	183		*776 77	49 Rāshasa	3 Jyēshtha	
3879	700	835	184		777 78	50 Anna .		
3880	701	836	185		778 79	51 Pūgala	12 Pūlguna .	
3881	702	837	186		779 80	52 Kālavukta		
3882	703	838	187		*780 81	53 Siddhīrthun		
3883	704	839	188		781-82	54 Raudra .	8 Kārtika	
3884	705	840	189		782 83	55 Durmatī .		
3885	706	841	190		783 84	56 Dundubhi .		
3886	707	842	191		*784-85	57 Rudhrōdgārin	5 Śrāvana .	
3887	708	843	192		785 86	58 Raktāksha .		
3888	709	844	193		786 87	59 Krōdhana .		
3889	710	845	194		787 88	60 Kshaya .	1 Chaitra	
3890	711	846	195		*788 89	1 Prabhava .		
3891	712	847	196		789 90	2 Vibhava .	10 Pausha .	
3892	713	848	197		790 91	3 Śukla .		
3893	714	849	198		791-92	4 Pramōda .		
3894	715	850	199		*792 93	5 Prajāpati .	7 Āsina†	
3895	716	851	200		793 94	6 Angiras .		

† By the "Indian Calendar" 6 Bhādrapada was intercalated.

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1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE						
MEAN SOLAR YEAR			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			Kali year.
Day and month, A.D.	Week-day	Time of mean M̄c̄sha samkrānti	Day and month, A.D.	Week-day	<i>a</i> (here= <i>t</i> , the index of the tithi)	
13	14	17	19	20	23	1
		H M S				
23 Mar (82)	5 Thur	2 15 0	13 Mar (72)	2 Mon	204 4459	3871
23 Mar (82)	6 Fri	8 27 30	2 Mar (61)	6 Fri	80 1292	3872
23 Mar (82)	0 Sat	14 40 0	21 Mar. (80)	5 Thur.	114 7688	3873
22 Mar (82)	1 Sun	20 52 30	10 Mar (70)	3 Tues	329 0841	3874
23 Mar (82)	3 Tues	3 5 0	27 Feb (58)	0 Sat	204 7675	3875
23 Mar (82)	4 Wed	9 17 30	18 Mar (77)	6 Fri	239 4071	3876
23 Mar (82)	5 Thur.	15 30 0	7 Mar (66)	3 Tues	115 0904	3877
22 Mar (82)	6 Fri	21 42 30	25 Feb (56)	1 Sun	329 4057	3878
23 Mar (82)	1 Sun	3 55 0	14 Mar (73)	6 Fri	25 4134	3879
23 Mar (82)	2 Mon	10 7 30	4 Mar (63)	4 Wed.	239 7288	3880
23 Mar. (82)	3 Tues	16 20 0	23 Mar (82)	3 Tues	274 3682	3881
22 Mar (82)	4 Wed	22 32 30	11 Mar (71)	0 Sat	150 0517	3882
23 Mar (82)	6 Fri	4 45 0	28 Feb (59)	4 Wed	25 7351	3883
23 Mar (82)	0 Sat	10 57 30	19 Mar (78)	3 Tues	60 3747	3884
23 Mar (82)	1 Sun	17 10 0	9 Mar (68)	1 Sun	274 6900	3885
22 Mar (82)	2 Mon	23 22 30	26 Feb (57)	5 Thur*	150 3734	3886
23 Mar. (82)	4 Wed	5 35 0	16 Mar (75)	4 Wed	185 0130	3887
23 Mar (82)	5 Thur	11 47 30	5 Mar (64)	1 Sun	60 6963	3888
23 Mar. (82)	6 Fri	18 0 0	23 Feb (54)	6 Fri	275 0116	3889
23 Mar (83)	1 Sun.	0 12 30	13 Mar (73)	5 Thur	309 6513	3890
23 Mar (82)	2 Mon	6 25 0	2 Mar (61)	2 Mon	185 3346	3891
23 Mar (82)	3 Tues	12 37 30	21 Mar (80)	1 Sun	219 9743	3892
23 Mar (82)	4 Wed	18 50 0	10 Mar (69)	5 Thur	95 6576	3893
23 Mar (83)	6 Fri	1 2 30	28 Feb (59)	3 Tues	309 9730	3894
23 Mar (82)	0 Sat	7 15 0	17 Mar (76)	1 Sun	5 9807	3895

TABLE

CONCURRENT YEAR								Mean Intercalated (adlukā) lunar month
Kalī	Śaka	Chaitrādi Vikrama	Mōshādi solar year in Bengal	Kollam	A D	JOVIAN SAMVATSARA		
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
3896	717	852	201		794 95	7 Śrīmukha	.	
3897	718	853	202		795 96	8 Bhāva	.	3 Jyēshtha
3898	719	854	203		*796 97	9 Yuva	.	
3899	720	855	204		797 98	10 Dhātṛ	.	12 Phālguna
3900	721	856	205		798 99	11 Īśvara	.	
3901	722	857	206		799 800	12 Bahudhānya	.	
3902	723	858	207		*800 01	13 Pramāthun	.	8 Kārttika
3903	724	859	208		801 02	14 Vikrama	.	
3904	725	860	209		802 03	15 Vṛsha	.	
3905	726	861	210		803 04	16 Chitrabhānu	.	5 Śrāvana
3906	727	862	211		*804 05	17 Subhānu	.	
3907	728	863	212		805 06	18 Tārāṇa	.	
3908	729	864	213		806 07	19 Pārthiva	.	1 Chaitra
3909	730	865	214		807 08	20 Vyaya	.	
3910	731	866	215		*808 09	21 Sarvajit	.	10 Pausha
3911	732	867	216		809 10	22 Sarvadhārin	.	
3912	733	868	217		810 11	23 Virōdhun	.	
3913	734	869	218		811-12	24 Vikṛta	.	6 Bhādrapada
3914	735	870	219		*812-13	25 Khara	.	
3915	736	871	220		813-14	26 Nandana	.	
3916	737	872	221		814-15	27 Vijaya	.	3 Jyēshtha
3917	738	873	222		815-16	28 Jaya	.	...
3918	739	874	223		*816-17	29 Manmathe	.	11 Māgha
3919	740	875	224		817-18	30 Durmukha	.	
3920	741	876	225		818-19	31 Hāmālamba	.	...

LXXVI—Contd

1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE						Kali year.
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS)			
Day and month, A.D.	Week-day.	Time of mean Mēsha-samkrānti	Day and month, A.D.	Week-day	α (here= t , the index of the tithi)	
13	14	17	19	20	23	1
		H M S				
23 Mar (82)	1 Sun	13 27 30	7 Mar (86)	6 Fri	220 2959	3896
23 Mar (82)	2 Mon	19 40 0	24 Feb (55)	3 Tues	95 9793	3897
23 Mar (83)	4 Wed	1 52 30	14 Mar (74)	2 Mon	130 6189	3898
23 Mar (82)	5 Thur	8 5 0	3 Mar (62)	6 Fri	6 3023	3899
23 Mar (82)	6 Fri	14 17 30	22 Mar (81)	5 Thur	40 9419	3900
23 Mar (82)	0 Sat	20 30 0	12 Mar (71)	3 Tues	255 2572	3901
23 Mar (83)	2 Mon	2 42 30	29 Feb (60)	0 Sat	130 9406	3902
23 Mar (82)	3 Tues	8 55 0	19 Mar (78)	6 Fri	165-5802	3903
23 Mar (82)	4 Wed	15 7 30	8 Mar (67)	3 Tues	41 2636	3904
23 Mar (82)	5 Thur	21 20 0	26 Feb (57)	1 Sun	255 5789	3905
23 Mar (83)	0 Sat	3 32 30	16 Mar (76)	0 Sat	290 2185	3906
23 Mar (82)	1 Sun	9 45 0	5 Mar (64)	4 Wed	165 9018	3907
23 Mar (82)	2 Mon	15 57 30	22 Feb (53)	1 Sun	41 5852	3908
23 Mar (82)	3 Tues	22 10 0	13 Mar (72)	0 Sat	76 2248	3909
23 Mar (83)	5 Thur	4 22 30	2 Mar (62)	5 Thur	290 5401	3910
23 Mar (82)	6 Fri	10 35 0	21 Mar (80)	4 Wed	325 1798	3911
23 Mar (82)	0 Sat	16 47 30	10 Mar (69)	1 Sun	200-8631	3912
23 Mar (82)	1 Sun	23 0 0	27 Feb (58)	5 Thur	76 5465	3913
23 Mar (83)	3 Tues	5 12 30	17 Mar (77)	4 Wed	111 1862	3914
23 Mar (82)	4 Wed	11 25 0	7 Mar (66)	2 Mon	325-5013	3915
23 Mar (82)	5 Thur	17 37 30	24 Feb (55)	6 Fri	201 1847	3916
23 Mar (82)	6 Fri	23 50 0	15 Mar (74)	5 Thur	235 8244	3917
23 Mar (83)	1 Sun	6 2 30	3 Mar (63)	2 Mon	111 5078	3918
23 Mar (82)	2 Mon	12 15 0	22 Mar (81)	1 Sun	146 1473	3919
23 Mar (82)	3 Tues	18 27 30	11 Mar (70)	5 Thur	21 8307	3920

TABLE

CONCURRENT YEAR								Mean Intercalated (adhika) lunar month
Kal	Saka	Chaitrādi Vikrama	Māhādi solar year in Bengal	Kollam	A.D	JOVIAN SAMVATSARA.		
						Southern system	Northern system	
1	2	3	3z	4	5	6	7	8a
3921	742	877	226		819 20	32 Vilamba† .	.	8 Kārttika .
3922	743	878	227		*820 21	34 Sīrvarin .	.	..
3923	744	879	228		821-22	35 Plava .	.	.
3924	745	880	229		822 23	36 Śubhakar† .	.	4 Āshādha .
3925	746	881	230		823 24	37 Śobhana .	.	..
3926	747	882	231		*824-25	38 Krōdhan .	.	.
3927	748	883	232	0 1	825-26	39 Viśvāvasu .	.	1 Chaitra .
3928	749	884	233	1-2	826-27	40 Parābhava .	.	.
3929	750	885	234	2-3	827-28	41 Plavanga .	.	10 Pausa .
3930	751	886	235	3 4	*828 29	42 Kilaka .	.	.
3931	752	887	236	4 5	829 30	43 Saumya .	.	...
3932	753	888	237	5 6	830 31	44 Sādhārana .	.	6 Bhādrapada .
3933	754	889	238	6 7	831-32	45 Virōdhakar† .	.	...
3934	755	890	239	7-8	*832-33	46 Paridhāvin .	.	...
3935	756	891	240	8 9	833 34	47 Pramādin .	.	3 Jyēshtha .
3936	757	892	241	9 10	834 35	48 Ānanda .	.	..
3937	758	893	242	10 11	*835 36	49 Rākshasa .	.	11 Māgha .
3938	759	894	243	11 12	*836 37	50 Anala .	.	...
3939	760	895	244	12-13	837-38	51 Prīngala .	.	...
3940	761	896	245	13 14	838 39	52 Kālayukta .	.	8 Kārttika .
3941	762	897	246	14 15	839 40	53 Siddhārthin .	.	...
3942	763	898	247	15 16	*840-41	5. Raudra .	.	...
3943	764	899	248	16 17	841 42	55 Durmati .	.	4 Āshādha .
3944	765	900	249	17 18	842 43	56 Dundubhi .	.	...
3945	766	901	250	18-19	843-44	57 Rudhrōdgārin .	.	...

† By both mean and true systems 32 Vikārin was expunged

LXXVI—Contd

1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE						Kali year
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS)			
Day and Month, A.D	Week-day.	Time of mean Mēsha-samkrānti.	Day and month, A. D	Week-day	α (here= t , the index of the tithi)	
13	14	17	19	20	23	1
24 Mar (83) . . .	5 Thur . . .	H M S 0 40 0	1 Mar (60) . . .	3 Tues. . .	236 1460	3921
23 Mar (83) . . .	6 Fri. . .	6 52 30	19 Mar (79)	2 Mon. . .	270 7856	3922
23 Mar (82) . . .	0 Sat. . .	13 5 0	8 Mar (67) . . .	6 Fri. . .	146 4690	3923
23 Mar (82) . . .	1 Sun. . .	19 17 30	25 Feb (56) . . .	3 Tues. . .	22 1524	3924
24 Mar (83) . . .	3 Tues. . .	1 30 0	16 Mar (75) . . .	2 Mon . . .	56 7920	3925
23 Mar (83) . . .	4 Wed. . .	7 42 30	5 Mar (65) . . .	0 Sat. . .	271 1073	3926
23 Mar (82) . . .	5 Thur . . .	13 55 0	22 Feb (53)	4 Wed. . .	146 7906	3927
23 Mar (82) . . .	6 Fri. . .	20 7 30	13 Mar (72) . . .	3 Tues. . .	181 4303	3928
24 Mar (83) . . .	1 Sun . . .	2 20 0	2 Mar (61) . . .	0 Sat. . .	57 1137	3929
23 Mar (83) . . .	2 Mon. . .	8 32 30	20 Mar (80) . . .	6 Fri. . .	91 7533	3930
23 Mar (82)	3 Tues. . .	14 45 0	10 Mar (69) . . .	4 Wed. . .	306 0686	3931
23 Mar (82) . . .	4 Wed. . .	20 57 30	27 Feb (58) . . .	1 Sun . . .	181 7519	3932
24 Mar (83) . . .	6 Fri . . .	3 10 0	18 Mar (77) . . .	0 Sat. . .	216 3916	3933
23 Mar (83) . . .	0 Sat. . .	9 22 30	6 Mar (66) . . .	4 Wed. . .	92 0749	3934
23 Mar (82) . . .	1 Sun. . .	15 35 0	24 Feb (55) . . .	2 Mon . . .	306 3902	3935
23 Mar (82) . . .	2 Mon. . .	21 47 30	14 Mar (73) . . .	0 Sat. . .	2 3979	3936
24 Mar (83) . . .	4 Wed. . .	4 0 0	4 Mar (63) . . .	5 Thur . . .	216 7132	3937
23 Mar (83) . . .	5 Thur . . .	10 12 30	22 Mar (82) . . .	4 Wed. . .	251 3528	3938
23 Mar (82) . . .	6 Fri. . .	16 25 0	11 Mar (70)	1 Sun. . .	127 0362	3939
23 Mar (82) . . .	0 Sat . . .	22 37 30	28 Feb (59)	5 Thur . . .	2 7176	3940
24 Mar (83) . . .	2 Mon . . .	4 50 0	19 Mar (78)	4 Wed. . .	37 3592	3941
23 Mar (83) . . .	3 Tues . . .	11 2 30	8 Mar (68) . . .	2 Mon. . .	251 6745	3942
23 Mar (82) . . .	4 Wed. . .	17 15 0	25 Feb (56) . . .	6 Fri . . .	127 3579	3943
23 Mar (82) . . .	5 Thur. . .	23 17 30	16 Mar (75)	5 Thur . . .	161 9975	3944
24 Mar (83) . . .	0 Sat. . .	5 40 0	5 Mar (64) . . .	2 Mon. . .	37 6809	3945

TABLE

CONCURRENT YEAR								Mean Intercalated (adhikā) lunar month.
Kalī	Śaka	Chaitrīdi Vikrama	Mēshādi solar year in Bengal	Kollam	A D	JOVIAN SAMVATSARA		
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
3946	767	902	251	19-20	*844 45	58 Raktāksha		1 Chaitra
3947	768	903	252	20-21	845 46	59 Krōdhana		
3948	769	904	253	21 22	846 47	60 Kshaya		9 Mārgāśira
3949	770	905	254	22 23	847-48	1 Prabhava		
3950	771	906	255	23-24	-*848 49	2 Vibhava		
3951	772	907	256	24 25	849 50	3 Śukla		6 Bhādrapada
3952	773	908	257	25 26	850-51	4 Pramōda		
3953	774	909	258	26 27	851-52	5 Prajāpati		
3954	775	910	259	27-28	*852 53	6 Aṅgiras		2 Vaiśākha
3955	776	911	260	28 29	853 54	7 Śrimukha		
3956	777	912	261	29 30	854 55	8 Bhāva		11 Māgha
3957	778	913	262	30 31	855 56	9 Yuvan		
3958	779	914	263	31-32	*856 57	10 Dhātṛi		
3959	780	915	264	32 33	857 58	11 Jāvara		7 Āśvīn
3960	781	916	265	33-34	858 59	12 Bahudhānya		
3961	782	917	266	34-35	859 60	13 Pramāthin		
3962	783	918	267	35 36	*860 61	14 Vikrama		4 Āśhāḍha
3963	784	919	268	36 37	861 62	15 Vṛisha		
3964	785	920	269	37-38	862 63	16 Chitrabhānu		12 Phālguna
3965	786	921	270	38-39	863-64	17 Subhānu		
3966	787	922	271	39 40	*864-65	18 Tārana		
3967	788	923	272	40 41	865 66	19 Pārthiva		9 Mārgāśira
3968	789	924	273	41-42	866-67	20 Vyaya		
3969	790	925	274	42-43	867-68	21 Sarvajit		
3970	791	926	275	43 44	*868 69	22 Sarvadhārin		6 Bhādrapada.†

† By the "Indian Calendar" 5 Śrāvana was intercalated.

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1 Arya Siddhanta, mean system.

COMMENCEMENT OF THE						
MEAN SOLAR YEAR			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS)			Kali year.
Day and month, A.D.	Week-day.	Time of mean M̄csha sambr̄anti	Day and month, A D	Week day.	a (here= <i>t</i> , the index of the tithi)	
13	14	17	19	20	23	1
		H M S				
23 Mar (83) .	1 Sun. .	11 52 30	23 Feb (84)	0 Sat	251 9980	3946
23 Mar (82) .	2 Mon .	18 5 0	13 Mar (72)	6 Fri	280 6357	3947
24 Mar. (83)	4 Wed .	0 17 30	2 Mar (81)	3 Tues .	102 3191	3948
24 Mar (83) .	5 Thur .	6 30 0	21 Mar (80)	2 Mon	106 9588	3949
23 Mar (83)	6 Fri .	12 42 30	9 Mar (69)	6 Fri .	72 0421	3950
23 Mar (82)	0 Sat. .	18 55 0	27 Feb (88)	4 Wed	286 9573	3951
24 Mar (83) .	2 Mon .	1 7 30	18 Mar. (77)	3 Tues .	321 5970	3952
24 Mar (83) .	3 Tues. .	7 20 0	7 Mar. (86)	0 Sat .	197 2503	3953
23 Mar (83)	4 Wed .	13 32 30	24 Feb (85)	4 Wed	72 9037	3954
23 Mar (82)	5 Thur .	19 45 0	14 Mar (73)	3 Tues .	107 8033	3955
24 Mar (83) .	0 Sat .	1 57 30	4 Mar (83)	1 Sun	321 9186	3956
24 Mar (83) .	1 Sun	8 10 0	22 Mar (81)	6 Fri .	17 9263	3957
23 Mar (83) .	2 Mon .	14 22 30	11 Mar (71)	4 Wed .	232 2416	3958
23 Mar (82)	3 Tues .	20 25 0	28 Feb (69)	1 Sun .	107 9250	3959
24 Mar (83)	5 Thur .	2 47 30	19 Mar (78)	0 Sat .	142 5646	3960
24 Mar (83) .	6 Fri .	9 0 0	8 Mar (87)	4 Wed	18 2480	3961
23 Mar (83) .	0 Sat .	15 12 30	26 Feb. (67)	2 Mon .	232 5693	3962
23 Mar (82)	1 Sun .	21 25 0	16 Mar (75)	1 Sun. .	287-2029	3963
24 Mar (83) .	3 Tues	3 37 30	5 Mar (64)	5 Thur .	142 8863	3964
24 Mar (83) .	4 Wed. .	9 50 0	24 Mar. (83)	4 Wed. .	177 5259	3965
23 Mar (83)	5 Thur. .	16 2 30	12 Mar (72)	1 Sun. .	53-2093	3966
23 Mar (82)	6 Fri .	22 15 0	2 Mar. (61)	6 Fri. .	287-5245	3967
24 Mar (83) .	1 Sun .	4 27 30	21 Mar. (80)	5 Thur. .	302-1642	3968
24 Mar (83) .	2 Mon .	10 40 0	10 Mar (69)	2 Mon. .	177-8476	3969
23 Mar. (83) .	3 Tues. .	16 52 30	27 Feb (68)	6 Fri. .	53 5309	3970

TABLE

CONCURRENT YEAR.								Mean Intercalated (adhika) lunar month
Kal.	Saka	Chaitrādi Vikrama	Mēshādi solar year in Bengal	Kollam	A.D.	JOVIAN SAMVATSARA		
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
3971	792	927	276	44 45	869-70	23 Virōdhin . . .		..
3972	793	928	277	45 46	870 71	24 Vikrita . . .		
3973	794	929	278	46 47	871-72	25 Khara . . .		2 Vaiśākha
3974	795	930	279	47-48	*872-73	26 Nandana . . .		..
3975	796	931	280	48 49	873-74	27 Vijaya . . .		11 Māgha
3976	797	932	281	49 50	874-75	28 Jaya . . .		.
3977	798	933	282	50 51	875-76	29 Manmatha . . .		
3978	799	934	283	51 52	*876-77	30 Durmukha . . .		7 Āśvina
3979	800	935	284	52 53	877-78	31 Hēmalamba . . .		
3980	801	936	285	53 54	878 79	32 Vilamba . . .		.
3981	802	937	286	54 55	879 80	33 Vikārin . . .		4 Āshādha
3982	803	938	287	55 56	*880 81	34 Sārvarin . . .		.
3983	804	939	288	56 57	881-82	35 Plava . . .		12 Phālguna .
3984	805	940	289	57 58	882 83	36 Subhakt . . .		
3985	806	941	290	58 59	883 84	37 Sōbhana . . .		.
3986	807	942	291	59 60	*884-85	38 Krōdhan . . .		9 Mārgāśira .
3987	808	943	292	60 61	885 86	39 Viśvāvasu . . .		.
3988	809	944	293	61-62	886 87	40 Parābhava . . .		.
3989	810	945	294	62 63	887 88	41 Plavanga . . .		5 Śrāvana .
3990	811	946	295	63 64	*888 89	42 Kīlaka . . .		
3991	812	947	296	64 65	889 90	43 Saumya . . .		
3992	813	948	297	65 66	890 91	44 Sādhāraṇa . . .		2 Vaiśākha .
3993	814	949	298	66 67	891-92	45 Virōdhakt . . .		.
3994	815	950	299	67 68	*892 93	46 Pandhāvin . . .		10 Pausa .
3995	816	951	300	68 69	893 94	47 Pramādin . . .		...

LXXVI—contd

1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE						
MEAN SOLAR YEAR.			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			Kal year.]
Day and month, A D	Week day	Time of mean Mēsha samkrānti	Day and month, A D	Week day	a (here= <i>t</i> , the index of the tithi)	
13	14	17	19	20	23	1
		H M S				
23 Mar (82)	4 Wed	23 5 0	17 Mar (76)	5 Thur. .	88 1705	3971
24 Mar (83)	6 Fri .	5 17 30	7 Mar (66)	3 Tues	302 4858	3972
24 Mar (83)	0 Sat	11 30 0	21 Feb (55)	0 Sat	178 1692	3973
23 Mar (83)	1 Sun	17 42 30	14 Mar (74)	6 Fri	212 8088	3974
23 Mar (82)	2 Mon	23 55 0	3 Mar (62)	3 Tues	88 4922	3975
24 Mar (83)	4 Wed	6 7 30	22 Mar (81)	2 Mon	123 1318	3976
24 Mar (83)	5 Thur	12 20 0	11 Mar (70)	6 Fri	9998 8151†	3977
23 Mar (83)	6 Fri	18 32 30	29 Feb (60)	4 Wed	213 1304	3978
24 Mar (83)	1 Sun	0 45 0	19 Mar (78)	3 Tues	247 7700	3979
24 Mar (83)	2 Mon	6 57 30	8 Mar (67)	0 Sat	123 4535	3980
24 Mar. (83)	3 Tues .	13 10 0	25 Feb (56)	4 Wed	9999 1368†	3981
23 Mar (83)	4 Wed .	19 22 30	15 Mar (75)	3 Tues	33 7764	3982
24 Mar (83)	6 Fri .	1 35 0	5 Mar (64)	1 Sun. .	248 0917	3983
24 Mar (83)	0 Sat	7 47 30	24 Mar (83)	0 Sat .	282 7313	3984
24 Mar (83)	1 Sun .	14 0 0	13 Mar (72)	4 Wed.	158 4147	3985
23 Mar (83)	2 Mon	20 12 30	1 Mar (61)	1 Sun	34 0980	3986
24 Mar (83)	4 Wed	2 25 0	20 Mar (79)	0 Sat	68 7377	3987
24 Mar (83)	5 Thur	8 37 30	10 Mar (69)	5 Thur .	283 0530	3988
24 Mar (83)	6 Fri	14 50 0	27 Feb (58)	2 Mon	158 7364	3989
23 Mar (83)	0 Sat .	21 2 30	17 Mar (77)	1 Sun	193 3760	3990
24 Mar (83)	2 Mon	3 15 0	6 Mar (65)	5 Thur	69 0594	3991
24 Mar (83)	3 Tues	9 27 30	24 Feb (55)	3 Tues	283 3746	3992
24 Mar (83)	4 Wed	15 40 0	15 Mar (74)	2 Mon.	318 0143	3993
23 Mar. (83)	5 Thur	21 52 30	3 Mar (63)	6 Fri	193 6976	3994
24 Mar (83)	0 Sat	4 5 0	22 Mar (81)	5 Thur	228 3372	3995

† As a mean tithi Chaitra śukla 1 was suppressed The civil day corresponding to it, i.e., the first day of the mean luni solar year, was as given in cols 19, 20

TABLE

CONCURRENT YEAR.								
Kau.	Saka	Chaitrādī Vikrama.	Mēshādī solar year in Bengal	Kollam.	A.D.	JOVIAN SAMVATSARA		Mean Intercalated (adhika) lunar month
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
3996	817	952	301	69 70	894 95	48 Ānanda . . .		
3997	818	953	302	70 71	895 96	49 Rākshasa . . .		7 Āśvina .
3998	819	954	303	71 72	*896 97	50 Anala . . .		
3999	820	955	304	72 73	897 98	51 Pingala . . .		
4000	821	956	305	73-74	898 99	52 Kālayukta . . .		3 Jyēshtha
4001	822	957	306	74 75	899 900	53 Siddhārtham . . .		
4002	823	958	307	75 76	*900 01	54 Raudra . . .		12 Phālguna
4003	824	959	308	76 77	901 02	55 Durmati . . .		
4004	825	960	309	77-78	902 03	56 Dundubhi . . .		
4005	826	961	310	78 79	903 04	57 Rudhirōdgārin . . .		9 Mārgasīra ‡
4006	827	962	311	79 80	*904 05	58 Raktāksha† . . .		
4007	828	963	312	80 81	905 06	59 Krōdhana . . .	60 Kshaya	
4008	829	964	313	81 82	906 07	60 Kshaya† . . .	1 Prabhava	5 Śrāvana
4009	830	965	314	82 83	907-08	1 Prabhava . . .	2 Vibhava	
4010	831	966	315	83-84	*908 09	2 Vibhava . . .	3 Śukla	
4011	832	967	316	84 85	909 10	3 Śukla . . .	4 Pramōda	2 Vaiśākha
4012	833	968	317	85 86	910 11	4 Pramōda . . .	5 Prajāpatī	
4013	834	969	318	86-87	911 12	5 Prajāpatī . . .	6 Angiras	10 Pausha
4014	835	970	319	87-88	*912 13	6 Angiras . . .	7 Śrīmukha	
4015	836	971	320	88 89	913 14	7 Śrīmukha . . .	8 Bhāva	
4016	837	972	321	89 90	914 15	8 Bhāva . . .	9 Yuvan	7 Āśvina .
4017	838	973	322	90 91	915 16	9 Yuvan . . .	10 Dhātri . . .	
4018	839	974	323	91-92	*916 17	10 Dhātri . . .	11 Īsvara . . .	
4019	840	975	324	92 93	917-18	11 Īsvara . . .	12 Bahudhānya	
4020	841	976	325	93 94	918 19	12 Bahudhānya . . .	13 Pramāthin	3 Jyēshtha

† By the mean system 59 Krōdhana was expunged, by the true system 60 Kshaya was the expunged samvatsara and the year A D 905 6 was called "Krodhana".

‡ By southern reckoning there was no suppression after this year

§ By the "Indian Calendar" 8 Kārttika was intercalated.

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1 Ārya Siddhānta, mean system

COMMENCEMENT OF THE						Kali year
MEAN SOLAR YEAR			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			
Day and month, A D	Week day	Time of mean Mēṣa-rāmkṛāntī	Day and month, A D.	Week day	a (here = t, the index of the tithi)	
13	14	17	19	20	23	1
24 Mar (83)	1 Sun.	H M S 10 17 30	11 Mar (70)	2 Mon	104 0206	3996
24 Mar (83)	2 Mon	16 30 0	1 Mar (60)	0 Sat.	318 3350	3997
23 Mar (83)	3 Tues.	22 42 30	18 Mar (78)	5 Thur	14 3436	3998
24 Mar (83)	5 Thur	4 55 0	8 Mar (67)	3 Tues.	228 6589	3999
24 Mar (83)	6 Fri	11 7 30	25 Feb (56)	0 Sat.	104 3423	4000
24 Mar (83)	0 Sat.	17 20 0	16 Mar (75)	6 Fri	138 9819	4001
23 Mar (83)	1 Sun	23 32 30	4 Mar (64)	3 Tues	14 0653	4002
24 Mar (83)	3 Tues.	5 45 0	23 Mar (82)	2 Mon	49 3049	4003
24 Mar (84)	4 Wed.	11 57 30	13 Mar (72)	0 Sat.	263 6202	4004
24 Mar (83)	5 Thur	18 10 0	2 Mar (61)	4 Wed	139 3034	4005
24 Mar (84)	0 Sat	0 22 30	20 Mar (80)	3 Tues.	173 9431	4006
24 Mar (83)	1 Sun	6 35 0	9 Mar (68)	0 Sat.	40 6264	4007
24 Mar (83)	2 Mon	12 47 30	27 Feb (58)	5 Thur	263 9418	4008
24 Mar (83)	3 Tues	19 0 0	18 Mar (77)	4 Wed	298 5814	4009
24 Mar (84)	5 Thur	1 12 30	6 Mar (66)	1 Sun	174 2647	4010
24 Mar (83)	6 Fri	7 25 0	23 Feb (54)	5 Thur	49 9481	4011
24 Mar (83)	0 Sat.	13 37 30	14 Mar (73)	4 Wed	84 5878	4012
24 Mar (83)	1 Sun	19 50 0	4 Mar (63)	2 Mon	298 9030	4013
24 Mar (84)	3 Tues.	2 2 30	21 Mar (81)	0 Sat.	9994 9109†	4014
24 Mar (83)	4 Wed.	8 15 0	11 Mar (70)	5 Thur	209 2259	4015
24 Mar (83)	5 Thur	14 27 30	28 Feb (59)	2 Mon.	84 9093	4016
24 Mar (83)	6 Fri	20 40 0	19 Mar (78)	1 Sun.	119 5490	4017
24 Mar (84)	1 Sun	2 52 30	7 Mar (67)	5 Thur	9995 2324†	4018
24 Mar (83)	2 Mon	9 5 0	25 Feb (56)	3 Tues.	209 5476	4019
24 Mar (83)	3 Tues	15 17 30	16 Mar (75)	2 Mon	244 1872	4020

† As a mean tithi Chaitra Śukla 1 was suppressed The civil day corresponding to it, i.e., the first day of the luni solar year was as given in cols 19, 20

TABLE

CONCURRENT YEAR								Mean Intercalated (adhika) lunar month
Kalī	Śaka	Chaitrādī Vikrama	Mēshādi solar year in Bengal.	Kollam	A.D	JOVIAN SAMVATSARA.		
						Southern system.	Northern system.	
1	2	3	3a	4	5	6	7	8a
4021	842	977	326	94 95	919 20	13 Pramāthin .	14 Vikrama .	12 Phālguna .
4022	843	978	327	95 96	*920 21	14 Vikrama	15 Vṛ̥ṣha .	..
4023	844	979	328	96 97	921 22	15 Vṛ̥ṣha .	16 Chitrabhānu .	..
4024	845	980	329	97 98	922 23	16 Chitrabhānu .	17 Subhānu .	8 Kārttika .
4025	846	981	330	98 99	923 24	17 Subhānu .	18 Tārana .	
4026	847	982	331	99 00	*924-25	18 Tārana .	19 Pārthiva .	
4027	848	983	332	100 01	925-26	19 Pārthiva .	20 Vyaya .	5 Śrāvana
4028	849	984	333	101-02	926 27	20 Vyaya	21 Sarvaṅg .	.
4029	850	985	334	102 03	927 28	21 Sarvaṅg	22 Sarvadhāra	.
4030	851	986	335	103 04	*928 29	22 Sarvadhāra .	23 Virōdhan .	1 Chaitra
4031	852	987	336	104 05	929 30	23 Virōdhan .	24 Vikṛita .	.
4032	853	988	337	105 06	930 31	24 Vikṛita .	25 Khara .	10 Pausa
4033	854	989	338	106 07	931-32	25 Khara	26 Nandana .	
4034	855	990	339	107 08	*932 33	26 Nandana	27 Vijaya .	.
4035	856	991	340	108-09	933 34	27 Vijaya .	28 Jaya .	6 Bhādrapada
4036	857	992	341	109 10	934 35	28 Jaya .	29 Manmatha .	..
4037	858	993	342	110-11	935 36	29 Manmatha	30 Durmukha .	
4038	859	994	343	111-12	*936-37	30 Durmukha	31 Hēmalamba .	3 Jyēshṭha .
4039	860	995	344	112-13	937-38	31 Hēmalamba	32 Vilamba .	...
4040	861	996	345	113 14	938-39	32 Vilamba	33 Vikāra .	11 Māgha .
4041	862	997	346	114-15	939-40	33 Vikāra .	34 Śārvarin .	...
4042	863	998	347	115-16	*940-41	34 Śārvarin .	35 Plava .	...
4043	864	999	348	116-17	941-42	35 Plava .	36 Subhakṛit .	8 Kārttika .
4044	865	1000	349	117-18	942-43	36 Subhakṛit .	37 Śōbhana .	...
4045	866	1001	350	118-19	943 44	37 Śōbhana .	38 Krōdhan .	...

LXXVI—contd.

1 Arya Siddhanta, mean system.

COMMENCEMENT OF THE						Kali year.
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA SURYA ENDS)			
Day and month, A.D.	Week-day	Time of mean Mēsha-samkrānti	Day and month, A.D.	Week-day.	α (here= t , the index of the tithi)	
13	14	17	19	20	23	1
		H M S				
24 Mar (83) .	4 Wed.	21 30 0	5 Mar (84)	6 Fri .	119 8706	4021
24 Mar (84)	6 Fri .	3 42 30	23 Mar (83) .	5 Thur .	154 5102	4022
24 Mar (83) . .	0 Sat .	9 55 0	12 Mar (71) .	2 Mon	30 1936	4023
24 Mar (83) .	1 Sun. .	16 7 30	2 Mar. (81) .	0 Sat .	244 5089	4024
24 Mar (83) .	2 Mon.	22 20 0	21 Mar (80) .	6 Fri. .	279 1485	4025
24 Mar (84) .	4 Wed	4 32 30	9 Mar (89) .	3 Tues .	154 8319	4026
24 Mar (83)	5 Thur.	10 45 0	26 Feb (57)	0 Sat .	30 5153	4027
24 Mar (83) . .	6 Fri .	16 57 30	17 Mar (76) .	6 Fri .	65-1549	4028
24 Mar (83)	0 Sat	23 10 0	7 Mar (86)-	4 Wed. .	279-4701	4029
24 Mar (84)	2 Mon	5 22 30	24 Feb (55) .	1 Sun .	155 1535	4030
24 Mar. (83)	3 Tues .	11 35 0	14 Mar (73)	0 Sat .	189 7932	4031
24 Mar (83)	4 Wed	17 47 30	3 Mar (82) .	4 Wed	65 4765	4032
25 Mar (84) .	6 Fri	0 0 0	22 Mar (81) .	3 Tues .	100 1162	4033
24 Mar (84)	0 Sat .	6 12 30	11 Mar (71) .	1 Sun	314 4314	4034
24 Mar (83) .	1 Sun	12 25 0	28 Feb (59) .	5 Thur .	190 1148	4035
24 Mar (83) .	2 Mon .	18 37 30	19 Mar (78) .	4 Wed	224 7544	4036
25 Mar (84) .	4 Wed. .	0 50 0	8 Mar (87) .	1 Sun .	100 4378	4037
24 Mar (84) .	5 Thur .	7 2 30	26 Feb (57) .	6 Fri .	314 7531	4038
24 Mar (83)	6 Fri .	13 15 0	15 Mar (74) .	4 Wed. .	10 7698	4039
24 Mar (83)	0 Sat	19 27 30	5 Mar (84) .	2 Mon .	225 0661	4040
25 Mar (84) . .	2 Mon.	1 40 0	24 Mar (83) .	1 Sun. .	259 7156	4041
24 Mar (84) . .	3 Tues.	7 52 30	12 Mar (72) .	5 Thur .	135 3991	4042
24 Mar (83) .	4 Wed.	14 5 0	1 Mar (80)	2 Mon .	11 0825	4043
24 Mar (83) . .	5 Thur .	20 17 30	20 Mar (79) .	1 Sun. .	45 7222	4044
25 Mar. (84) . .	0 Sat.	2 30 0	10 Mar (89) .	6 Fra .	260 0474	4045

TABLE

CONCURRENT YEAR								Mean Intercalated (adhikā) lunar month
Kali	Saka	Chaitrādi Vikrama	Māshādi solar year in Bengal	Kollam	A D	JOVIAN SAMVATSARA		
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
4046	867	1002	351	119 20	*944 45	38 Krōdhin	39 Visvāvasu	5 Śrāvast
4047	868	1003	352	120 21	945 46	39 Visvāvasu	40 Parābhava	
4048	869	1004	353	121-22	946 47	40 Parābhava	41 Pravanga	
4049	870	1005	354	122 23	947-48	41 Pravanga	42 Kīlaka	1 Chaitra
4050	871	1006	355	123-24	*948 49	42 Kīlaka	43 Saumya	.
4051	872	1007	356	124 25	949 50	43 Saumya	44 Sādhārana	10 Pausha
4052	873	1008	357	125 26	950 51	44 Sādhārana	45 Virōdhakrit	
4053	874	1009	358	126 27	951-52	45 Virōdhakrit	46 Paridhāvin	
4054	875	1010	359	127 28	*952 53	46 Paridhāvin	47 Pramādin	6 Bhādrapada
4055	876	1011	360	128 29	953 54	47 Pramādin	48 Ānanda	
4056	877	1012	361	129 30	954 55	48 Ānanda	49 Rākshasa	.
4057	878	1013	362	130 31	955 56	49 Rākshasa	50 Anala	3 Jyēshtha
4058	879	1014	363	131 32	*956 57	50 Anala	51 Pingala	.
4059	880	1015	364	132 33	957 58	51 Pingala	52 Kālayukta	11 Māgha
4060	881	1016	365	133 34	958-59	52 Kālayukta	53 Siddhārthin	
4061	882	1017	366	134 35	959 60	53 Siddhārthin	54 Raudra	
4062	883	1018	367	135 36	*960 61	54 Raudra	55 Durmatī	8 Kārtika
4063	884	1019	368	136 37	961 62	55 Durmatī	56 Dundubhi	
4064	885	1020	369	137 38	962 63	56 Dundubhi	57 Rudhirōdgārīn	..
4065	886	1021	370	138 39	963 64	57 Rudhirōdgārīn	58 Raktāksha	4 Āshādha
4066	887	1022	371	139 40	*964 65	58 Raktāksha	59 Krōdhana	.
4067	888	1023	372	140 41	965 66	59 Krōdhana	60 Kshaya	
4068	889	1024	373	141 42	966 67	60 Kshaya	1 Prabhava	1 Chaitra
4069	890	1025	374	142 43	967 68	1 Prabhava	2 Vibhava	
4070	891	1026	375	143 44	*968 69	2 Vibhava	3 Sukla	9 Mārgaśira

† By the "Indian Calendar" the intercalated month was 4 Āshādha

LXXVI—contd

I Ārya Siddhānta, mean system

COMMENCEMENT OF THE						
MEAN SOLAR YEAR			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS)			Kali year
Day and month, A D	Week day	Time of mean M' sha-samkrānti.	Day and month, A D	Week day	α (here= t , the index of the tithi)	
13	14	17	19	20	23	1
		H M S				
24 Mar (84)	1 Sun	8 42 30	27 Feb (58)	3 Tues	135 7207	4046
24 Mar (83)	2 Mon	14 55 0	17 Mar (76)	2 Mon	170 3603	4047
24 Mar (83)	3 Tues	21 7 30	6 Mar (65)	6 Fri	46 0436	4048
25 Mar (84)	5 Thur	3 20 0	24 Feb (55)	4 Wed	260 3590	4049
24 Mar (84)	6 Fri	9 32 30	14 Mar (74)	3 Tues	294 9986	4050
24 Mar (83)	0 Sat	15 45 0	3 Mar (62)	0 Sat	170 6819	4051
24 Mar (83)	1 Sun	21 57 30	22 Mar (81)	6 Fri	205 3216	4052
25 Mar (84)	3 Tues	4 10 0	11 Mar (70)	3 Tues	81 0049	4053
24 Mar (84)	4 Wed	10 22 30	29 Feb (60)	1 Sun	295 3203	4054
24 Mar (83)	5 Thur	16 35 0	19 Mar (78)	0 Sat	329 9599	4055
24 Mar (83)	6 Fri	22 47 30	8 Mar (67)	4 Wed	205 6432	4056
25 Mar (84)	1 Sun	5 0 0	25 Feb (56)	1 Sun	81 3266	4057
24 Mar (84)	2 Mon	11 12 30	15 Mar (75)	0 Sat	115 9662	4058
24 Mar (83)	3 Tues	17 25 0	5 Mar (64)	5 Thur	330 2815	4059
24 Mar (83)	4 Wed	23 37 30	23 Mar (82)	3 Tues	26 2892	4060
25 Mar (84)	6 Fri	5 50 0	13 Mar (72)	1 Sun	240 6045	4061
24 Mar (84)	0 Sat	12 2 30	1 Mar (61)	5 Thur	116 2879	4062
24 Mar (83)	1 Sun	18 15 0	20 Mar (79)	4 Wed	150 9275	4063
25 Mar (84)	3 Tues	0 27 30	9 Mar (68)	1 Sun	26 6109	4064
25 Mar (84)	4 Wed	6 40 0	27 Feb (58)	6 Fri	240 9262	4065
24 Mar (84)	5 Thur	12 52 30	17 Mar (77)	5 Thur	275 5658	4066
24 Mar (83)	6 Fri	19 5 0	6 Mar (65)	2 Mon	151 2491	4067
25 Mar (84)	1 Sun	1 17 30	23 Feb (54)	6 Fri	26 9325	4068
25 Mar (84)	2 Mon	7 30 0	14 Mar (73)	5 Thur	61 5721	4069
24 Mar (84)	3 Tues	13 42 30	3 Mar (63)	3 Tues	275 8874	4070

TABLE

CONCURRENT YEAR								Mean Intercalated (adh'ita) lunar month.
Kali	Saka.	Chaitrādi Vikrama	Māsādi solar year in Bengal	Kollam	A.D	JOVIAN SAMVATSARĀ		
						Southern system	Northern system	
1	2	3	3a	4	5	6	8	8a
4071	892	1027	376	144 45	969-70	3 Sukla	4 Pramōda	
4072	893	1028	377	145 46	970 71	4 Pramōda	5 Prajāpati	
4073	894	1029	378	146 47	971 72	5 Prajāpati	6 Angiras	6 Bhādrapada
4074	895	1030	379	147 48	*972 73	6 Angiras	7 Śrīmukha	
4075	896	1031	380	148 49	973 74	7 Śrīmukha	8 Bhāva	
4076	897	1032	381	149 50	974 75	8 Bhāva	9 Yuvan	2 Vaiśākha
4077	898	1033	382	150 51	975 76	9 Yuvan	10 Dhātṛi	
4078	899	1034	383	151 52	*976 77	10 Dhātṛi	11 Īsvara	11 Māgha
4079	900	1035	384	152 53	977-78	11 Īsvara	12 Bahudhānya	
4080	901	1036	385	153 54	978 79	12 Bahudhānya	13 Pramāthin	
4081	902	1037	386	154 55	979 80	13 Pramāthin	14 Vikrama	8 Kārttika †
4082	903	1038	387	155 56	*980 81	14 Vikrama	15 Vrisha	
4083	904	1039	388	156 57	981 82	15 Vrisha	16 Chitrabhānu	
4084	905	1040	389	157 58	982 83	16 Chitrabhānu	17 Subhānu	4 Āshādha
4085	906	1041	390	158 59	983 84	17 Subhānu	18 Tārana	
4086	907	1042	391	159 60	*984 85	18 Tārana	19 Pārthiva	
4087	908	1043	392	160 61	985 86	19 Pārthiva	20 Vyaya	1 Chaitra
4088	909	1044	393	161 62	986 87	20 Vyaya	21 Sarvajit	
4089	910	1045	394	162 63	987 88	21 Sarvajit	22 Sarvadhārin	9 Mārgasira
4090	911	1046	395	163 64	*988 89	22 Sarvadhārin	23 Virōdhin	
4091	912	1047	396	164 65	989 90	23 Virōdhin	24 Vikṛita †	
4092	913	1048	397	165 66	990 91	24 Vikṛita	26 Nandana	6 Bhādrapada
4093	914	1049	398	166 67	991 92	25 Khara	27 Vijaya	
4094	915	1050	399	167 68	*992 93	26 Nandana	28 Jaya	
4095	916	1051	400	168 69	993 94	27 Vijaya	29 Manmatha	2 Vaiśākha

† By the "Indian Calendar" 7 Āsṛina was intercalated

‡ 25 Khara was expunged in the north by the mean system, but 26 Nandana by the true system. By the true system the year A.D 990 91 was, in the north, called "Khara"

LXXVI—Contd

1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE						
MEAN SOLAR YEAR.			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚULKA 1 ENDS).			Kali year
Day and month, A D	Week-day	Time of mean Mēgh-samkrānti	Day and month, A D	Week day	a (here= <i>t</i> , the index of the tithi)	
13	14	17	19	20	23	1
24 Mar (83)	4 Wed	H M S 19 55 0	22 Mar (81)	2 Mon	310 5271	4071
25 Mar (84)	6 Fri	2 7 30	11 Mar (70)	6 Fri	186 2104	4072
25 Mar (84)	0 Sat	8 20 0	28 Feb (59)	3 Tues	61 8939	4073
24 Mar (84)	1 Sun	14 32 30	18 Mar (78)	2 Mon	96 5335	4074
24 Mar (83)	2 Mon	20 45 0	8 Mar (67)	0 Sat	310 8487	4075
25 Mar (84)	4 Wed	2 57 30	25 Feb (56)	4 Wed	186 5321	4076
25 Mar (84)	5 Thur	9 10 0	16 Mar (75)	3 Tues	221 1716	4077
24 Mar (84)	6 Fri.	15 22 30	4 Mar (64)	0 Sat	96 8550	4078
24 Mar (83)	0 Sat	21 35 0	23 Mar (82)	6 Fri	131 4946	4079
25 Mar (84)	2 Mon	3 47 30	12 Mar (71)	3 Tues	7 1781	4080
25 Mar (84)	3 Tues	10 0 0	2 Mar (61)	1 Sun	221 4933	4081
24 Mar (84)	4 Wed	16 12 30	20 Mar (80)	0 Sat	256 1329	4082
24 Mar (83)	5 Thur	22 25 0	9 Mar (68)	4 Wed	131 8163	4083
25 Mar (84)	0 Sat	4 37 30	26 Feb (57)	1 Sun	7 4998	4084
25 Mar (84)	1 Sun	10 50 0	17 Mar (76)	0 Sat	41 1393	4085
24 Mar (84)	2 Mon	17 2 30	6 Mar (66)	5 Thur	256 4546	4086
24 Mar (83)	3 Tues	23 15 0	23 Feb (54)	2 Mon	132 1379	4087
25 Mar (84)	5 Thur	5 27 30	14 Mar (73)	1 Sun	166 7776	4088
25 Mar (84)	6 Fri	11 40 0	3 Mar (62)	5 Thur	42 4610	4089
24 Mar (84)	0 Sat	17 52 30	21 Mar (81)	4 Wed	77 1006	4090
25 Mar (84)	2 Mon	0 5 0	11 Mar (70)	2 Mon	291 4158	4091
25 Mar (84)	3 Tues	6 17 30	28 Feb (59)	6 Fri	167 0092	4092
25 Mar (84)	4 Wed	12 30 0	19 Mar (78)	5 Thur	201 7389	4093
24 Mar (84)	5 Thur	18 42 30	7 Mar (67)	2 Mon	77 4222	4094
25 Mar (84)	0 Sat	9 55 0	25 Feb (56)	0 Sat	291 7375	4095

TABLE

CONCURRENT YEAR								Mean Intercalated (adhika) lunar month.
Kal.	Saka.	Chaltrādi Vikrama.	Mēshādi solar year in Bengal	Kollam.	A D	JOVIAN SAMVATSARA.		
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
4096	917	1052	401	169 70	994 95	28 Jaya . .	30 Durmukha .	.
4097	918	1053	402	170 71	995 96	29 Manmatha .	31 Hēmalamba	11 Mēgha
4098	919	1054	403	171 72	*996 97	30 Durmukha .	32 Vilamba .	.
4099	920	1055	404	172 73	997 98	31 Hēmalamba	33 Vikārin .	..
4100	921	1056	405	173-74	998 99	32 Vilamba .	34 Sārvarin .	7 Āvina .
4101	922	1057	406	174-75	999 000	33 Vikārin	35 Plava . .	..
4102	923	1058	407	175 76	*1000 01	34 Sārvarin .	36 Subhakṛt .	.
4103	924	1059	408	176-77	1001-02	35 Plava . .	37 Śōbhana .	4 Āshādha .
4104	925	1060	409	177-78	1002 03	36 Subhakṛt	38 Krōdhun .	.
4105	926	1061	410	178 79	1003 04	37 Śōbhana	39 Viśvāvasu .	12 Phālguna .
4106	927	1062	411	179 80	*1004 05	38 Krōdhun	40 Parābhava .	.
4107	928	1063	412	180-81	1005 06	39 Viśvāvasu .	41 Plavanga .	.
4108	929	1064	413	181-82	1006 07	40 Parābhava .	42 Kilaka .	9 Mārgaśīra .
4109	930	1065	414	182-83	1007-08	41 Plavanga .	43 Saumya	...
4110	931	1066	415	183 84	*1008 09	42 Kilaka	44 Sādharana	..
4111	932	1067	416	184-85	1009-10	43 Saumya .	45 Virōdhakṛt .	5 Śrāvāṣa .
4112	933	1068	417	185-86	1010 11	44 Sādharana .	46 Paridhāvin .	.
4113	934	1069	418	186-87	1011-12	45 Virōdhakṛt .	47 Pramādin .	.
4114	935	1070	419	187-88	*1012-13	46 Paridhāvin .	48 Ānanda .	2 Vaiśākha .
4115	936	1071	420	188-89	1013 14	47 Pramādin .	49 Rākshasa .	...
4116	937	1072	421	189 90	1014-15	48 Ānanda .	50 Anala .	10 Pausha .
4117	938	1073	422	190 91	1015-16	49 Rākshasa .	51 Pingala	.
4118	939	1074	423	191 92	*1016-17	50 Anala .	52 Kālayukta	..
4119	940	1075	424	192-93	1017-18	51 Pingala .	53 Siddhārthan .	7 Āvina .
4120	941	1076	425	193 94	1018-19	52 Kālayukta .	54 Raudra .	...

LXXVI—Contd.

1 Arya Siddhanta, mean system.

COMMENCEMENT OF THE						
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS)			Kali year.
Day and month, A.D.	Week-day	Time of mean Mēsha-samkrānti	Day and month, A D	Week-day.	a (here= <i>t</i> , the index of the tith)	
13	14	17	19	20	23	1
		H. M S				
25 Mar. (84)	1 Sun	7 7 30	16 Mar (75)	6 Fri	326-8771	4096
25 Mar (84)	2 Mon	13 20 0	8 Mar (64)	3 Tues	202 0605	4097
24 Mar (84)	3 Tues	19 32 30	23 Mar (83)	2 Mon.	236 7001	4098
25 Mar. (84)	5 Thur	1 45 0	12 Mar (71)	6 Fra.	112 3835	4099
25 Mar (84)	6 Fri	7 57 30	2 Mar (61)	4 Wed	326 6988	4100
25 Mar (84)	0 Sat	14 10 0	20 Mar (79)	2 Mon.	22-7065	4101
24 Mar (84)	1 Sun	20 22 30	9 Mar (69)	0 Sat.	237-0218	4102
25 Mar (84)	3 Tues.	2 35 0	26 Feb (57)	4 Wed	112-7052	4103
25 Mar (84)	4 Wed.	8 47 30	17 Mar (76)	3 Tues	147 3448	4104
25 Mar (84)	5 Thur	15 0 0	6 Mar (65)	0 Sat	23 0272	4105
24 Mar (84)	6 Fri	21 12 30	24 Mar (84)	6 Fri	57-6667	4106
25 Mar (84)	1 Sun	3 25 0	14 Mar (73)	4 Wed	271-9631	4107
25 Mar (84)	2 Mon	9 37 30	3 Mar (62)	1 Sun	147 6665	4108
25 Mar (84)	3 Tues	15 50 0	22 Mar (81)	0 Sat.	182 3061	4109
24 Mar (84)	4 Wed	22 2 30	10 Mar. (70)	4 Wed.	57 9894	4110
25 Mar (84)	6 Fri	4 15 0	28 Feb. (59)	2 Mon.	272-3047	4111
25 Mar (84)	0 Sat.	10 27 30	19 Mar. (78)	1 Sun.	306 9444	4112
25 Mar (84)	1 Sun.	18 40 0	8 Mar. (67)	5 Thur	182 6277	4113
24 Mar (84)	2 Mon	22 52 30	25 Feb. (56)	2 Mon.	58 3111	4114
25 Mar (84)	4 Wed	5 5 0	15 Mar (74)	1 Sun.	92 9607	4115
25 Mar (84)	5 Thur	11 17 30	5 Mar. (64)	6 Fra.	397 2659	4116
25 Mar (84)	6 Fri	17 30 0	23 Mar (82)	4 Wed.	3-2737	4117
24 Mar (84)	0 Sat.	23 42 30	12 Mar. (72)	2 Mon	217-5890	4118
25 Mar (84)	2 Mon	5 55 0	1 Mar. (60)	6 Fri.	93-2723	4119
25 Mar (84)	3 Tues	12 7 30	20 Mar. (79)	5 Thur.	127-9119	4120

TABLE

CONCURRENT YEAR								Mean Intercalated (adhika) lunar month
Kalī	Saka	Chaitrādī Vikrama.	Mgshādī solar year in Bengal	Kollam.	A.D	JOVIAN SAMVATSARA		
						Southern system	Northern system.	
1	2	3	3a	4	5	6	7	8a
4121	942	1077	426	194 95	1019 20	53 Siddhārthin	55 Durmatī .	
4122	943	1078	427	195-96	*1020 21	54 Raudra	56 Dundubhū .	4 Āshādha ‡ .
4123	944	1079	428	196 97	1021-22	55 Durmatī	57 Rudhirōdgārīn	.
4124	945	1080	429	197 98	1022 23	56 Dundubhū	58 Raktāksha .	12 Phālguna .
4125	946	1081	430	198 99	1023 24	57 Rudhirōdgārīn	59 Krōdhana .	.
4126	947	1082	431	199 00	*1024-25	58 Raktāksha .	60 Kshaya .	.
4127	948	1083	432	200 01	1025 26	59 Krōdhana	1 Prabhava .	9 Mārgaśīra
4128	949	1084	433	201-02	1026 27	60 Kshaya .	2 Vibhava .	.
4129	950	1085	434	202-03	1027-28	1 Prabhava .	3 Śukla .	.
4130	951	1086	435	203 04	*1028-29	2 Vibhava	4 Pramōda	5 Śrāvāṇa .
4131	952	1087	436	204 05	1029-30	3 Śukla	5 Prajāpati .	.
4132	953	1088	437	205 06	1030 31	4 Pramōda	6 Angīras .	.
4133	954	1089	438	206 07	1031-32	5 Prajāpati	7 Śrīmukha .	2 Vaiśākha .
4134	955	1090	439	207-08	*1032-33	6 Angīras	8 Bhāva .	.
4135	956	1091	440	208 09	1033 34	7 Śrīmukha	9 Yuvan .	10 Pausha .
4136	957	1092	441	209 10	1034-35	8 Bhāva .	10 Dhātṛi .	.
4137	958	1093	442	210 11	1035-36	9 Yuvan .	11 Īśvara .	.
4138	959	1094	443	211-12	*1036 37	10 Dhātṛi	12 Bahudhānya	7 Āśvina .
4139	960	1095	444	212-13	1037-38	11 Īśvara	13 Pramāthun	.
4140	961	1096	445	213 14	1038 39	12 Bahudhānya	14 Vikrama	.
4141	962	1097	446	214-15	1039-40	13 Pramāthun .	15 Vṛisha .	3 Jyēshtha .
4142	963	1098	447	215-16	*1040 41	14 Vikrama .	16 Chitrabhānu	.
4143	964	1099	448	216 17	1041-42	15 Vṛisha	17 Subhānu	12 Phālguna .
4144	965	1100	449	217-18	1042 43	16 Chitrabhānu	18 Tārana .	...
4145	966	1101	450	218 19	1043 44	17 Subhānu .	19 Pārthiva .	...

‡ By the "Indian Calendar" 3 Jyēshtha was intercalated.

LXXVI—Contd.

1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE						Kali year.
MEAN SOLAR YEAR.			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			
Day and month, A.D	Week-day	Time of mean Mésa-samkrānti	Day and month, A D	Week-day	a (here= <i>t</i> , the index of the tithi)	
13	14	17	19	20	23	1
		H. M S				
25 Mar (84)	4 Wed	18 20 0	9 Mar (88)	2 Mon.	3 5953	4121
25 Mar (85)	6 Fri	0 32 30	27 Feb (58)	0 Sat	217 8106	4122
25 Mar (84)	0 Sat	6 45 0	17 Mar (70)	6 Fri.	252 5502	4123
25 Mar. (84)	1 Sun.	12 57 30	6 Mar (65)	3 Tues	128 2336	4124
25 Mar. (84)	2 Mon	19 10 0	25 Mar (84)	2 Mon	162 8732	4125
25 Mar (85)	4 Wed	1 22 30	13 Mar (73)	6 Fri	38 5566	4126
25 Mar (84)	5 Thur.	7 35 0	3 Mar (62)	4 Wed	252 8719	4127
25 Mar (84)	6 Fri.	13 47 30	22 Mar (81)	3 Tues	287 5115	4128
25 Mar (84)	0 Sat	20 0 0	11 Mar (70)	0 Sat	163 1948	4129
25 Mar (85)	2 Mon	2 12 30	28 Feb (59)	4 Wed	38 8782	4130
25 Mar (84)	3 Tues	8 25 0	18 Mar (77)	3 Tues	73 5179	4131
25 Mar. (84)	4 Wed	14 37 30	8 Mar (67)	1 Sun.	287 8331	4132
25 Mar (84)	5 Thur.	20 50 0	25 Feb (56)	5 Thur.	163 5165	4133
25 Mar (85)	0 Sat	3 2 30	15 Mar (75)	4 Wed	198 1561	4134
25 Mar (84)	1 Sun	9 15 0	4 Mar (63)	1 Sun	73 8395	4135
25 Mar (84)	2 Mon.	15 27 30	23 Mar (82)	0 Sat	108 4791	4136
25 Mar (84)	3 Tues	21 40 0	13 Mar (72)	5 Thur	322 7944	4137
25 Mar (85)	5 Thur.	3 52 30	1 Mar (61)	2 Mon	198 4778	4138
25 Mar (84)	6 Fri.	10 5 0	20 Mar (79)	1 Sun.	233 1174	4139
25 Mar (84)	0 Sat	16 17 30	9 Mar (68)	5 Thur	108 8008	4140
25 Mar (84)	1 Sun	22 30 0	27 Feb (58)	3 Tues	323 1161	4141
25 Mar (85)	3 Tues.	4 42 30	16 Mar (76)	1 Sun.	19 1238	4142
25 Mar (84)	4 Wed	10 55 0	6 Mar (65)	6 Fri	233 4391	4143
25 Mar (84)	5 Thur	17 7 30	25 Mar (84)	5 Thur	268 0787	4144
25 Mar (84)	6 Fri.	23 20 0	14 Mar (73)	2 Mon.	143 7021	4145

TABLE

CONCURRENT YEAR.								Mean Intercalated (adhika) lunar month.
Kal.	Saka	Chaitradī Vikrama	Māhādī solar year in Bengal.	Kollam	A.D	JOVIAN SAMVATSARA.		
						Southern system.	Northern system	
1	2	3	3a	4	5	6	7	8a
4146	967	1102	451	219-20	*1044-45	18 Tārana . .	20 Vyaya . .	8 Kārttika .
4147	968	1103	452	220-21	1045-46	19 Pārthiva . .	21 Sarvajit . .	.
4148	969	1104	453	221-22	1046-47	20 Vyaya . .	22 Sarvadhāra . .	...
4149	970	1105	454	222-23	1047-48	21 Sarvajit . .	23 Virōdhan . .	5 Śrāvana .
4150	971	1106	455	223-24	*1048-49	22 Sarvadhāra . .	24 Vikṛta . .	...
4151	972	1107	456	224-25	1049-50	23 Virōdhan . .	25 Khara . .	.
4152	973	1108	457	225-26	1050-51	24 Vikṛta . .	26 Nandana . .	1 Chaitre .
4153	974	1109	458	226-27	1051-52	25 Khara . .	27 Vijaya . .	...
4154	975	1110	459	227-28	*1052-53	26 Nandana . .	28 Jaya . .	10 Pausa .
4155	976	1111	460	228-29	1053-54	27 Vijaya . .	29 Manmatha . .	...
4156	977	1112	461	229-30	1054-55	28 Jaya . .	30 Durmukha . .	...
4157	978	1113	462	230-31	1055-56	29 Manmatha . .	31 Hēmalamba . .	7 Āsvina† .
4158	979	1114	463	231-32	*1056-57	30 Durmukha . .	32 Vilamba . .	...
4159	980	1115	464	232-33	1057-58	31 Hēmalamba . .	33 Vikāra . .	...
4160	981	1116	465	233-34	1058-59	32 Vilamba . .	34 Śarvarā . .	3 Jyēsthā .
4161	982	1117	466	234-35	1059-60	33 Vikāra . .	35 Plava . .	...
4162	983	1118	467	235-36	*1060-61	34 Śarvarā . .	36 Subhakti . .	12 Phālguna .
4163	984	1119	468	236-37	1061-62	35 Plava . .	37 Śobhana . .	...
4164	985	1120	469	237-38	1062-63	36 Subhakti . .	38 Krōdhan . .	...
4165	986	1121	470	238-39	1063-64	37 Śobhana . .	*39 Viśvāvasu . .	8 Kārttika .
4166	987	1122	471	239-40	*1064-65	38 Krōdhan . .	40 Parābhava . .	...
4167	988	1123	472	240-41	1065-66	39 Viśvāvasu . .	41 Plavaṅga . .	.
4168	989	1124	473	241-42	1066-67	40 Parābhava . .	42 Kīlaka . .	5 Śrāvana .
4169	990	1125	474	242-43	1067-68	41 Plavaṅga . .	43 Saumya . .	...
4170	991	1126	475	243-44	*1068-69	42 Kīlaka . .	44 Sādharana . .	...

† By the "Indian Calendar" 6 Bhādrapada was the intercalated month.

LXXVI—Contd.

1 Ārya Siddhanta, mean system.

COMMENCEMENT OF THE						
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS)			Kalī year
Day and month, A.D.	Week-day.	Time of mean Mēṣha-samkrānti	Day and month, A.D.	Week-day.	α (here= t , the index of the tithi)	
13	14	17	19	20	23	1
		H M S.				
25 Mar. (85)	1 Sun.	5 32 30	2 Mar (82)	6 Fri.	19 4454	4146
25 Mar (84)	2 Mon.	11 45 0	21 Mar. (80)	5 Thur.	54-0850	4147
25 Mar. (84)	3 Tues.	17 57 30	11 Mar. (70)	3 Tues.	268-4003	4148
26 Mar (85)	5 Thur.	0 10 0	28 Feb (59)	0 Sat.	144 0838	4149
25 Mar (85)	6 Fri.	6 22 30	18 Mar (78)	6 Fri.	178 7233	4150
25 Mar (84)	0 Sat.	12 35 0	7 Mar (86)	3 Tues.	54 4067	4151
25 Mar (84)	1 Sun.	18 47 30	25 Feb (56)	1 Sun.	268-7219	4152
26 Mar. (85)	3 Tues.	1 0 0	16 Mar (75)	0 Sat.	303 3615	4153
25 Mar (85)	4 Wed.	7 12 30	4 Mar (64)	4 Wed.	179 0449	4154
25 Mar. (84)	5 Thur.	13 25 0	23 Mar (82)	3 Tues.	213-6845	4155
25 Mar (84)	6 Fri.	19 37 30	12 Mar (71)	0 Sat.	89 3679	4156
26 Mar. (85)	1 Sun.	1 50 0	2 Mar (61)	5 Thur.	303-6832	4157
25 Mar (85)	2 Mon.	8 2 30	19 Mar (79)	3 Tues.	9999-6909 §	4158
25 Mar. (84)	3 Tues.	14 15 0	9 Mar (68)	1 Sun.	214 0062	4159
25 Mar. (84)	4 Wed.	20 27 30	26 Feb (57)	5 Thur.	89 6896	4160
26 Mar (85)	6 Fri.	2 40 0	17 Mar (76)	4 Wed.	124 3292	4161
25 Mar (85)	0 Sat.	8 52 30	5 Mar (65)	1 Sun.	^v 0-0126	4162
25 Mar. (84)	1 Sun.	15 5 0	24 Mar. (83)	0 Sat.	34 6522	4163
25 Mar. (84)	2 Mon.	21 17 30	14 Mar (73)	5 Thur.	248 9675	4164
26 Mar. (85)	4 Wed.	3 30 0	3 Mar (62)	2 Mon.	124-6509	4165
25 Mar. (85)	5 Thur.	9 42 30	21 Mar (81)	1 Sun.	159-2905	4166
25 Mar (84)	6 Fri.	15 55 0	10 Mar. (69)	5 Thur.	34 9739	4167
25 Mar. (84)	0 Sat.	22 7 30	28 Feb (59)	3 Tues.	249 2892	4168
26 Mar (85)	2 Mon.	4 20 0	19 Mar (78)	2 Mon.	233 9283	4169
25 Mar (85)	3 Tues.	10 32 30	7 Mar (67)	6 Fri.	159 6122	4170

§ As a mean tithi Chaitra Sukla 1 was expunged. The civil day corresponding to it, α , the first day of the luni-solar year was as given in cols 19, 20

TABLE

CONCURRENT YEAR.								Mean Intercalated (adhika) lunar month
Kal	Saka.	Chaitrādī Vikrama	Mēshādī solar year in Bengal	Kollam	A D	JOVIAN SAMVATSARA.		
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
4171	902	1127	476	244 45	1069 70	43 Saumya	45 Virōdhakrit	1 Chaitra .
4172	903	1128	477	245 46	1070 71	44 Sādhārana	46 Paridhāvin	
4173	904	1129	478	246 47	1071-72	45 Virōdhakrit	47 Pramādīn	10 Pausha
4174	905	1130	479	247 48	*1072-73	46 Paridhāvin	48 Ānanda	
4175	906	1131	480	248 49	1073 74	47 Pramādīn	49 Rākshasa	
4176	907	1132	481	249 50	1074 75	48 Ānanda	50 Anala	6 Bhādrapada
4177	908	1133	482	250 51	1075 76	49 Rākshasa	51 Pingala †	
4178	909	1134	483	251-52	*1076 77	50 Anala	53 Siddhārthin	
4179	1000	1135	484	252 53	1077 78	51 Pingala	54 Raudra	3 Jyēshtha .
4180	1001	1136	485	253 54	1078 79	52 Kālayukta	55 Durmatī	
4181	1002	1137	486	254 55	1079 80	53 Siddhārthin	56 Dundubhi	11 Māgha
4182	1003	1138	487	255 56	*1080 81	54 Raudra	57 Rudhrōdgārīn	
4183	1004	1139	488	256 57	1081 82	55 Durmatī	58 Raktāksha .	
4184	1005	1140	489	257 58	1082 83	56 Dundubhi	59 Krōdhana	8 Kārttika .
4185	1006	1141	490	258 59	1083 84	57 Rudhrōdgārīn	60 Kshaya .	
4186	1007	1142	491	259 60	*1084 85	58 Raktāksha	1 Prabhava	
4187	1008	1143	492	260 61	1085 86	59 Krōdhana	2 Vibhava	4 Āshādha
4188	1009	1144	493	261 62	1086 87	60 Kshaya	3 Śukla .	
4189	1010	1145	494	262 63	1087 88	1 Prabhava	4 Pramōda	
4190	1011	1146	495	263 64	*1088 89	2 Vibhava	5 Prajāpati	1 Chaitra .
4191	1012	1147	496	264 65	1089 90	3 Śukla . .	6 Angras .	
4192	1013	1148	497	265 66	1090 91	4 Pramōda	7 Śrīmukha .	9 Mārgaśīra .
4193	1014	1149	498	266 67	1091-92	5 Prajāpati	8 Bhāva	
4194	1015	1150	499	267 68	*1092 93	6 Angras .	9 Yuvan	
4195	1016	1151	500	268 69	1093 94	7 Śrīmukha .	10 Dhātri . .	6 Bhādrapada

† 52 Kālayukta was suppressed in the north.

LXXVI—Contd

1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE						Kal year.
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			
Day and month, A.D.	Week-day	Time of mean Mēsha-samkrānti	Day and month, A.D.	Week-day.	α (here= t , the index of the tithi)	
13	14	17	19	20	23	1
		H. M. S.				
25 Mar (84) . . .	4 Wed. . .	10 45 0	24 Feb (55) . . .	3 Tues . . .	35 2955	4171
25 Mar (84) . . .	5 Thur. . .	22 57 30	15 Mar. (74) . . .	2 Mon. . .	69 9351	4172
26 Mar (85) . . .	0 Sat . . .	5 10 0	5 Mar (64) . . .	0 Sat . . .	284 2504	4173
25 Mar (85) . . .	1 Sun . . .	11 22 30	23 Mar. (83) . . .	6 Fri. . .	318 8901	4174
25 Mar (84) . . .	2 Mon . . .	17 35 0	12 Mar (71) . . .	3 Tues . . .	194 5734	4175
25 Mar (84) . . .	3 Tues . . .	23 47 30	1 Mar. (60) . . .	0 Sat . . .	70 2568	4176
26 Mar (85) . . .	5 Thur. . .	6 0 0	20 Mar (79) . . .	6 Fri. . .	104 8964	4177
25 Mar. (85) . . .	6 Fri . . .	12 12 30	9 Mar (69) . . .	4 Wed . . .	319 2116	4178
25 Mar. (84) . . .	0 Sat . . .	18 25 0	26 Feb (57) . . .	1 Sun. . .	194 8950	4179
26 Mar. (85) . . .	2 Mon. . .	0 37 30	17 Mar (76) . . .	0 Sat . . .	229 5347	4180
26 Mar. (85) . . .	3 Tues. . .	6 50 0	6 Mar. (65) . . .	4 Wed . . .	105 2180	4181
25 Mar. (85) . . .	4 Wed. . .	13 2 30	24 Mar. (84) . . .	3 Tues. . .	139 8576	4182
25 Mar. (84) . . .	5 Thur. . .	19 15 0	13 Mar (72) . . .	0 Sat. . .	15 5410	4183
26 Mar. (85) . . .	0 Sat . . .	1 27 30	3 Mar (62) . . .	5 Thur. . .	229 8563	4184
26 Mar. (85) . . .	1 Sun. . .	7 40 0	22 Mar (81) . . .	4 Wed. . .	264 4959	4185
25 Mar (85) . . .	2 Mon. . .	13 52 30	10 Mar. (70) . . .	1 Sun. . .	140 1793	4186
25 Mar. (84) . . .	3 Tues. . .	20 5 0	27 Feb (58) . . .	5 Thur. . .	15 8627	4187
26 Mar. (85) . . .	5 Thur. . .	2 17 30	18 Mar (77) . . .	4 Wed. . .	50 5023	4188
26 Mar (85) . . .	6 Fri . . .	8 30 0	8 Mar (67) . . .	2 Mon. . .	264 8176	4189
25 Mar (85) . . .	0 Sat. . .	14 42 30	25 Feb (56) . . .	6 Fri . . .	140 5009	4190
25 Mar. (84) . . .	1 Sun. . .	20 55 0	15 Mar (74) . . .	5 Thur. . .	175 1405	4191
26 Mar. (85) . . .	3 Tues . . .	3 7 30	4 Mar (63) . . .	2 Mon. . .	50 8239	4192
26 Mar. (85) . . .	4 Wed . . .	9 20 0	23 Mar. (82) . . .	1 Sun . . .	85 4636	4193
25 Mar. (85) . . .	5 Thur . . .	15 32 30	12 Mar (72) . . .	6 Fri. . .	299 7788	4194
25 Mar. (84) . . .	6 Fri. . .	21 45 0	1 Mar (60) . . .	3 Tues . . .	175-4622	4195

TABLE

CONCURRENT YEAR								Mean Intercalated (adhika) lunar month
Kali.	Saka.	Chaitrādī Vikrama.	Mēshādi solar year in Bengal.	Kollam	A D.	JOVIAN SAMVATSARA		
						Southern system.	Northern system	
1	2	3	3a	4	5	6	7	8a
4196	1017	1152	501	269-70	1094-95	8 Bhāva . .	11 Jēvara . .	.
4197	1018	1153	502	270-71	1095-96	9 Yuvan . .	12 Bahudhānya . .	.
4198	1019	1154	503	271-72	*1096-97	10 Dhātṛi . .	13 Pramāthun . .	3 Jyēshtha † .
4199	1020	1155	504	272-73	1097-98	11 Jēvara . .	14 Vikrama . .	.
4200	1021	1156	505	273-74	1098-99	12 Bahudhānya . .	15 Vrisha . .	11 Māgha . .
4201	1022	1157	506	274-75	1099-00	13 Pramāthun . .	16 Chitrabhānu . .	...
4202	1023	1158	507	275-76	*1100-01	14 Vikrama . .	17 Subhānu . .	.
4203	1024	1159	508	276-77	1101-02	15 Vrisha . .	18 Tārana . .	8 Kārttika . .
4204	1025	1160	509	277-78	1102-03	16 Chitrabhānu . .	19 Pārthiva . .	..
4205	1026	1161	510	278-79	1103-04	17 Subhānu . .	20 Vyaya . .	..
4206	1027	1162	511	279-80	*1104-05	18 Tārana . .	21 Sarvajit . .	4 Āshādha . .
4207	1028	1163	512	280-81	1105-06	19 Pārthiva . .	22 Sarvadhārn . .	..
4208	1029	1164	513	281-82	1106-07	20 Vyaya . .	23 Virōdhun . .	..
4209	1030	1165	514	282-83	1107-08	21 Sarvajit . .	24 Vikrita . .	1 Chaitra . .
4210	1031	1166	515	283-84	*1108-09	22 Sarvadhārn . .	25 Khara . .	..
4211	1032	1167	516	284-85	1109-10	23 Virōdhun . .	26 Nandana . .	9 Mārgasira . .
4212	1033	1168	517	285-86	1110-11	24 Vikrita . .	27 Vijaya . .	.
4213	1034	1169	518	286-87	1111-12	25 Khara . .	28 Jaya . .	.
4214	1035	1170	519	287-88	*1112-13	26 Nandana . .	29 Manmatha . .	6 Bhādrapada . .
4215	1036	1171	520	288-89	1113-14	27 Vijaya . .	30 Durmukha . .	.
4216	1037	1172	521	289-90	1114-15	28 Jaya . .	31 Hēmalamba . .	.
4217	1038	1173	522	290-91	1115-16	29 Manmatha . .	32 Vilamba . .	2 Vaiśākha . .
4218	1039	1174	523	291-92	*1116-17	30 Durmukha . .	33 Vikārin . .	.
4219	1040	1175	524	292-93	1117-18	31 Hēmalamba . .	34 Śārvarin . .	11 Māgha . .
4220	1041	1176	525	293-94	1118-19	32 Vilamba . .	35 Piava . .	...

By the "Indian Calendar" 2 Vaiśākha was intercalated.

LXXVI—Contd.

I Ārya Siddhānta, mean system.

COMMENCEMENT OF THE						Kali year.
MEAN SOLAR YEAR.			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS)			
Day and month, A D	Week-day	Time of mean Mēsha-samkrānti.	Day and month, A D	Week-day.	a (here= <i>i</i> , the index of the tithi)	
13	14	17	19	20	23	1
		H M S				
26 Mar (85)	1 Sun	3 57 30	20 Mar (79)	2 Mon.	210 1018	4196
26 Mar. (85)	2 Mon	10 10 0	9 Mar. (88)	6 Fri	85 7852	4197
25 Mar (85)	3 Tues	16 22 30	27 Feb (58)	4 Wed	300-1005	4198
25 Mar (84)	4 Wed	22 35 0	16 Mar (75)	2 Mon.	9996 1082†	4199
26 Mar (85)	6 Fri	4 47 30	6 Mar (65)	0 Sat	210-4235	4200
26 Mar (85)	0 Sat	11 0 0	25 Mar (84)	6 Fri	245 0630	4201
25 Mar (85)	1 Sun	17 12 30	13 Mar (73)	3 Tues	120 7464	4202
25 Mar (84)	2 Mon	23 25 0	2 Mar (61)	0 Sat.	9996-4298†	4203
26 Mar (85)	4 Wed.	5 37 30	21 Mar. (80)	6 Fri	31 0694	4204
26 Mar. (85)	5 Thur.	11 50 0	11 Mar. (70)	4 Wed	245 3847	4205
25 Mar (85)	6 Fri.	18 2 30	28 Feb (59)	1 Sun.	121 0681	4206
26 Mar (85)	1 Sun	0 15 0	18 Mar (77)	0 Sat.	155-7077	4207
26 Mar. (85)	2 Mon	6 27 30	7 Mar (66)	4 Wed	31-3911	4208
26 Mar. (85)	3 Tues.	12 40 0	25 Feb (56)	2 Mon	245 7063	4209
25 Mar (85)	4 Wed	18 52 30	15 Mar. (75)	1 Sun.	280-3460	4210
26 Mar (85)	6 Fri.	1 5 0	4 Mar (63)	5 Thur.	156 0293	4211
26 Mar. (85)	0 Sat.	7 17 30	23 Mar (82)	4 Wed.	190 6690	4212
26 Mar (85)	1 Sun.	13 30 0	12 Mar (71)	1 Sun.	66-3524	4213
25 Mar. (85)	2 Mon.	19 42 30	1 Mar (61)	6 Fri.	280 6676	4214
26 Mar. (85)	4 Wed.	1 55 0	20 Mar. (79)	5 Thur.	315-3072	4215
26 Mar. (85)	5 Thur.	8 7 30	9 Mar. (68)	2 Mon.	190 9905	4216
26 Mar. (85)	6 Fri	14 20 0	26 Feb. (57)	6 Fri.	66 6740	4217
25 Mar (85)	0 Sat	20 32 30	16 Mar. (76)	5 Thur.	101-3136	4218
26 Mar. (85)	2 Mon.	2 45 0	6 Mar (65)	3 Tues.	315 6288	4219
26 Mar. (85)	3 Tues	8 57 30	24 Mar (83)	1 Sun.	11 6365	4220

† As a mean tithi Chaitra Sukla 1 was expunged. The civil day corresponding to it, *i.e.*, the first day of the luni solar year was as given in cols. 19, 20.

TABLE

CONCURRENT YEAR.								Mean Intercalated (adhika) lunar month
Kalī	Saka	Chaitrādi Vikrama	Mūshūdi solar year in Bengol	Kollam	A D	JOVIAN SAMVATSARA		
						Southern system	Northern system.	
1	2	3	3a	4	5	6	7	8a
4221	1042	1177	526	294 95	1119 20	33 Vikārn	36 Śubhakṛit	..
4222	1043	1178	527	295 96	*1120 21	34 Śārvarn	37 Śōbhana	7 Āsvina
4223	1044	1179	528	296 97	1121 22	35 Plava	38 Krōdhun	..
4224	1045	1180	529	297-98	1122 23	36 Śubhakṛit	39 Viśvāvasu	.
4225	1046	1181	530	298 99	1123-24	37 Śōbhana	40 Parābhava	4 Āshādha
4226	1047	1182	531	299 00	*1124-25	38 Krōdhun	41 Plavanga	...
4227	1048	1183	532	300 01	1125-26	39 Viśvāvasu	42 Kīlaka	12 Phālguna
4228	1049	1184	533	301-02	1126 27	40 Parābhava	43 Saumya	..
4229	1050	1185	534	302-03	1127-28	41 Plavanga	44 Sādharāṇa	.
4230	1051	1186	535	303 04	*1128 29	42 Kīlaka	45 Virōdhakṛit	9 Mārgasīra
4231	1052	1187	536	304 05	1129 30	43 Saumya	46 Paridhāvin	.
4232	1053	1188	537	305 06	1130 31	44 Sādharāṇa	47 Pramādin	.
4233	1054	1189	538	306 07	1131 32	45 Virōdhakṛit	48 Ānanda	6 Bhādrapada
4234	1055	1190	539	307-08	*1132 33	46 Paridhāvin	49 Rākshasa	.
4235	1056	1191	540	308 09	1133 34	47 Pramādin	50 Anala	..
4236	1057	1192	541	309 10	1134 35	48 Ānanda	51 Pingala	2 Vaiśākha
4237	1058	1193	542	310-11	1135 36	49 Rākshasa	52 Kālayukta	.
4238	1059	1194	543	311-12	*1136 37	50 Anala	53 Siddhārthun	11 Māgha
4239	1060	1195	544	312-13	1137-38	51 Pingala	54 Raudra	..
4240	1061	1196	545	313-14	1138 39	52 Kālayukta	55 Durmatī	.
4241	1062	1197	546	314-15	1139-40	53 Siddhārthun	56 Dundubhu	7 Āsvina
4242	1063	1198	547	315-16	*1140 41	54 Raudra	57 Rudhūrōdgārn	...
4243	1064	1199	548	316-17	1141-42	55 Durmatī	58 Raktāksha	...
4244	1065	1200	549	317-18	1142 43	56 Dundubhu	59 Krōdhana	4 Āshādha
4245	1066	1201	550	318-19	1143-44	57 Rudhūrōdgārn	60 Kahaya	...

LXXVI—Contd.

1 Arya Siddhanta, mean system.

COMMENCEMENT OF THE						
MEAN SOLAR YEAR.			MPAN LUNI SOLAR YEAR (MPAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS)			Kal year
Day and month, A D	Week day	Time of mean M̄śha-samkrānti	Day and month, A.D.	Week day	a (here= <i>t</i> , the index of the tithi)	
13	14	17	19	20	23	1
		H M. S				
26 Mar. (85) . . .	4 Wed . . .	15 10 0	14 Mar (73)	6 Fri . . .	225 9518	4221
25 Mar. (85) . . .	5 Thur. . .	21 22 30	2 Mar. (62)	3 Tues	101 0352	4222
26 Mar. (85) . . .	0 Sat	3 35 0	21 Mar (80)	2 Mon	136 2748	4223
26 Mar (85) . . .	1 Sun . . .	9 47 30	10 Mar (69)	6 Fri . . .	11 9582	4224
26 Mar (85) . . .	2 Mon . . .	16 0 0	28 Feb (59) . . .	4 Wed	226 2735	4225
25 Mar (85) . . .	3 Tues . . .	22 12 30	18 Mar (78)	3 Tues. . .	260 9131	4226
26 Mar (85) . . .	5 Thur. . .	4 25 0	7 Mar. (66)	0 Sat . . .	136 5965	4227
26 Mar (85) . . .	6 Fri	10 37 30	26 Mar (85)	6 Fri. . .	171 2360	4228
26 Mar (85) . . .	0 Sat . . .	16 50 0	15 Mar (74) . . .	3 Tues	46 9195	4229
25 Mar (85) . . .	1 Sun . . .	23 2 30	4 Mar (64)	1 Sun . . .	261 2348	4230
26 Mar. (85)	3 Tues . . .	5 15 0	23 Mar (82)	0 Sat. . .	295 8744	4231
26 Mar. (85) . . .	4 Wed. . .	11 27 30	12 Mar (71)	4 Wed . . .	171 5578	4232
26 Mar (85) . . .	5 Thur. . .	17 40 0	1 Mar (60) . . .	1 Sun	47 2411	4233
25 Mar. (85) . . .	6 Fri . . .	23 52 30	19 Mar (79) . . .	0 Sat	81 8807	4234
26 Mar. (85) . . .	1 Sun	6 5 0	9 Mar (69)	5 Thur	296 1960	4235
26 Mar (85) . . .	2 Mon . . .	12 17 30	26 Feb (57) . . .	2 Mon. . .	171 8794	4236
26 Mar (85) . . .	3 Tues . . .	18 30 0	17 Mar (76) . . .	1 Sun	206 5190	4237
26 Mar (80) . . .	5 Thur	0 42 30	5 Mar (65)	5 Thur . . .	82 2024	4238
26 Mar. (85) . . .	6 Fri . . .	6 55 0	24 Mar (83)	4 Wed. . .	116 8420	4239
26 Mar (85) . . .	0 Sat . . .	13 7 30	14 Mar (73) . . .	2 Mon	331 1573	4240
26 Mar (85) . . .	1 Sun . . .	19 20 0	3 Mar (62)	6 Fri. . .	206 8407	4241
26 Mar (80) . . .	3 Tues. . .	1 32 30	21 Mar. (81) . . .	5 Thur . . .	241 4803	4242
26 Mar (85) . . .	4 Wed. . .	7 45 0	10 Mar (69)	2 Mon . . .	117 1637	4243
26 Mar. (85) . . .	5 Thur . . .	13 57 30	28 Feb (59)	0 Sat . . .	331 4790	4244
26 Mar. (85) . . .	6 Fri. . .	20 10 0	18 Mar (77) . . .	5 Thur . . .	27 4867	4245

TABLE

CONCURRENT YEAR								Mean Intercalated (adhika) lunar month
Kal	Saka	Chaitradī Vikrama	Mēshādi solar year in Bengal	Kollam	A D	JOVIAN SAMVATSARA		
						Southern system	Northern system.	
1	2	3	3a	4	5	6	7	fa
4246	1067	1202	551	319-20	*1144 45	58 Raktāksha	1 Prabhava .	12 Phālguna .
4247	1068	1203	552	320 21	1145 46	59 Krōdhana	2 Vibhava	.
4248	1069	1204	553	321-22	1146 47	60 Kshaya	3 Śukla	.
4249	1070	1205	554	322 23	1147-48	1 Prabhava	4 Pramōda	9 Mārgaśira .
4250	1071	1206	555	323-24	*1148 49	2 Vibhava	5 Prajāpati .	.
4251	1072	1207	556	324 25	1149 50	3 Śukla	6 Angiras	.
4252	1073	1208	557	325 26	1150 51	4 Pramōda	7 Śrīmukha	5 Śrāvapa .
4253	1074	1209	558	326 27	1151-52	5 Prajāpati	8 Bhāva .	...
4254	1075	1210	559	327-28	*1152 53	6 Angiras	9 Yuvan	.
4255	1076	1211	560	328 29	1153 54	7 Śrīmukha	10 Dhātri .	2 Vaiśākha .
4256	1077	1212	561	329 30	1154 55	8 Bhāva	11 Iśvara .	.
4257	1078	1213	562	330-31	1155 56	9 Yuvan	12 Bahudhānya	10 Pausa .
4258	1079	1214	563	331-32	*1156 57	10 Dhātri .	13 Pramāthun .	..
4259	1080	1215	564	332-33	1157 58	11 Iśvara .	14 Vikrama .	.
4260	1081	1216	565	333 34	1158-59	12 Bahudhānya	15 Vṛisha .	7 Āsvina .
4261	1082	1217	566	334-35	1159 60	13 Pramāthun .	16 Chitrabhānu	...
4262	1083	1218	567	335 36	*1160 61	14 Vikrama	17 Subhānu*	.
4263	1084	1219	568	336 37	1161-62	15 Vṛisha .	19 Pārthiva	3 Jyēshtha .
4264	1085	1220	569	337-38	1162-63	16 Chitrabhānu	20 Vyaya .	.
4265	1086	1221	570	338-39	1163 64	17 Subhānu	21 Sarvajit	12 Phālguna .
4266	1087	1222	571	339-40	*1164-65	18 Tārana .	22 Sarvadhārm	.
4267	1088	1223	572	340-41	1165 66	19 Pārthiva	23 Virōdhun	.
4268	1089	1224	573	341-42	1166-67	20 Vyaya	24 Vikṛita .	8 Kārttika .
4269	1090	1225	574	342-43	1167-68	21 Sarvajit	25 Khara .	.
4270	1091	1226	575	343-44	*1168-69	22 Sarvadhārm .	26 Nandana	.

* 18 Tārana was suppressed in the north.

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1 Arya Siddhanta, mean system.

COMMENCEMENT OF THE						
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS)			Kali year.
Day and month, A.D.	Week-day.	Time of mean Mēsha-samkrānti	Day and month, A.D.	Week-day.	α (here= t , the index of the tithi)	
13	14	17	19	20	23	1
		H M S				
26 Mar (86) .	1 Sun	2 22 30	7 Mar (87) .	3 Tues	241 8019	4248
26 Mar (85)	2 Mon .	8 35 0	26 Mar. (85) .	2 Mon .	276 4415	4247
26 Mar (85) .	3 Tues .	14 47 30	15 Mar (74) .	6 Fri .	152 1249	4248
26 Mar (85)	4 Wed .	21 0 0	4 Mar (83)	3 Tues .	27 8084	4249
26 Mar. (86)	6 Fri .	3 12 30	22 Mar (82)	2 Mon	62-4479	4250
26 Mar (85)	0 Sat .	9 25 0	12 Mar (71)	0 Sat	276 7631	4251
26 Mar. (85) .	1 Sun .	15 37 30	1 Mar (60)	4 Wed .	152-4465	4252
26 Mar (85)	2 Mon. .	21 50 0	20 Mar (79)	3 Tues	187 0861	4253
26 Mar (86)	4 Wed .	4 2 30	8 Mar. (68)	0 Sat .	62 7695	4254
26 Mar (85) .	5 Thur. .	10 15 0	26 Feb (57)	5 Thur	277 0848	4255
26 Mar (85) .	6 Fri. .	16 27 30	17 Mar (76)	4 Wed .	311 7245	4256
26 Mar (85)	0 Sat .	22 40 0	6 Mar (65)	1 Sun .	187 4078	4257
26 Mar (86)	2 Mon	4 52 30	24 Mar. (84)	0 Sat .	222-0474	4258
26 Mar (85) .	3 Tues .	11 5 0	13 Mar (72)	4 Wed. .	98 1308	4259
26 Mar (85) .	4 Wed. .	17 17 30	3 Mar (62)	2 Mon.	312 0461	4260
26 Mar (85) .	5 Thur	23 30 0	21 Mar. (80)	0 Sat .	8 0538	4261
26 Mar (86) .	0 Sat	5 42 30	10 Mar (70)	5 Thur.	222 3691	4262
26 Mar. (85)	1 Sun. .	11 55 0	27 Feb (58)	2 Mon	98 4525	4263
26 Mar. (85)	2 Mon	18 7 30	18 Mar (77)	1 Sun	132 6822	4264
27 Mar. (86)	4 Wed .	0 20 0	7 Mar (66)	5 Thur	8 3755	4265
26 Mar. (86) .	5 Thur .	6 32 30	25 Mar (85)	4 Wed.	43 0151	4266
26 Mar (86)	6 Fri .	12 45 0	15 Mar (74)	2 Mon	257 3504	4267
26 Mar (85) .	0 Sat .	18 57 30	4 Mar. (63)	6 Fri .	133 0138	4268
27 Mar. (86)	2 Mon .	1 10 0	23 Mar (82)	5 Thur .	167 6434	4269
26 Mar. (86)	3 Tues .	7 22 30	11 Mar. (71)	2 Mon	43 3368	4270

TABLE

CONCURRENT YEAR.								
Kali	Saka	Chaitrādi Vikrama	Mēshādi solar year in Bengal.	Kollam	A D	JOVIAN SAMVATSARA		Mean Intercalated (adhika) lunar month
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
4271	1092	1227	576	344 45	1169 70	23 Virōdhun .	27 Vijaya . .	5 Śrāvāṇa .
4272	1093	1228	577	345 46	1170 71	24 Vikṛita .	28 Jaya . .	..
4273	1094	1229	578	346 47	1171-72	25 Khara .	29 Manmatha .	...
4274	1095	1230	579	347 48	*1172-73	26 Nandana .	30 Durmukha .	2 Vaiśākha .
4275	1096	1231	580	348 49	1173 74	27 Vijaya	31 H̄malamba .	...
4276	1097	1232	581	349 50	1174-75	28 Jaya .	32 Vilamba .	10 Paus̄ha .
4277	1098	1233	582	350 51	1175-76	29 Manmatha .	33 Vikārin .	.
4278	1099	1234	583	351-52	*1176 77	30 Durmukha .	34 Śārvarin .	.
4279	1100	1235	584	352 53	1177-78	31 H̄malamba .	35 Plava . .	7 Ās̄vina .
4280	1101	1236	585	353 54	1178 79	32 Vilamba .	36 Śubhakrit .	..
4281	1102	1237	586	354-55	1179 80	33 Vikārin	37 Śōbhana .	.
4282	1103	1238	587	355 56	*1180 81	34 Śārvarin .	38 Krōdhun .	3 Jyēshtha .
4283	1104	1239	588	356 57	1181-82	35 Plava . .	39 Viśvāvasu .	.
4284	1105	1240	589	357-58	1182 83	36 Śubhakrit	40 Parābhava .	12 Phālguna .
4285	1106	1241	590	358-59	1183 84	37 Śōbhana	41 Plavanga .	.
4286	1107	1242	591	359 60	*1184 85	38 Krōdhun .	42 Kīlaka . .	.
4287	1108	1243	592	360 61	1185 86	39 Viśvāvasu	43 Saumya .	8 Kārttika .
4288	1109	1244	593	361 62	1186 87	40 Parābhava	44 Sādhārana .	..
4289	1110	1245	594	362 63	1187-88	41 Plavanga .	45 Virōdhakrit	.
4290	1111	1246	595	363 64	*1188-89	42 Kīlaka .	46 Paridhāvin .	5 Śrāvāṇa .
4291	1112	1247	596	364 65	1189 90	43 Saumya	47 Pramādin .	.
4292	1113	1248	597	365 66	1190 91	44 Sādhārana	48 Ānanda .	.
4293	1114	1249	598	366 67	1191-92	45 Virōdhakrit	49 Rākshasa .	1 Chaitra
4294	1115	1250	599	367 68	*1192 93	46 Paridhāvin	50 Anala	.
4295	1116	1251	600	368 69	1193 94	47 Pramādin .	51 Pingala .	10 Paus̄ha .

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1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE						
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS)			Kali year
Day and month, A D	Week day.	Time of mean Mēsha-samkrānti.	Day and month, A D	Week-day	<i>a</i> (here= <i>t</i> , the index of the tithi).	
13	14	17	19	20	23	1
		H M S				
26 Mar (85)	4 Wed	13 35 0	1 Mar (60)	0 Sat	257 0521	4271
26 Mar (85)	5 Thur	19 47 30	20 Mar (79)	6 Fri	292 2917	4272
27 Mar. (86)	0 Sat	2 0 0	9 Mar (68)	3 Tues	167 9751	4273
26 Mar. (86)	1 Sun.	8 12 30	26 Feb. (57)	0 Sat	43 6084	4274
26 Mar. (85)	2 Mon	14 25 0	16 Mar. (75)	6 Fri.	78 2981	4275
26 Mar (85)	3 Tues	20 37 30	6 Mar (65)	4 Wed.	292 0133	4276
27 Mar (86)	5 Thur.	2 50 0	25 Mar (84)	3 Tues.	327 2528	4277
26 Mar (86)	6 Fri.	9 2 30	13 Mar (73)	0 Sat	202 9372	4278
26 Mar (85)	0 Sat	15 15 0	2 Mar (61)	4 Wed.	78 6196	4279
26 Mar (85)	1 Sun	21 27 30	21 Mar. (80)	3 Tues.	113 2593	4280
27 Mar (86)	3 Tues	3 40 0	11 Mar. (70)	1 Sun.	327 5745	4281
26 Mar. (86)	4 Wed.	9 52 30	28 Feb (59)	5 Thur.	203 2579	4282
26 Mar (85)	5 Thur.	16 5 0	18 Mar (77)	4 Wed.	237 8975	4283
26 Mar (85)	6 Fri.	22 17 30	7 Mar (66)	1 Sun.	113 5809	4284
27 Mar. (86)	1 Sun.	4 30 0	26 Mar (85)	0 Sat.	148 2205	4285
26 Mar. (86)	2 Mon.	10 42 30	14 Mar (74)	4 Wed.	23 9039	4286
26 Mar. (85)	3 Tues	16 55 0	4 Mar (63)	2 Mon.	238 2192	4287
26 Mar (85)	4 Wed.	23 7 30	23 Mar (82)	1 Sun.	272 8588	4288
27 Mar (86)	6 Fri.	5 20 0	12 Mar (71)	5 Thur.	148 5422	4289
26 Mar (86)	0 Sat	11 32 30	29 Feb (60)	2 Mon.	24 2256	4290
26 Mar (85)	1 Sun.	17 45 0	19 Mar (78)	1 Sun.	58 8452	4291
26 Mar. (85)	2 Mon	23 57 30	9 Mar (68)	6 Fri	273 1805	4292
27 Mar (86)	4 Wed.	6 10 0	26 Feb (57)	3 Tues	148 8038	4293
26 Mar. (86)	5 Thur	12 22 30	16 Mar (76)	2 Mon	183 5036	4294
26 Mar. (85)	6 Fri.	18 35 0	5 Mar (64)	6 Fri	59 1868	4295

TABLE

CONCURRENT YEAR								Mean Intercalated (adhika) lunar month
Kal.	Saka	Chaitrādi Vikrama.	Mēshādi solar year in Bengal	Kollam	A.D	JOVIAN SAMVATSARA		
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
4296	1117	1252	601	369-70	1194-95	48 Ānanda .	52 Kālayukta .	...
4297	1118	1253	602	370 71	1195 96	49 Rākshasa .	53 Siddhārthun .	..
4298	1119	1254	603	371-72	*1196 97	50 Anala .	54 Raudra .	6 Bhādrapada
4299	1120	1255	604	372 73	1197-98	51 Pingala .	55 Durmatī .	..
4300	1121	1256	605	373 74	1198-99	52 Kālayukta .	56 Dundubhu .	..
4301	1122	1257	606	374-75	1199 00	53 Siddhārthun .	57 Rudhurōdgārṇ .	3 Jyēshṭha
4302	1123	1258	607	375 76	*1200 01	54 Raudra .	58 Raktāksha .	..
4303	1124	1259	608	376 77	1201-02	55 Durmatī .	59 Krōdhana .	11 Māgha .
4304	1125	1260	609	377-78	1202 03	56 Dundubhu .	60 Kshaya .	...
4305	1126	1261	610	378-79	1203 04	57 Rudhurōdgārṇ .	1 Prabhava .	...
4306	1127	1262	611	379 80	*1204 05	58 Raktāksha .	2 Vibhava .	8 Kārttika .
4307	1128	1263	612	380 81	1205-06	59 Krōdhana .	3 Śukla .	..
4308	1129	1264	613	381-82	1206 07	60 Kshaya .	4 Pramōda .	...
4309	1130	1265	614	382-83	1207-08	1 Prabhava .	5 Prajāpati .	5 Śrāvāṇa .
4310	1131	1266	615	383 84	*1208 09	2 Vibhava .	6 Angaras .	..
4311	1132	1267	616	384 85	1209-10	3 Śukla .	7 Śrīmukha .	..
4312	1133	1268	617	385 86	1210 11	4 Pramōda .	8 Bhāva .	1 Chaitra
4313	1134	1269	618	386 87	1211-12	5 Prajāpati .	9 Yuvan .	...
4314	1135	1270	619	387-88	*1212-13	6 Angaras .	10 Dhātri .	10 Pausa .
4315	1136	1271	620	388 89	1213-14	7 Śrīmukha .	11 Iśvara .	.
4316	1137	1272	621	389-90	1214-15	8 Bhāva .	12 Bahudhānya .	..
4317	1138	1273	622	390-91	1215-16	9 Yuvan .	13 Pramāthun .	6 Bhādrapada
4318	1139	1274	623	391 92	*1216-17	10 Dhātri .	14 Vikrama .	...
4319	1140	1275	624	392 93	1217-18	11 Iśvara .	15 Vrisha .	..
4320	1141	1276	625	393 94	1218 19	12 Bahudhānya .	16 Chitrabhānu .	3 Jyēshṭha .

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1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE						
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			Kalī year.
Day and month, A D	Week day	Time of mean Mīśha-samkrānti	Day and month, A D	Week-day	a (here= f , the index of the tithi)	
13	14	17	19	20	23	1
		H M S				
27 Mar. (86) . .	1 Sun. .	0 47 30	24 Mar (83) . .	5 Thur. .	93 8264	4296
27 Mar (86) . .	2 Mon . .	7 0 0	14 Mar (73)	3 Tues . .	308 1417	4297
26 Mar (86) . .	3 Tues. .	13 12 30	2 Mar. (62)	0 Sat . .	183 8251	4298
26 Mar. (85) . .	4 Wed. . .	19 25 0	21 Mar (80)	6 Fri. . .	218 4647	4299
27 Mar. (86)	6 Fri . .	1 37 31	10 Mar (69) . .	3 Tues . .	94 1481	4300
27 Mar (86) . .	0 Sat . .	7 50 0	28 Feb (59)	1 Sun . .	308 4634	4301
26 Mar. (86)	1 Sun . .	14 2 30	17 Mar (77)	6 Fri . .	4 4711	4302
26 Mar (85)	2 Mon . .	20 15 0	7 Mar (66)	4 Wed. . .	218 7864	4303
27 Mar. (86) . .	4 Wed . .	2 27 30	26 Mar (85)	3 Tues . .	253 4359	4304
27 Mar (86) . .	5 Thur . .	8 40 0	15 Mar (74)	0 Sat . .	129 1004	4305
26 Mar (86) . .	6 Fri. . .	14 52 30	2 Mar (63) . .	4 Wed . .	4 7027	4306
26 Mar (85)	0 Sat . .	21 5 0	22 Mar (81)	3 Tues . .	39 4324	4307
27 Mar (86)	2 Mon . .	3 17 30	12 Mar (71) . .	1 Sun . .	253 7477	4308
27 Mar (86) . .	3 Tues . .	9 30 0	1 Mar (60) . .	5 Thur . .	129 4311	4309
26 Mar (86) . .	4 Wed . .	15 42 30	10 Mar. (79)	4 Wed . .	164 0707	4310
26 Mar (85)	5 Thur . .	21 55 0	6 Mar (67)	1 Sun . .	39 7540	4311
27 Mar (86)	0 Sat . .	4 7 30	26 Feb (57) . .	6 Fri . .	254 0693	4312
27 Mar (86)	1 Sun . .	10 20 0	17 Mar (76) . .	5 Thur . .	288-7089	4313
26 Mar (86)	2 Mon . .	16 32 30	5 Mar (65) . .	2 Mon . .	164 3923	4314
26 Mar (85)	3 Tues . .	22 45 0	24 Mar (63) . .	1 Sun . .	199 0319	4315
27 Mar (86)	5 Thur . .	4 57 30	13 Mar (72)	5 Thur . .	74 7152	4316
27 Mar (86)	6 Fri . .	11 10 0	3 Mar (62)	3 Tues . .	289 0306	4317
26 Mar (86) . .	0 Sat . .	17 22 30	21 Mar (81)	2 Mon . .	323 6702	4318
26 Mar (85)	1 Sun . .	23 35 0	10 Mar (69)	6 Fri . .	199 3535	4319
27 Mar. (86)	3 Tues . .	5 47 30	27 Feb (58) . .	3 Tues . .	75 0369	4320

TABLE

CONCURRENT YEAR.								Mean Intercalated (adhika) lunar month
Kali	Saka	Chaitrīdi Vikrama	Mēshādi solar year in Bengal	Kollam	A D.	JOVIAN SAMVATSARA.		
						Southern system.	Northern system.	
1	2	3	3a	4	5	6	7	8a
4321	1142	1277	626	394 95	1219 20	13 Pramāthīn .	17 Subhānu .	..
4322	1143	1278	627	395 96	*1220 21	14 Vikrama .	18 Tārana .	11 Māgha .
4323	1144	1279	628	396 97	1221 22	15 Vṛisha	10 Pārthiva	.
4324	1145	1280	629	297-98	1222 23	16 Chutrabhānu	20 Vyaya .	
4325	1146	1281	630	398 99	1223 24	17 Subhānu .	21 Sarvajit	8 Kārttika
4326	1147	1282	631	399 00	*1224-25	18 Tārana .	22 Sarvadhārin .	..
4327	1148	1283	632	400 01	1225-26	19 Pārthiva .	23 Virōdhin .	..
4328	1149	1284	633	401 02	1226 27	20 Vyaya .	24 Vikṛita .	4 Āshādha .
4329	1150	1285	634	402 03	1227-28	21 Sarvajit .	25 Khara .	.
4330	1151	1286	635	403 04	*1228 29	22 Sarvadhārin .	26 Nandana .	.
4331	1152	1287	636	404 05	1229 30	23 Virōdhin .	27 Vijaya .	1 Chaitra .
4332	1153	1288	637	405 06	1230 31	24 Vikṛita .	28 Jaya .	.
4333	1154	1289	638	406-07	1231-32	25 Khara .	29 Manmatha	0 Mārgasīra
4334	1155	1290	639	407-08	*1232-33	26 Nandana .	30 Durmukha .	.
4335	1156	1291	640	408-09	1233-34	27 Vijaya .	31 Hēmalamba .	.
4336	1157	1292	641	409-10	1234-35	28 Jaya .	32 Vilamba .	6 Bhādrapada
4337	1158	1293	642	410 11	1235 36	29 Manmatha .	33 Vikārin .	.
4338	1159	1294	643	411-12	*1236-37	30 Durmukha .	34 Sārvarin .	.
4339	1160	1295	644	412-13	1237 38	31 Hēmalamba .	35 Plava .	2 Vaiśākha .
4340	1161	1296	645	413-14	1238 39	32 Vilamba .	36 Śubhakṛit .	..
4341	1162	1297	646	414 15	1239 40	33 Vikārin .	37 Śōbhana .	11 Māgha .
4342	1163	1298	647	415 16	*1240 41	34 Sārvarin .	38 Krōdhin .	..
4343	1164	1299	648	416 17	1241-42	35 Plava .	39 Viśvāvasu .	...
4344	1165	1300	649	417-18	1242 43	36 Śubhakṛit	40 Parābhava .	7 Āsīna .
4345	1166	1301	650	418-19	1243-44	37 Śōbhana	41 Plavanga

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1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE						
MEAN SOLAR YEAR.			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			Kalā year
Day and month, A.D.	Week day	Time of mean Mīśha-samkrānti	Day and month, A.D.	Week-day	a (here= <i>l</i> , the index of the tithi)	
13	14	17	19	20	23	1
		H M S				
27 Mar (80) .	4 Wed .	12 0 0	18 Mar (77) .	2 Mon .	109 6765	4321
26 Mar (86)	5 Thur. .	18 12 30	7 Mar (67)	0 Sat .	323 9918	4322
27 Mar (86) .	0 Sat .	0 25 0	25 Mar (84) .	5 Thur	10-9905	4323
27 Mar (86)	1 Sun .	0 37 30	15 Mar (74) .	3 Tues	234 3148	4324
27 Mar (86) .	2 Mon .	12 50 0	4 Mar (63) .	0 Sat .	109 9982	4325
26 Mar (86)	3 Tues	10 2 30	22 Mar (82) .	6 Fri. .	144 6378	4326
27 Mar (86) .	5 Thur .	1 15 0	11 Mar (70) .	3 Tues .	20 3212	4327
27 Mar (86) .	6 Fri .	7 27 30	1 Mar. (60)	1 Sun. .	234 6365	4328
27 Mar (86)	0 Sat	13 40 0	20 Mar (79) .	0 Sat.	269 2761	4329
26 Mar (86) .	1 Sun .	10 52 30	8 Mar (68)	4 Wed	144 9594	4330
27 Mar (86)	3 Tues .	2 5 0	25 Feb (56) .	1 Sun. .	20 0428	4331
27 Mar (86) .	4 Wed .	8 17 30	16 Mar (75) .	0 Sat .	55 2824	4332
27 Mar. (86) .	5 Thur .	14 30 0	6 Mar (65) .	5 Thur .	289 5977	4333
26 Mar (86) .	6 Fri. .	26 42 30	24 Mar (84) .	4 Wed. .	304 2373	4334
27 Mar (86) .	1 Sun .	2 55 0	13 Mar (72) .	1 Sun .	179 9207	4335
27 Mar (86) .	2 Mon .	9 7 30	2 Mar (61) .	5 Thur .	55 6041	4336
27 Mar (86) .	3 Tues	15 20 0	21 Mar (80) .	4 Wed. .	90 2437	4337
26 Mar. (86) .	4 Wed. .	21 32 30	10 Mar (70) .	2 Mon .	304-5590	4338
27 Mar. (86) .	6 Fri. .	3 45 0	27 Feb (58) .	6 Fri. .	180 2424	4339
27 Mar. (86) .	0 Sat. .	9 57 30	18 Mar. (77) .	5 Thur. .	214 8820	4340
27 Mar. (86) .	1 Sun .	16 10 0	7 Mar (66) .	2 Mon. .	90 5654	4341
26 Mar (86) .	2 Mon .	22 22 30	25 Mar. (85) .	1 Sun. .	125 2049	4342
27 Mar (86) .	4 Wed .	4 35 0	14 Mar. (73)	5 Thur. .	0 8884	4343
27 Mar. (86) .	5 Thur. .	10 47 30	4 Mar. (63) .	3 Tues .	215 2037	4344
27 Mar. (86) .	6 Fri. .	17 0 0	23 Mar (82) .	2 Mon. .	249 8433	4345

TABLE

CONCURRENT YEAR								Mean Intercalated (adhika) lunar month
Kalī.	Śaka.	Chaitrādi Vikrama.	Māshādi solar year in Bengal	Kollam.	A D	Jovian Samvatsara		
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
4346	1167	1302	651	419-20	*1244 45	38 Krōdhan	42 Kīlaka . .	..
4347	1168	1303	652	420 21	1245-46	39 Viśvāvasu	43 Saumya†	4 Āshādha .
4348	1169	1304	653	421-22	1246 47	40 Parābhava	45 Virōdhakṛit .	...
4349	1170	1305	654	422-23	1247-48	41 Pravanga	46 Paridhāvin .	..
4350	1171	1306	655	423 24	*1248 49	42 Kīlaka . .	47 Pramādin .	1 Chaitra .
4351	1172	1307	656	424-25	1249 50	43 Saumya . .	48 Ānanda . .	..
4352	1173	1308	657	425 26	1250 51	44 Sādhārana .	49 Rākshasa .	9 Mārgaśira .
4353	1174	1309	658	426-27	1251-52	45 Virōdhakṛit .	50 Anala . .	.
4354	1175	1310	659	427-28	*1252-53	46 Paridhāvin .	51 Pingala . .	..
4355	1176	1311	660	428 29	1253 54	47 Pramādin .	52 Kālayukta .	6 Bhādrapada
4356	1177	1312	661	429 30	1254-55	48 Ānanda . .	53 Siddhārthan .	.
4357	1178	1313	662	430 31	1255 56	49 Rākshasa .	54 Raudra . .	.
4358	1179	1314	663	431-32	*1256 57	50 Anala . .	55 Durmatī . .	2 Vaiśākha .
4359	1180	1315	664	432 33	1257-58	51 Pingala . .	56 Dundubhi . .	.
4360	1181	1316	665	433 34	1258 59	52 Kālayukta .	57 Rudhirōdgārn .	11 Māgha .
4361	1182	1317	666	434 35	1259 60	53 Siddhārthan .	58 Raktāksha . .	...
4362	1183	1318	667	435-36	*1260 61	54 Raudra . .	59 Krōdhana . .	...
4363	1184	1319	668	436 37	1261 62	55 Durmatī . .	60 Kshaya . .	7 Āśvina .
4364	1185	1320	669	437-38	1262 63	56 Dundubhi . .	1 Prabhava . .	...
4365	1186	1321	670	438-39	1263-64	57 Rudhirōdgārn .	2 Vibhava . .	...
4366	1187	1322	671	439 40	*1264-65	58 Raktāksha .	3 Śukla . .	4 Āshādha .
4367	1188	1323	672	440-41	1265-66	59 Krōdhana . .	4 Pramōda . .	.
4368	1189	1324	673	441 42	1266 67	60 Kshaya . .	5 Prajāpati . .	12 Phālguna .
4369	1190	1325	674	442 43	1267 68	1 Prabhava . .	6 Angiras . .	.
4370	1191	1326	675	443 44	*1268 69	2 Vibhava . .	7 Śrimukha . .	.

† 44, Sādhārana, was suppressed in the north by the mean system, but 45 Virōdhakṛit by the true system. By the latter system the year A.D. 1246-47 was called in the north, "Sādhārana"

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1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE

MEAN SOLAR YEAR.			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			Kali year
Day and month, A.D.	Week day	Time of mean M̄csha-samkrānti	Day and month, A D	Week day	a (here= t , the index of the tithi)	
13	14	17	19	20	23	1
		H M S				
26 Mar (86) .	0 Sat .	23 12 30	11 Mar (71)	6 Fri	125 5266	4346
27 Mar. (86) . .	2 Mon	5 25 0	28 Feb (59)	3 Tues	1 2100	4347
27 Mar (86) . .	3 Tues	11 37 30	19 Mar (78)	2 Mon	35 8196	4348
27 Mar (86) . .	4 Wed. .	17 50 0	9 Mar (68)	0 Sat .	250 1649	4349
27 Mar (87) . .	6 Fri.	0 2 30	26 Feb (57)	4 Wed	125 8482	4350
27 Mar. (86) . .	0 Sat .	6 15 0	16 Mar (75)	3 Tues .	160 4878	4351
27 Mar (86) . .	1 Sun .	12 27 30	5 Mar (64)	0 Sat	36 1712	4352
27 Mar (86) . .	2 Mon	18 40 0	24 Mar (83)	6 Fri	70 8109	4353
27 Mar (87) . .	4 Wed	0 52 30	13 Mar (73)	4 Wed .	285 1262	4354
27 Mar (86) . .	5 Thur.	7 5 0	2 Mar (61)	1 Sun .	160 8095	4355
27 Mar (86) . .	6 Fri	13 17 30	21 Mar (80)	0 Sat .	195 4491	4356
27 Mar (86) . .	0 Sat .	19 30 0	10 Mar (69)	4 Wed	71 1325	4357
27 Mar (87) . .	2 Mon .	1 42 30	28 Feb (59) .	2 Mon	285 4478	4358
27 Mar (86) . .	3 Tues	7 55 0	18 Mar (77) .	1 Sun .	320 0874	4359
27 Mar (86) . .	4 Wed	14 7 30	7 Mar (66)	5 Thur	195 7708	4360
27 Mar (86) . .	5 Thur	20 20 0	26 Mar (85)	4 Wed	230 4104	4361
27 Mar (87) . .	0 Sat .	2 32 30	14 Mar (74)	1 Sun	106 0938	4362
27 Mar (86) . .	1 Sun	8 45 0	4 Mar (63)	6 Fri	320 4091	4363
27 Mar (86) . .	2 Mon	14 57 30	22 Mar (81) .	4 Wed .	16 4168	4364
27 Mar (86) . .	3 Tues	21 10 0	12 Mar (71) .	2 Mon .	230 7321	4365
27 Mar. (87) . .	5 Thur	3 22 30	29 Feb (60)	6 Fri	106 4155	4366
27 Mar. (86) . .	6 Fri	9 35 0	19 Mar (78) .	5 Thur	141 0551	4367
27 Mar. (86) . .	0 Sat	15 47 30	8 Mar (67)	2 Mon .	16 7384	4368
27 Mar (86) . .	1 Sun .	22 0 0	27 Mar (86) .	1 Sun .	51-3780	4369
27 Mar (87) . .	3 Tues .	4 12 30	16 Mar. (76) .	6 Fri. .	265 6934	4370

TABLE

CONCURRENT YEAR								
Kalī	Saka	Chaitrādi Vikrama	Vijāhādi solar year in Bengal	Kollam	A D	JOVIAN SAMVATSARA.		Mean Intercalated (adhika) lunar month
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
4371	1192	1327	676	444 45	1269 70	3 Śukla	8 Dhāva	9 Mārgasīra .
4372	1193	1328	677	445 40	1270 71	4 Pramōda	9 Yuvan .	.
4373	1194	1329	678	446 47	1271-72	5 Prajāpati .	10 Dhātṛi .	.
4374	1195	1330	679	447 48	*1272 73	6 Angiras	11 Īsvara	5 Śrāvana .
4375	1196	1331	680	448 40	1273 74	7 Śrīmukha	12 Bahudhānya	.
4376	1197	1332	681	449 50	1274-75	8 Bhāva	13 Pramāthun .	.
4377	1198	1333	682	450 51	1275-76	9 Yuvan .	14 Vikrama .	2 Vaiśākha .
4378	1199	1334	683	451 52	*1276 77	10 Dhātṛi	15 Vṛsha .	.
4379	1200	1335	684	452 53	1277-78	11 Īsvara	16 Chitrabhānu	10 Pausa .
4380	1201	1336	685	453 54	1278-79	12 Bahudhānya	17 Subhānu .	..
4381	1202	1337	686	454 55	1279 80	13 Pramāthun	18 Tārana .	.
4382	1203	1338	687	455 56	*1280 81	14 Vikrama .	19 Pārthiva .	7 Āsvina .
4383	1204	1339	688	456 57	1281 82	15 Vṛsha	20 Vyaya .	..
4384	1205	1340	689	457-58	1282 83	16 Chitrabhānu	21 Sarvajit .	.
4385	1206	1341	690	458 59	1283 84	17 Subhānu .	22 Sarvadhārm	4 Āshādha .
4386	1207	1342	691	459 60	*1284 85	18 Tārana .	23 Virōdhin .	.
4387	1208	1343	692	460 61	1285 86	19 Pārthiva .	24 Vikṛita .	12 Phālguna .
4388	1209	1344	693	461-62	1286 87	20 Vyaya	25 Khara .	..
4389	1210	1345	694	462 63	1287-88	21 Sarvajit .	26 Nandana .	...
4390	1211	1346	695	463 64	*1288 89	22 Sarvadhārm .	27 Vijaya .	9 Mārgasīra
4391	1212	1347	696	464-65	1289 90	23 Virōdhin .	28 Jaya .	.
4392	1213	1348	697	465 66	1290 91	24 Vikṛita .	29 Manmatha	.
4393	1214	1349	698	466 67	1291 92	25 Khara	30 Durmukha .	5 Śrāvana .
4394	1215	1350	699	467 68	*1292 93	26 Nandana .	31 Hemalamba	.
4395	1216	1351	700	468 69	1293 94	27 Vijaya .	32 Vilamba .	..

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1 Arya Siddhanta, mean system.

COMMENCEMENT OF THE						
MEAN SOLAR YEAR			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS)			Kali year
Day and month, A D.	Week-day	Time of mean M̄śha-samkrānti	Day and month, A D	Week day	a (here= t , the index of the tithi)	
13	14	17	19	20	23	1
		H M S				
27 Mar. (86) .	4 Wed .	10 25 0	5 Mar (84) .	3 Tues	141 3707	4371
27 Mar. (86) .	5 Thur .	16 37 30	24 Mar (83)	2 Mon	176 0164	4372
27 Mar (86) .	6 Fri .	22 50 0	13 Mar. (72) .	6 Fri	51 6998	4373
27 Mar (87) .	1 Sun .	5 2 30	2 Mar (62)	4 Wed	266 0150	4374
27 Mar (86) .	2 Mon.	11 15 0	21 Mar (80)	3 Tues .	300 6546	4375
27 Mar (86) .	3 Tues	17 27 30	10 Mar (69)	0 Sat	176 3380	4376
27 Mar (86) .	4 Wed	23 40 0	27 Feb (58)	4 Wed .	52 0213	4377
27 Mar (87) .	6 Fri .	5 52 30	17 Mar (77)	3 Tues	86 6609	4378
27 Mar (86) .	0 Sat .	12 5 0	7 Mar (66)	1 Sun	300 9762	4379
27 Mar (86) .	1 Sun .	18 17 30	25 Mar (84)	6 Fri	9996 9840*	4380
28 Mar (87) .	3 Tues. .	0 30 0	15 Mar (74) .	4 Wed	211 2992	4381
27 Mar (87) .	4 Wed	6 42 30	3 Mar (63)	1 Sun	86 9826	4382
27 Mar (86) .	5 Thur. .	12 55 0	22 Mar (81)	0 Sat .	121 6222	4383
27 Mar. (86) .	6 Fri. .	19 7 30	11 Mar (70)	4 Wed	9997 3056*	4384
28 Mar. (87) .	1 Sun .	1 26 0	1 Mar (60) .	2 Mon	211 6209	4385
27 Mar (87) .	2 Mon. .	7 32 30	19 Mar (79) .	1 Sun .	246 2605	4386
27 Mar (86) .	3 Tues .	13 45 0	8 Mar (67) .	5 Thur. .	121 9439	4387
27 Mar. (86) .	4 Wed. .	19 57 30	27 Mar (86) .	4 Wed. .	156 5834	4388
28 Mar. (87) .	6 Fri .	2 10 0	16 Mar (75) .	1 Sun.	32 2669	4389
27 Mar. (87) .	0 Sat .	8 22 30	5 Mar (65) .	6 Fri .	246 5821	4390
27 Mar. (86) .	1 Sun .	14 35 0	24 Mar (83)	5 Thur	281 2218	4391
27 Mar. (86) .	2 Mon .	20 47 30	13 Mar (72) .	2 Mon.	156 9051	4392
28 Mar (87) .	4 Wed. .	3 0 0	2 Mar (61) .	6 Fri .	32 5885	4393
27 Mar (87) .	5 Thur. .	9 12 30	20 Mar (80) .	5 Thur. .	67 2281	4394
27 Mar (86) .	6 Fri. .	15 25 0	10 Mar (69) .	3 Tues .	281 5434	4395

* As a mean tithi Chaitra Sukla 1 was expunged. The civil day corresponding to it, $s e$, the first day of the luni solar year was as given in cols. 19, 20.

TABLE

CONCURRENT YEAR								Mean Intercalated (adhika) lunar month
Kalī	Saka	Chaitrādi Vikrama	Mūshādi solar year in Bengal	Kollam	A D	JOVIAN SAMVATSARA		
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
4306	1217	1352	701	469-70	1294 95	28 Jaya . . .	33 Vikārin . . .	2 Vaiśākha
4397	1218	1353	702	470 71	1295-96	29 Manmatha	34 Śārvarin	.
4308	1219	1354	703	471 72	*1296 97	30 Durmukha	35 Plava	10 Pausa . .
4399	1220	1355	704	472-73	1297-98	31 Hōmalamba	36 Śubhakrit . .	.
4400	1221	1356	705	473 74	1298 99	32 Vilamba . .	37 Śōbhana	.
4401	1222	1357	706	474 75	1299 00	33 Vikārin	38 Krōdhun	7 Āsvina . .
4402	1223	1358	707	475-76	*1300 01	34 Śārvarin	39 Viśvāvasu . .	.
4403	1224	1359	708	476 77	1301-02	35 Plava	40 Parābhava	.
4404	1225	1360	709	477-78	1302 03	36 Śubhakrit	41 Plavanga	3 Jyēshtha . .
4405	1226	1361	710	478 79	1303 04	37 Śōbhana	42 Kīlaka	.
4406	1227	1362	711	479 80	*1304 05	38 Krōdhun	43 Saumya	12 Phālguna
4407	1228	1363	712	480 81	1305 06	39 Viśvāvasu	44 Sādharana	.
4408	1229	1364	713	481 82	1306 07	40 Parābhava	45 Virōdhakrit . .	.
4409	1330	1365	714	482 83	1307-08	41 Plavanga . .	46 Paridhāvin	8 Kārttika
4410	1231	1366	715	483 84	*1308 09	42 Kīlaka . . .	47 Pramādin	.
4411	1232	1367	716	484 85	1309-10	43 Saumya	48 Ānanda	..
4412	1233	1368	717	485 86	1310 11	44 Sādharana . .	49 Rākehasa	5 Śrāvāṇa
4413	1234	1369	718	486 87	1311-12	45 Virōdhakrit . .	50 Anala . . .	...
4414	1235	1370	719	487 88	*1312 13	46 Paridhāvin	51 Pingala . . .	.
4415	1236	1371	720	488 89	1313 14	47 Pramādin . .	52 Kālayukta . .	1 Chaitra . .
4416	1237	1372	721	489 90	1314 15	48 Ānanda	53 Siddhārthin	..
4417	1238	1373	722	490 91	1315 16	49 Rākshasa . .	54 Raudra . . .	10 Pausa . .
4418	1239	1374	723	491 92	*1316-17	50 Anala	55 Durnatī . . .	.
4419	1240	1375	724	492 93	1317 18	51 Pingala	56 Dunsūbhī	..
4420	1241	1376	725	493 94	1318-19	52 Kālayukta . .	57 Rudhrōdgārīn	7 Āsvina . .

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1 Arya Siddhanta, mean system.

COMMENCEMENT OF THE						Kali year
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS).			
Day and month, A.D	Week-day	Time of mean Mīshnasamkrānti	Day and month, A.D	Week-day	α (here= t , the index of the tithi)	
13	14	17	19	20	23	1
		H M S				
27 Mar (86)	0 Sat	21 37 40	27 Feb (58)	0 Sat	157 2208	4396
28 Mar. (87)	2 Mon	3 50 0	18 Mar (77)	6 Fri.	191-8604	4397
27 Mar (87)	3 Tues	10 2 30	6 Mar (66)	3 Tues	07-5498	4398
27 Mar (86)	4 Wed.	16 15 0	25 Mar (84)	2 Mon	102 1894	4399
27 Mar (86)	5 Thur	22 27 30	15 Mar (74)	0 Sat	316 5047	4400
28 Mar (87)	0 Sat	4 40 0	4 Mar (63)	4 Wed	192 1881	4401
27 Mar (87)	1 Sun	10 52 30	22 Mar (82)	3 Tues	226-8277	4402
27 Mar (86)	2 Mon	17 5 0	11 Mar (70)	0 Sat	102 5111	4403
27 Mar (86)	3 Tues.	23 17 30	1 Mar (60)	5 Thur	316 8264	4404
28 Mar. (87)	5 Thur	5 30 0	19 Mar (78)	3 Tues	12 8341	4405
27 Mar. (87)	6 Fri.	11 42 30	8 Mar. (68)	1 Sun	227 1494	4406
27 Mar (86)	0 Sat	17 55 0	27 Mar. (86)	0 Sat	261 7889	4407
28 Mar (87)	2 Mon	0 7 30	16 Mar (75)	4 Wed	137 4728	4408
28 Mar. (87)	3 Tues	6 20 0	5 Mar (64)	1 Sun	13-1558	4409
27 Mar (87)	4 Wed.	12 32 30	23 Mar (93)	0 Sat	47 7954	4410
27 Mar (86)	5 Thur	18 45 0	13 Mar (72)	5 Thur.	262 1106	4411
28 Mar. (87)	0 Sat	0 57 30	2 Mar (61)	2 Mon	137 7940	4412
28 Mar (87)	1 Sun	7 10 0	21 Mar (80)	1 Sun	172 4337	4413
27 Mar (87)	2 Mon	13 22 30	9 Mar (69)	5 Thur.	48 1170	4414
27 Mar (86)	3 Tues	19 35 0	27 Feb (58)	3 Tues	262 4322	4415
28 Mar (87)	5 Thur	1 47 30	18 Mar (77)	2 Mon	297 0719	4416
28 Mar (87)	6 Fri	8 0 0	7 Mar (66)	6 Fri	172 7553	4417
27 Mar (87)	0 Sat	14 12 30	25 Mar (85)	5 Thur	207 3949	4418
27 Mar (86)	1 Sun	20 25 0	14 Mar (73)	2 Mon	83 0782	4419
28 Mar (87)	3 Tues	2 37 30	4 Mar (63)	0 Sat	297-3935	4420

TABLE

CONCURRENT YEAR						JOVIAN SAMVATSABA.		Mean Intercalated (adhika) lunar month
Kali.	Saka	Chaitrādi Vikrama	Mēshādi solar year in Bengal.	Kollam.	A D.	Southern system.	Northern system	
1	2	3	3a	4	5	6	7	8a
4421	1242	1377	726	494 95	1319 20	53 Siddhārthun	58 Raktāksha	.
4422	1243	1378	727	495 96	*1320 21	54 Raudra	59 Krōdhana	..
4423	1244	1379	728	496 97	1321-22	55 Durmati	60 Kshaya	3 Jyēshtha .
4424	1245	1380	729	497-98	1322-23	56 Dundubhi	1 Prabhava	
4425	1246	1381	730	498 99	1323-24	57 Rudhurōdgārn	2 Vibhava	12 Phālguna
4426	1247	1382	731	499 00	*1324-25	58 Raktāksha	3 Sukla	.
4427	1248	1383	732	500 01	1325 26	59 Krōdhana	4 Pramōda	.
4428	1249	1384	733	501 02	1326 27	60 Kshaya	5 Prajāpati	8 Kārttika
4429	1250	1385	734	502 03	1327-28	1 Prabhava	6 Angiras	..
4430	1251	1386	735	503 04	*1328 29	2 Vibhava	7 Śrīmukha	.
4431	1252	1387	736	504 05	1329-30	3 Sukla	8 Bhāva	5 Śrāvana
4432	1253	1388	737	505 06	1330 31	4 Pramōda	9 Yuvan†	..
4433	1254	1389	738	506 07	1331-32	5 Prajāpati	11 Iśvara	.
4434	1255	1390	739	507 08	*1332-33	6 Angiras	12 Bahudhānya	1 Chaitra
4435	1256	1391	740	508 09	1333 34	7 Śrīmukha	13 Pramāthun	.
4436	1257	1392	741	509 10	1334 35	8 Bhāva	14 Vikrama	10 Pausha
4437	1258	1393	742	510-11	1335-36	9 Yuvan	15 Vṛsha	.
4438	1259	1394	743	511-12	*1336 37	10 Dhātri	16 Chutrabhānu	.
4439	1260	1395	744	512-13	1337-38	11 Iśvara	17 Subhānu	6 Bhādrapada
4440	1261	1396	745	513 14	1338 39	12 Bahudhānya	18 Tāraṇa	..
4441	1262	1397	746	514-15	1339-40	13 Pramāthun	19 Pārthiva	.
4442	1263	1398	747	515-16	*1340-41	14 Vikrama	20 Vyaya	3 Jyēshtha .
4443	1264	1399	748	516 17	1341 42	15 Vṛsha	21 Sarvajit	..
4444	1265	1400	749	517-18	1342 43	16 Chutrabhānu	22 Sarvadhārn	11 Māgha .
4445	1266	1401	750	518 19	1343-44	17 Subhānu	23 Virōdhun	..

† 10 Dhātri was suppressed in the north by the mean system, but 11 Iśvara by the true system. The year A.D. 1331-32 was by the latter system called "10 Dhātri" in the north.

LXXVI—Contd.

1 Arya Siddhanta, mean system.

COMMENCEMENT OF THE						
MEAN SOLAR YEAR			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS)			Kali year.
Day and month, A.D	Week day	Time of mean Mēsha-samkrānti	Day and month, A D	Week day	a (here= <i>t</i> , the index of the tithi)	
13	14	17	19	20	23	1
		H M S				
28 Mar (87)	4 Wed	8 50 0	23 Mar (82)	6 Fri.	332 0331	4421
27 Mar (87) .	5 Thur	15 2 30	11 Mar (71)	3 Tues	207-7165	4422
27 Mar. (86)	6 Fri	21 15 0	28 Feb (59)	0 Sat .	83 3999	4423
28 Mar (87) . .	1 Sun	3 27 30	19 Mar (78)	6 Fri	118 0395	4424
28 Mar (87)	2 Mon.	9 40 0	9 Mar (68)	4 Wed	332-3547	4425
27 Mar (87)	3 Tues	15 52 30	26 Mar (86)	2 Mon	28 3624	4426
27 Mar (86)	4 Wed	22 5 0	16 Mar (75)	0 Sat	242 6778	4427
28 Mar (87)	6 Fri	4 17 30	5 Mar (64)	4 Wed	118-3612	4428
28 Mar (87)	0 Sat	10 30 0	24 Mar (83)	3 Tues	153 0008	4429
27 Mar (87) .	1 Sun .	16 42 30	12 Mar (72)	0 Sat. .	28 7841	4430
27 Mar (86)	2 Mon	22 55 0	2 Mar (61)	5 Thur	242 9995	4431
28 Mar (87)	4 Wed	5 7 30	21 Mar (80)	4 Wed	277 6391	4432
28 Mar (87) . .	5 Thur	11 20 0	10 Mar (69)	1 Sun	153 3224	4433
27 Mar (87) . .	6 Fri .	17 32 30	27 Feb (58)	5 Thur .	29 0058	4434
27 Mar (86)	0 Sat	23 45 0	17 Mar (76)	4 Wed	63-6455	4435
28 Mar (87)	2 Mon	5 57 30	7 Mar (66)	2 Mon .	277 9607	4436
28 Mar (87)	3 Tues .	12 10 0	25 Mar. (85)	1 Sun .	312 6003	4437
27 Mar (87)	4 Wed .	18 22 30	14 Mar. (74)	5 Thur	188 2837	4438
28 Mar (87)	6 Fri	0 35 0	3 Mar (62)	2 Mon .	63 9089	4439
28 Mar (87) . .	0 Sat	6 47 30	22 Mar (81)	1 Sun	98 6067	4440
28 Mar (87)	1 Sun	13 0 0	12 Mar (71)	6 Fri .	312 9231	4441
27 Mar (87)	2 Mon .	19 12 30	29 Feb (60)	3 Tues .	188 6054	4442
28 Mar (87)	4 Wed	1 25 0	19 Mar (78)	2 Mon	223-2350	4443
28 Mar (87)	5 Thur. .	7 37 30	8 Mar. (67)	6 Fri	98 9284	4444
28 Mar (87)	6 Fri .	13 50 0	27 Mar. (86)	5 Thur .	133 5679	4445

TABLE

CONCURRENT YEAR								
Kalī	Śaka	Chaitrī Vikrama	Mēshādi solar year in Bengal	Kollam	A D	JOVIAN SAMVATSARA.		Mean Intercalated (adhika) lunar month.
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
4446	1267	1402	751	519 20	*1344 45	18 Tārana	24 Vikrīta	
4447	1268	1403	752	520 21	1345 46	19 Pārthiva	25 Khara	8 Kārttika
4448	1269	1404	753	521 22	1346 47	20 Vyaya	26 Nandana	
4449	1270	1405	754	522 23	1347 48	21 Sarvajit	27 Vijaya	
4450	1271	1406	755	523 24	*1348 49	22 Sarvadhārin	28 Jaya	4 Āshādha
4451	1272	1407	756	524 25	1349 50	23 Virōdhan	29 Manmatha	
4452	1273	1408	757	525 26	1350 51	24 Vikrīta	30 Durmukha	
4453	1274	1409	758	526-27	1351-52	25 Khara	31 Hēmalamba	1 Chaitra
4454	1275	1410	759	527 28	*1352 53	26 Nandana	32 Vilamba	"
4455	1276	1411	760	528 29	1353 54	27 Vijaya	33 Vikārin	9 Mārgasīra
4456	1277	1412	761	529 30	1354 55	28 Jaya	34 Sārvarin	
4457	1278	1413	762	530 31	1355 56	29 Manmatha	35 Plava	
4458	1279	1414	763	531 32	*1356 57	30 Durmukha	36 Śubhakt	6 Bhādrapada
4459	1280	1415	764	532 33	1357 58	31 Hēmalamba	37 Śōbhana	
4460	1281	1416	765	533 34	1358 59	32 Vilamba	38 Krōdhan	
4461	1282	1417	766	534 35	1359 60	33 Vikārin	39 Viśvāvasu	3 Jyēsthā
4462	1283	1418	767	535 36	*1360 61	34 Sārvarin	40 Parābhava	
4463	1284	1419	768	536 37	1361 62	35 Plava	41 Plavanga	11 Māgha
4464	1285	1420	769	537 38	1362 63	36 Śubhakt	42 Kilaka	
4465	1286	1421	770	538 39	1363 64	37 Śōbhana	43 Saumya	
4466	1287	1422	771	539 40	*1364 65	38 Krōdhan	44 Sādhārana	8 Kārttika
4467	1288	1423	772	540 41	1365 66	39 Viśvāvasu	45 Virōdhakt	
4468	1289	1424	773	541 42	1366 67	40 Parābhava	46 Paridhāvin	
4469	1290	1425	774	542 43	1367 68	41 Plavanga	47 Pramādin	4 Āshādha
4470	1291	1426	775	543 44	*1368 69	42 Kilaka	48 Ānanda	

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1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE						
MEAN SOLAR YEAR			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS)			Kali year
Day and month, A D	Week day	Time of mean M̄śha-samkrānti.	Day and month, A D	Week day	α (here= t , the index of the titlu)	
13	14	17	19	20	23	1
		H M S				
27 Mar (87)	0 Sat	20 2 30	15 Mar (75)	2 Mon	0 2513	4446
28 Mar (87)	2 Mon	2 15 0	5 Mar (64)	0 Sat	223 5666	4447
28 Mar (87)	3 Tues	8 27 30	24 Mar (63)	6 Fri	258 2062	4448
28 Mar (87)	4 Wed	14 40 0	13 Mar (72)	3 Tues	133 8897	4449
27 Mar (87)	5 Thur	20 52 30	1 Mar (61)	0 Sat	0 5730	4450
28 Mar (87)	0 Sat	3 5 0	20 Mar (70)	6 Fri	44 2126	4451
28 Mar (87)	1 Sun	9 17 30	10 Mar (60)	4 Wed	238 5279	4452
28 Mar (87)	2 Mon	15 30 0	27 Feb (58)	1 Sun	134 2112	4453
27 Mar (87)	3 Tues	21 42 30	17 Mar (77)	0 Sat	168 8509	4454
28 Mar (87)	5 Thur	3 55 0	6 Mar (65)	4 Wed	44 5342	4455
28 Mar (87)	6 Fri	10 7 30	25 Mar (84)	3 Tues	79 1738	4456
28 Mar (87)	0 Sat	16 20 0	15 Mar (74)	1 Sun	293 4891	4457
27 Mar (87)	1 Sun	22 32 30	3 Mar (63)	5 Thur	169 1725	4458
28 Mar (87)	3 Tues	4 45 0	22 Mar (81)	4 Wed	203 8121	4459
28 Mar (87)	4 Wed	10 57 30	11 Mar (70)	1 Sun	79 4955	4460
28 Mar (87)	5 Thur	17 10 0	1 Mar (60)	6 Fri	293 8108	4461
27 Mar (87)	6 Fri	23 22 30	19 Mar (70)	5 Thur	328 4504	4462
28 Mar (87)	1 Sun	5 35 0	8 Mar (67)	2 Mon	204 1338	4463
28 Mar (87)	2 Mon	11 47 30	27 Mar (86)	1 Sun	238 7731	4464
28 Mar (87)	3 Tues	18 0 0	16 Mar (75)	5 Thur	114 4568	4465
28 Mar (88)	5 Thur	0 12 30	5 Mar (65)	3 Tues	328 7721	4466
28 Mar (87)	6 Fri	6 25 0	23 Mar (82)	1 Sun	24 7798	4467
28 Mar (87)	0 Sat	12 37 30	13 Mar (72)	6 Fri	239 0951	4468
28 Mar (87)	1 Sun	18 50 0	2 Mar (61)	3 Tues	114 7785	4469
28 Mar (88)	3 Tues	1 2 30	20 Mar (80)	2 Mon	148 4181	4470

TABLE

CONCURRENT YEAR								Mean Intercalated (adhika) lunar month
Kal	Saka	Chaitrādi Vikrama	Mēshādi solar year in Bengal	Kollam	A D	JOVIAN SAMVATSARA		
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
4471	1292	1427	776	544 45	1369-70	43 Saumya	49 Rākshasa	...
4472	1293	1428	777	545-46	1370 71	44 Sādhārana	50 Anala	1 Chaitra
4473	1294	1429	778	546 47	1371-72	45 Virōdhakrit	51 Pingala	.
4474	1295	1430	779	547 48	*1372 73	46 Paridhāvin	52 Kālayukta	9 Mārgasīra
4475	1296	1431	780	548 49	1373 74	47 Pramādin	53 Siddhārthin	.
4476	1297	1432	781	549 50	1374 75	48 Ānanda	54 Raudra	.
4477	1298	1433	782	550 51	1375 76	49 Rākshasa	55 Durmatī	6 Bhādrapada
4478	1299	1434	783	551 52	*1376 77	50 Anala	56 Dundubhi	.
4479	1300	1435	784	552 53	1377 78	51 Pingala	57 Rudhirōdgārīn	.
4480	1301	1436	785	553 54	1378 79	52 Kālayukta	58 Raktāksha	2 Vaiśakha
4481	1302	1437	786	554 55	1379 80	53 Siddhārthin	59 Krōdhana	.
4482	1303	1438	787	555 56	*1380 81	54 Raudra	60 Kshaya	11 Māgha
4483	1304	1439	788	556 57	1381 82	55 Durmatī	1 Prabhava	.
4484	1305	1440	789	557 58	1382-83	56 Dundubhi	2 Vibhava	.
4485	1306	1441	790	558 59	1383 84	57 Rudhirōdgārīn	3 Śukla	7 Āśvina
4486	1307	1442	791	559 60	*1384 85	58 Raktāksha	4 Pramōda	.
4487	1308	1443	792	560 61	1385 86	59 Krōdhana	5 Prajāpati	..
4488	1309	1444	793	561 62	1386 87	60 Kshaya	6 Angiras	4 Āshādha
4489	1310	1445	794	562 63	1387 88	1 Prabhava	7 Śrīmukha	...
4490	1311	1446	795	563 64	*1388 89	2 Vibhava	8 Bhāva	12 Phālguna
4491	1312	1447	796	564 65	1389 90	3 Śukla	9 Yuvan	.
4492	1313	1448	797	565 66	1390 91	4 Pramōda	10 Dhātri	.
4493	1314	1449	798	566 67	1391 92	5 Prajāpati	11 Īsvara	9 Mārgasīra
4494	1315	1450	799	567 68	*1392 93	6 Angiras	12 Bahudhānya	..
4495	1316	1451	800	568 69	1393 94	7 Śrīmukha	13 Pramāthin	...

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1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE						
MEAN SOLAR YEAR.			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			Kali year
Day and month, A.D.	Week-day	Time of mean Māsha-samkrānti	Day and month, A D	Week day	a (here= <i>t</i> , the index of the tithi)	
13	14	17	19	20	23	1
		H M S				
28 Mar (87)	4 Wed	7 15 0	9 Mar (68)	6 Fri	25 1015	4471
28 Mar (87)	5 Thur.	13 27 30	27 Feb (58)	4 Wed	239 4167	4472
28 Mar (87)	6 Fri	19 40 0	18 Mar (77)	3 Tues	274 0564	4473
28 Mar (88)	1 Sun	1 52 30	6 Mar (66)	0 Sat	149 7397	4474
28 Mar (87)	2 Mon	8 5 0	25 Mar (84)	6 Fri	184 3794	4475
28 Mar. (87)	3 Tues	14 17 30	14 Mar (73)	3 Tues	60 0627	4476
28 Mar (87)	4 Wed	20 30 0	4 Mar (63)	1 Sun	274 3779	4477
28 Mar (88)	6 Fri	2 42 30	22 Mar (82)	0 Sat	309 0176	4478
28 Mar (87)	0 Sat	8 55 0	11 Mar (70)	4 Wed	184 7009	4479
28 Mar (87)	1 Sun	15 7 30	28 Feb (59)	1 Sun	60 3844	4480
28 Mar (87)	2 Mon	21 20 0	19 Mar (78)	0 Sat	95 0230	4481
28 Mar (88)	4 Wed	3 32 30	8 Mar (68)	5 Thur	309 3392	4482
28 Mar (87)	5 Thur	9 45 0	26 Mar (85)	3 Tues	5 3469	4483
28 Mar (87)	6 Fri	15 57 30	16 Mar (75)	1 Sun.	219 6622	4484
28 Mar (87)	0 Sat	22 10 0	5 Mar (64)	5 Thur	95 3456	4485
28 Mar (88)	2 Mon	4 22 30	23 Mar (83)	4 Wed	129 9852	4486
28 Mar (87)	3 Tues	10 35 0	12 Mar (71)	1 Sun	5 6686	4487
28 Mar (87)	4 Wed	16 47 30	2 Mar (61)	6 Fri	219 9839	4488
28 Mar (87)	5 Thur	23 0 0	21 Mar (80)	5 Thur	254 6235	4489
28 Mar (88)	0 Sat	5 12 30	9 Mar (69)	2 Mon	130 3069	4490
28 Mar (87)	1 Sun	11 25 0	28 Mar (87)	1 Sun	164 9464	4491
28 Mar (87)	2 Mon	17 37 30	17 Mar (76)	5 Thur	40 6298	4492
28 Mar. (87)	3 Tues	23 50 0	7 Mar (66)	3 Tues	254 9451	4493
28 Mar (88)	5 Thur	6 2 30	25 Mar (85)	2 Mon	389 5848	4494
28 Mar (87)	6 Fri	12 15 0	14 Mar (73)	6 Fri	165 2681	4495

TABLE

CONCURRENT YEAR								Mean Intercalated (<i>ardhika</i>) lunar month
Kal.	Saka	Chaitrādi Vikrama.	Mēshādi solar year in Bengal	Kollam	A D	JOVIAN SAMVATSARA		
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
4496	1317	1452	801	569-70	1394 95	8 Bhāva	14 Vikrama	6 Bhārapada
4497	1318	1453	802	570 71	1395 96	9 Yuvan	15 Vrisha	
4498	1319	1454	803	571-72	*1396 97	10 Dhātri	16 Chitrabhanu	
4499	1320	1455	804	572 73	1397 98	11 Īsvara	17 Subhānu	2 Vaisākha
4500	1321	1456	805	573 74	1398 99	12 Bahudhanya	18 Tārana	11 Māgha
4501	1322	1457	806	574 75	1399 00	13 Pramīthin	19 Pārthiva	
4502	1323	1458	807	575 76	*1400 01	14 Vikrama	20 Vyava	

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1 Ārya Siddhānta, mean system

COMMENCEMENT OF THE						
MEAN SOLAR YEAR			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA SŪKLA 1 ENDS)			Kalī year
Day and month, A.D.	Week day	Time of mean Mēṣha samkrānti	Day and month, A.D.	Week day	a (here= t , the index of the tithi)	
13	14	17	19	20	23	1
28 Mar (87)	0 Sat	H M S 18 27 30	3 Mar (82)	3 Tues	40 9515	4496
29 Mar (88)	2 Mon	0 40 0	22 Mar (81)	2 Mon	75 5912	4497
28 Mar (88)	3 Tues	6 52 30	11 Mar (71)	0 Sat	289 9064	4498
28 Mar (87)	4 Wed	13 5 0	28 Feb (59)	4 Wed	165 5898	4499
28 Mar (87)	5 Thur	19 17 30	19 Mar (78)	3 Tues	200 2294	4500
29 Mar (88)	0 Sat	1 30 0	8 Mar (67)	0 Sat	75 9127	4501
28 Mar (88)	1 Sun	7 42 30	26 Mar (86)	6 Fri	110 5523	4502

TABLE LXXVII

DURATION AND COLLECTIVE DURATION OF MEAN SOLAR MONTHS ACCORDING TO THE FIRST ARYA SIDDHĀNTA, WITH INCREASE OF a AT EACH SAMKRĀNTI

Mean luni solar month, ending after the second of the two solar samkrāntis connected with it	At the mean solar samkrāntis.	Collective duration in time and collective increase of a from mean Mūsha samkrānti to the several samkrāntis.					
		Day	Week-day	H	M	S	a
1	2	3			4		
1 Chaitra .	{ Mīna samk (of previous year)						
2 Vaiśākha .	{ Mēsha-samk. .	0	0	0	0	0	0
3. Jyēshtha .	{ Vṛishabhā-samk	30	(2)	10	31	2½	307 3526
4. Āshādha .	{ Mithuna-samk. .	60	(4)	21	2	5	614 7052
5 Śrāvapa .	{ Karka-samk .	91	(0)	7	33	7½	922 0579
6 Bhādrapada	{ Simha-samk. .	121	(2)	18	4	10	1229 4105
7 Āvina .	{ Kanyā samk .	152	(5)	4	35	12½	1536 7631
8 Kārtika .	{ Tulā-samk .	182	(0)	15	6	15	1844 1157
9 Mārgāśira	{ Vriśchika-samk .	213	(3)	1	37	17½	2151 4684
10 Pausha .	{ Dhanus samk. .	243	(5)	12	8	20	2458 8210
11 Māgha .	{ Makara-samk	273	(0)	22	39	22½	2766 1736
12. Phālguna .	{ Kumbha-samk	304	(3)	9	10	25	3073 5262
1 Chaitra (of following year)	{ Mīna-samk	334	(5)	19	41	27½	3380 8789
	{ Mēsha samk (of following year)	365	(1)	6	12	30	3689-2315*

The duration of each mean solar month is 30d 10h 31m 2½s; and during this period in addition to one whole revolution, the mean moon increases her distance from mean sun, in measurement by 10,000ths of circle by, (or in other words the monthly increase of $a =$) 307 352623 726.

* More fully 3688 231484714.

TABLE LXXVIII

VALUE OF $a (=t)$ AT BEGINNING OF CENTURIES OF THE KALIYUGA, ACCORDING TO THE FIRST ARYA SIDDHANTA MEAN SYSTEM

[The value of a to be added for beginning of odd years of centuries is given in Table LXXIII above W. D = Week-day]

Century K Y	W - D	$a (= t)$
36	1	7715 3525
37	1	6583 1816
38	0	5112 3787
39	0	3980 2078
40	0	2848 0389
41	0	1715 8659
42	0	583 6950
43	0	9451 5240
44	0	8319 3531
45	0	7187 1822
46	6	5716 3793
47	6	4584 2084
48	6	3452 0375

The duration of each mean solar month is 30d 10h 31m 2½s, and during this period in addition to one whole revolution, the mean moon increases her distance from mean sun, in measurement by 10,000ths of circle by, (or in other words the monthly increase of $a=$) 307 352623726

N B—These values of a agree generally with Professor Jacobi's values above (Vol XI, p 164) The apparent differences are due to two causes. (i) The present estimate of the sum of the greatest equations of moon and sun is about 0.4 greater than that of Professor Jacobi; (ii) The values here stated for the beginnings of centuries 38 to 42 are for mean sunrise on Saturdays, while his are for mean sunrise on the following Sundays

TABLE LXXIX.

MEAN SUNRISE VALUES OF a (DISTANCE OF MEAN MOON FROM MEAN SUN), IN 10,000THS OF CIRCLE, FOR A MONTH PREVIOUS TO THE DAY OF MEAN MESHA-SAMKRANTI.

Interval of days from mean Mēsha-samkranti day	W - D	a (mean sunrise value)	Interval of days from mean Mēsha-samkranti day.	W - D	a (mean sunrise value).
-31	4	9502 4119	15	6	4920 5219
30	5	9841 0438	14	0	5259 1538
29	6	179 6756	13	1	5597 7856
28	0	518 3075	12	2	5936 4175
27	1	856 9394	11	3	6275 0494
26	2	1195 5713	10	4	6613 6813
25	3	1534 2032	9	5	6952 3131
24	4	1872 8350	8	6	7290 9450
23	5	2211 4669	7	0	7629 5769
22	6	2550 0988	6	1	7968 2088
21	0	2888 7306	5	2	8306 8406
20	1	3227 3625	4	3	8645 4725
19	2	3565 9944	3	4	8984 1044
18	3	3904 6263	2	5	9322 7263
17	4	4243 2581	1	6	9661 3581
16	5	4581 8900	0	0	0

N B—The use of this Table is explained in example 1.

TABLE LXXX

THE SUN'S MEAN LONGITUDE DURING THE HINDU SOLAR YEAR, IN 10,000THS OF CIRCLE, ACCORDING TO THE FIRST ĀRYA SIDDHĀNTA, AT PERIODS OF 24 HOURS EACH, MEASURED FROM THE MOMENT OF MEAN MĒSHA-SAMKRĀNTI

The same in degrees, etc., can be calculated by Table XLIV, Vol. XIV above

24-hour period	Sun's mean longitude	24-hour period	Sun's mean longitude	24-hour period	Sun's mean longitude	24-hour period	Sun's mean longitude								
1	2	1	2	1	2	1	2								
At moment of mean Mēsha samkrānti	0	42	1149 8700	At moment of mean Kārla samkrānti	2500 0										
		43	1177 2479					87	2331 8736	127	3476 9379				
		44	1204 7277					88	2403 2514	128	3504 3657				
		45	1232 0036					89	2436 6293	129	3531 7436				
		46	1259 3614					90	2464 0071	130	3559 1214				
		47	1286 7303					91	2491 3850	131	3586 4993				
		48	1314 1371					92	2518 7629	132	3613 8772				
		49	1341 5150					93	2546 1407	133	3641 2550				
		50	1368 8929					94	2573 5186	134	3668 6329				
		51	1396 2707					95	2600 8964	135	3696 0107				
		52	1423 6486					96	2628 2743	136	3723 3886				
		53	1451 0264					97	2655 6521	137	3750 7664				
		54	1478 4043					98	2683 0300	138	3778 1443				
		55	1505 7821					99	2710 4079	139	3805 5222				
		56	1533 1600					100	2737 7857	140	3832 9000				
		57	1560 5379					101	2765 1636	141	3860 2779				
58	1587 9157	102	2792 5414	142	3887 6557										
59	1615 2936	103	2819 9193	143	3915 0336										
60	1642 6714	104	2847 2971	144	3942 4114										
At moment of mean Mithuna samkrānti	1666 6			At moment of mean Kanyā samkrānti	4166 6										
								61	1670 0493	105	2874 6750	145	3969 7893		
								62	1697 4271	106	2902 0529	146	3997 1672		
								63	1724 8050	107	2929 4307	147	4024 5450		
								64	1752 1829	108	2956 8086	148	4051 9229		
								65	1779 5607	109	2984 1864	149	4079 3007		
								66	1806 9386	110	3011 5643	150	4106 6786		
								67	1834 3164	111	3038 9421	151	4134 0564		
								68	1861 6943	112	3066 3200	152	4161 4343		
								69	1889 0721	113	3093 6979	At moment of mean Kanyā samkrānti	4166 6	153	4188 8122
								70	1916 4500	114	3121 0757			154	4216 1900
								71	1943 8279	115	3148 4536			155	4243 5679
								72	1971 2057	116	3175 8314			156	4270 9457
								73	1998 5836	117	3203 2093			157	4298 3236
								74	2025 9614	118	3230 5872			158	4325 7014
								75	2053 3393	119	3257 9650			159	4353 0793
76	2080 7171	120	3285 3429	160	4380 4572										
77	2108 0950	121	3312 7207	161	4407 8350										
78	2135 4729	At moment of mean Śmha samkrānti	3333 3	162	4435 2129										
79	2162 8507			163	4462 5907										
80	2190 2286			164	4489 9686										
81	2217 6064			165	4517 3464										
82	2244 9843			166	4544 7243										
83	2272 3621			167	4572 1022										
84	2299 7400			168	4599 4800										
85	2327 1179			169	4626 8579										
86	2354 4957			170	4654 2357										
				171	4681 6136										
At moment of mean Śmha samkrānti	833 3														
										31	845 7136				
										32	876 0914				
										33	903 4693				
										34	930 8471				
										35	958 2250				
		36	985 6029												
		37	1012 9807												
		38	1040 3586												
		39	1067 7364												
		40	1095 1143												
		41	1122 4921												

TABLE LXXX—Contd

24 hour period	Sun's mean longitude	24 hour period	Sun's mean longitude	24 hour period	Sun's mean longitude	24 hour period	Sun's mean longitude		
1	2	1	2	1	2	1	2		
172	4708 9914	220	6023 1286	272	7446 7772	320	8760 9143		
173	4736 3693	221	6050 5064	273	7471 1550	321	8788 2922		
174	4763 7472	222	6077 8843	At moment of mean <i>Atalāra samkrānti</i> } 7500 0	7500 0	322	8815 6700		
175	4791 1250	223	6105 2622			323	8843 0479		
176	4818 5029	224	6132 6400			324	8870 4257		
177	4845 8807	225	6160 0179			325	8897 8036		
178	4873 2586	226	6187 3957			326	8925 1814		
179	4900 6364	227	6214 7736			327	8952 5593		
180	4928 0143	228	6242 1514			328	8979 9372		
181	4955 3922	229	6269 5293			329	9007 3150		
182	4982 7700	230	6296 9072			330	9034 6929		
At moment of mean <i>Tulā samkrānti</i> } 5000 0	5000 0	231	6324 2850			274	7501 5329	331	9062 0707
		232	6351 6629	275	7528 9107	332	9089 4486		
		233	6379 0407	276	7556 2886	333	9116 8264		
		234	6406 4186	277	7583 6664	334	9144 2043		
		235	6433 7964	278	7611 0443	At moment of mean <i>Mina-samkrānti</i> } 9166 6	9166 6		
		236	6461 1743	279	7638 4222			335	9171 5822
		237	6488 5522	280	7665 8000			336	9198 9600
		238	6515 9300	281	7693 1779			337	9226 3379
		239	6543 3079	282	7720 5557			338	9253 7157
		240	6570 6857	283	7747 9336			339	9281 0936
241	6598 0636	284	7775 3114	340	9308 4715				
242	6625 4414	285	7802 6893	341	9335 8493				
243	6652 8193	286	7830 0672	342	9363 2272				
At moment of mean <i>Dhanus samkrānti</i> } 6666 6	6666 6	244	6680 1972	287	7857 4450			343	9390 6050
		245	6707 5750	288	7884 8229	344	9417 9829		
		246	6734 9529	289	7912 2007	345	9445 3607		
		247	6762 3307	290	7939 5786	346	9472 7386		
		248	6789 7086	291	7967 9564	347	9500 1165		
		249	6817 0864	292	7994 3343	348	9527 4943		
		250	6844 4643	293	8021 7122	349	9554 8722		
		251	6871 8422	294	8049 0900	350	9582 2500		
		252	6899 2200	295	8076 4679	351	9609 6279		
		253	6926 5979	296	8103 8457	352	9637 0057		
At moment of mean <i>Kumbha samkrānti</i> } 8333 3	8333 3	254	6953 9757	297	8131 2236	353	9664 3836		
		255	6981 3536	298	8158 6014	354	9691 7615		
		256	7008 7314	299	8185 9793	355	9719 1393		
		257	7036 1093	300	8213 3572	356	9746 5172		
		258	7063 4872	301	8240 7350	357	9773 8950		
		259	7090 8650	302	8268 1129	358	9801 2729		
		260	7118 2429	303	8295 4907	359	9828 6507		
		261	7145 6207	304	8322 8686	360	9856 0286		
		262	7172 9986	At moment of mean <i>Mēsh samkrānti</i> } 10,000 0	10,000 0	305	8350 2464	361	9883 4065
		263	7200 3764			306	8377 6243	362	9910 7843
264	7227 7543	307	8405 0022			363	9938 1622		
265	7255 1322	308	8432 3800			364	9965 5400		
266	7282 5100	309	8459 7579			365	9992 9179		
267	7309 8879	310	8487 1357			At moment of mean <i>Mēsh samkrānti</i> } 10,000 0	10,000 0		
268	7337 2657	311	8514 5136						
269	7364 6436	312	8541 8914						
270	7392 0214	313	8569 2693						
271	7419 3993	314	8596 6472						
		315	8624 0250						
		316	8651 4029						
		317	8678 7807						
		318	8706 1586						
		319	8733 5364						
At moment of mean <i>Vṛścika samkrānti</i> } 6833 3	6833 3								
214	5858 8614								
215	5886 2393								
216	5913 6172								
217	5940 9950								
218	5968 3729								
219	5995 7507								

TABLE LXXXI

SUN'S MEAN LONGITUDE INCREASE IN FRACTIONS OF DAY ACCORDING TO THE FIRST ARYA
SIDDHANIA

(For the same in degrees, etc, see above, Vol XIV, Table XLIV)

INCREASE PER HOUR		INCREASE PER MINUTE				INCREASE PER SECOND			
No	In 10,000ths of circle	No	In 10,000ths of circle	No	In 10,000ths of circle	No	In 10,000ths of circle	No	In 10,000ths of circle
1	1 1407	1	0 0190	31	0 5894	1	0 0003	31	0 0098
2	2 2815	2	0 0380	32	0 6084	2	0 0006	32	0 0101
3	3 4222	3	0 0570	33	0 6274	3	0 0010	33	0 0105
4	4 5630	4	0 0760	34	0 6464	4	0 0013	34	0 0108
5	5 7037	5	0 0951	35	0 6654	5	0 0016	35	0 0111
6	6 8445	6	0 1141	36	0 6844	6	0 0019	36	0 0114
7	7 9852	7	0 1331	37	0 7035	7	0 0022	37	0 0117
8	9 1260	8	0 1521	38	0 7225	8	0 0025	38	0 0120
9	10 2667	9	0 1711	39	0 7415	9	0 0029	39	0 0124
10	11 4074	10	0 1901	40	0 7605	10	0 0032	40	0 0127
11	12 5482	11	0 2091	41	0 7795	11	0 0035	41	0 0130
12	13 6889	12	0 2281	42	0 7985	12	0 0038	42	0 0133
13	14 8297	13	0 2472	43	0 8175	13	0 0041	43	0 0136
14	15 9704	14	0 2662	44	0 8365	14	0 0044	44	0 0139
15	17 1112	15	0 2852	45	0 8556	15	0 0048	45	0 0143
16	18 2519	16	0 3042	46	0 8746	16	0 0051	46	0 0146
17	19 3926	17	0 3232	47	0 8936	17	0 0054	47	0 0149
18	20 5334	18	0 3422	48	0 9126	18	0 0057	48	0 0152
19	21 6741	19	0 3612	49	0 9316	19	0 0060	49	0 0155
20	22 8149	20	0 3802	50	0 9506	20	0 0063	50	0 0158
21	23 9556	21	0 3993	51	0 9696	21	0 0067	51	0 0162
22	25 0964	22	0 4183	52	0 9886	22	0 0070	52	0 0165
23	26 2371	23	0 4373	53	1 0077	23	0 0073	53	0 0168
		24	0 4563	54	1 0267	24	0 0076	54	0 0171
		25	0 4753	55	1 0457	25	0 0079	55	0 0174
		26	0 4943	56	1 0647	26	0 0082	56	0 0177
		27	0 5133	57	1 0837	27	0 0086	57	0 0181
		28	0 5323	58	1 1027	28	0 0089	58	0 0184
		29	0 5514	59	1 1217	29	0 0092	59	0 0187
		30	0 5704			30	0 0095		

No. 7—TWO NEW GRANTS OF DHRUVASENA [I] FROM PALITANA.

By V S SURTHANKAR, PH D

I edit here two new Valabhi copper-plate grants (one complete and one incomplete) which were presented, in 1918, to the Trustees of the Prince of Wales Museum, Bombay, by the Bhavnagar Darbar, which is ever ready to further the cause of epigraphic research by placing ungrudgingly the materials, as they are discovered, in the hands of students of Indian history for investigation and publication, and, when possible, by having them exhibited in centrally situated museums. The plates under reference were discovered at the bottom of a small tank outside the Śatruñjaya Gate at Pālitānā while the tank was being drained during the time of the late Thakor Saheb of that State.¹

A.—PLATES OF DHRUVASENA I. ; [VALABHI]-SAM[VAT] 207.

The plates, which are inscribed on one side only, are two in number, each measuring roughly $11\frac{1}{2}$ " broad by $6\frac{1}{4}$ " high. The edges are just slightly raised in order to protect the writing, which (excepting portions of ll 1-4) is in a state of perfect preservation. The plates are of fair thickness, but the letters, being deep, show through on the reverse sides. The engraving is well executed. Each of the plates has two holes bored in it. A ring of copper passing through one pair of them serves to hold the plates together at one end. The seal, which is an invariable accompaniment of such plates, is missing. The aggregate weight of the plates is about 102 tālas. Each plate contains twelve lines of writing, the last line but one of the second plate contains the date.

From the foregoing description of the plates, as well as from the facsimiles of them appearing with this article, it will be evident that this record does not differ in any striking particular from any of the hitherto published records of the same king. Only in the portion dealing with the grant proper does the text of this inscription differ, for example, from that of other plates of this king which were discovered some years back also at Pālitānā, and have been edited by Dr. Sten Konow in a former issue of this Journal.² The royal donor, Dhruvasēna, as well as the *dataka* Mammaka and the writer Kikkaka, are names well known to the Indian epigraphist. It will, therefore, be unnecessary to go here into a minute description of the characters and orthography of this inscription. It will suffice to observe that the alphabet offers a specimen of final *t* (l. 15), final *m* (l. 23) and the numerical ideograms 200, 7, and 5, and that the name of the founder of the dynasty is spelt as *Bhatakka* (l. 3). At the end of line 12 is to be found a horizontal stroke, about $\frac{1}{4}$ " long, evidently drawn with a view to fill up the empty space remaining at the end. The reason for leaving the space vacant appears to be that the writer did not wish to commence, at the end of the line, a long word the whole of which would not have been contained in the short space that was left over.

The inscription is one of the *Mahārāja* Dhruvasēna [I.] of the Mastraka dynasty, and the grant contained in it is issued from the city of Valabhī. The object of the inscription appears to be to record the confirmation by Dhruvasēna of the donee, a Brāhmaṇa named Mādhyava, of the Śunaka *gōtra*, student of the Chhandōga School, and resident of the village of Jyēshthānaka (stated to be Akshasarakā-*prāvāśya*) in the Hastavapra-haranī in the possession of some

¹ My friend Pandit Girijāsankar Vallabhī of Rajkot, Curator of the Prince of Wales Museum, Bombay, informs me that the five Pālitānā plates edited by Prof. Konow (above, Vol. XI, pp 104 ff) were discovered at the same place and at the same time as the plates here described.

² Above, Vol. XI, pp 104 ff.

land already enjoyed by him in the village of which he was a resident Besides Hastavapra, which is the modern Hāthab (6 miles south of Gōghā in the Bhāvnagar State), and Valabhī, which is commonly identified with the modern Valā (situated in 21° 52' N and 71° 57' E), none of the places can be located The date of the record is the year 207 (given as usual in numerical ideograms), and the 5th (*tithi*) of the dark fortnight of Vaiśākha The year when referred to the Gupta-Valabhī era yields A D (207+320)=A.D 527

There are two expressions in this inscription, both occurring in the portion dealing with the grant proper, which deserve some comment they are *Akshasaraka-prāiēśya*- (l 12) and *sa-saibaram* (l 16) The latter we will consider first

Being mentioned along with the well-known technical expressions *sa-hiraṇy-ūḍēyam* and *sa-bhāta-rāta*^o, *sa-saibaram* must be a term of like nature, i.e. a technicality of the lawyers, but what its significance may be I am unable to surmise There can be no question regarding the correctness of the reading, the letters are perfectly distinct The word *saibara* is not to be found in dictionaries, nor have I come across it elsewhere I can only think that it may be, as it stands, a clerical error, but I am unable to suggest any plausible emendation for it

The word *prāiēśya* in the other expression referred to above is also one that presents some difficulty to the interpreter Here it is used in compound with *Akshasaraka*, evidently a place-name, and serves to locate more definitely the village *Jyēshthānaka* situated in the *Hastavapra-haranī* As far as I know, the word *prāiēśya* has been met with only twice before once in another Valabhī grant, occurring there in a compound with the same place-name *Akshasaraka*, and once again in the *Khariar* grant of *Mahāsudēva*, compounded with the word *Navannaka*, which is also a place-name

The former record forms one of the five Valabhī grants from *Pāitānā*¹ edited by Prof Sten Konow, and is a grant of *Dhruvasēna I*, dated in *Samvat 210* In that connection Prof Konow rightly points out that the phrase *Akshasaraka-prāiēśya* of the grant corresponds to the *Akshasaraka-prāpiya* in a third Valabhī grant,² viz the *Ganēśgad* (*Baroda*) plates of *Dhruvasēna*, dated *Samvat 207* Hultsch, when editing the latter grant, translated the phrase by 'which belongs to the *Akshasaraka-prāpa*' Prof Konow, who regards *prāiēśya* and *prāpiya* as synonyms, rejects Hultsch's rendering of *Akshasaraka-prāpiya* and advances the suggestion that *prāiēśya* in this connection means the same thing as in the phrase *a-chāta-bhata-prāiēśya*, and accordingly translates the phrase by 'which can be entered from (i.e. which borders on) *Akshasaraka*' I cannot, in the first place, admit that the expressions *a-chāta-bhata-prāiēśya* and *Akshasaraka-prāiēśya* correspond exactly For in the former the first member of the compound comprises the logical subject of the verb contained in *prāiēśya*, but such cannot be the case with the second expression, even if we assign to it the meaning which Prof Konow does Secondly, I do not understand what is meant by saying that a village could be 'entered' from such and such a place If, moreover, *prāiēśya* meant the same thing as 'bordering on,' as Prof Konow asserts, I cannot help thinking that the writer would have employed a simple word like *samtpa* or *pāra-vaṭṭin*, which he at hand, to express that simple idea of proximity rather than use the circumlocution of *prāiēśya* or *prāpiya* Hultsch, on the other hand, appears to me to be undoubtedly on the right track He looks upon *prāpiya* as a derivative of *prāpa*, which he takes to be a word denoting a territorial division smaller than an *āhāra* Similarly the analogous term *prāiēśya* should also be looked upon as a *taddhata* of *prāiēśa* That this derivation is correct may be seen from the *Khariar* plates of *Mahāsudēva*, in which a village is described (l 4) as *Ashṭimad-āhāriya* and *Navannaka-etat-prāiēśya* No one will dispute that *āhāriya* is derived from *āhāra* ('district,' 'province') by the addition of the suffix *-iya* That supplies us with the clue to the explanation of the other words under consideration here All these words are derived

¹ Above, Vol. XI, pp 101 ff, and Pl'ates

² Above, Vol III, p. 320, and Plate

by the addition of the secondary -(ī)ya to the strengthened forms of the roots ā-*hri*, pra-(ā)-*viś* and pra-(ā)-*āp* ('bring to,' 'carry to'), words with only minute differences of meaning I feel, therefore, constrained to reject the interpretation of Prof Konow in favour of the other *Prāpīya* I take to be 'that which belongs to the *prāpa*,' and *prāvēśya* 'that which belongs to the *prāśā* (or *prāśā*)', both *prāpa* and *prāvēśā* I regard as territorial divisions smaller than the *āhīra*.

TEXT.¹

Plate A,

- 10 परमभट्टारकपादानुभ्या(ध्या) तो महागजध्रुवसेनः कुशलो सव्वीनेष खानायुक्त-
नियुक्तकचाट-
- 11 भट्टाङ्गिकमहत्तरध्रुवस्थानाधिकारणिकादाण्डपाणिकादीनन्याश्च² यथासंबन्धमान-
कननु-
- 12 दर्शयत्यस्तु वसंविदितं यथा मया हस्तवप्रहरणामक्षरकप्रावेश्य-³

Plate A₂

- 13 ज्येष्ठानकयामे उत्तरसीम्नि पादावर्त्तयतं षष्ठ्यधिकं तस्मिन्नव⁴ ग्रामव⁵व्यशुनका-
- 14 सगोत्राणां छन्दोगसब्रह्मचारीणां⁶ ब्रह्मणमाधवपूर्वभुज्यभुज्यमानकं⁷(;) मातापित्रोः
- 15 पुस्त्राप्यायनायात्मना⁸शैहिकामुषिकयथाभिलषितफलावामिनिमित्त⁹माचन्द्रार्का-
गर्णवक्षितिसरित्-
- 16 पर्वतस्थितिसमकालीन पुत्रपौत्रान्वयभोज्य¹⁰ सशैवरं महि[र*]खादेय समूहया-
तप्रत्यायविशुद्धा¹¹
- 17 उदकातिसर्गेण ब्रह्मदेयं त्रिसृष्ट¹²[!*] यत एषां ब्रह्मदेयस्थित्या भुजता¹³
ज्ञवतां प्रदिशताश्च¹⁴
- 18 स्वस्याप्यावधा¹⁵ विचारणा वा न कार्यास्महंशजैर¹⁶गामिभद्रवृपतिभिश्च¹⁷नित्या-
न्यैश्वर्यास्थिरं मानुषं
- 19 सामान्य¹⁸ च भूमिदानफलमवगच्छन्निरयमस्महायोनुमन्तव्य [!]* (उ) यस्त्विन्द्र्या-
दच्छिद्यमानं¹⁹ वानुमोदे-

¹ From the original plates, and a set of estampages

² Up to this, the text is practically identical with the text of the Pālitānū plate of Dhruvasena I (dated 807-8 of 206), published above, Vol XI, pp 106 ff. The only *variae lectiones* are unimportant mistakes of orthography, which it would be unnecessary to register individually as the facsimiles are there for reference.

³ Read °न्याय.

⁴ Read °काननु-

⁵ In the original a short horizontal stroke after श्य

⁶ Read श्व.

⁷ A short vacant space between व and व्य. Read ग्रामवासव्य°

⁸ Read °चारिषा ब्राह्मण°.

⁹ Read °पूर्वभुज्यभुज्यमान°. The *anusvāra* is written over the line between क; and मा. The letters *pūrvā bhujyā-bhujyamānakāh* have been engraved over some faintly incised letters.

¹⁰ Read न.

¹¹ Read त.

¹² Read ज्य

¹³ Read व.

¹⁴ Read ए

¹⁵ Read भुजता

¹⁶ Read तांश

¹⁷ Read °न्याय.

¹⁸ Read रा

¹⁹ Read श्वा.

²⁰ Read श्वा.

²¹ Read यथाच्छिद्यतादाच्छि

- 20 त्व पंचभिः महापातकैस्त्रोपपातकैस्त्रयुक्तस्व^१दपि चात्र व्यासगीताः श्लोका
भवन्ति [॥*] बहुभिर्ब^२सुधा
- 21 भुक्ता राजभिस्सगरादिभिः [॥*] यस्य यस्य यदा भूमिः तस्य तस्य तदा
फलं [॥*] स्वदत्तां परदत्तां वा यो हरेत
- 22 वसुन्धरां [॥*] गवां शतसहस्रस्य हन्तुः [॥*] ^२प्राप्नोति किल्बिषां^३ [॥*] पूर्व-
दत्तां द्विजातिभ्यो यत्नाद्दत्त युधिष्ठिरः [॥*]
- 23 महि^४ महिमतां श्रेष्ठ दानाच्छ्रेयोनुपादानम् [॥*] दूतकः प्रतीहारमम्मकः [॥*]
सं २०० ७ वैशख^५ व ५ [॥*]
- 24 स्वहस्तो मम मझाराजभु^६सेनस्य [॥*] लिखितं किङ्ककेनति^७ [॥*]

TRANSLATION

[Ll 1-11 contain the usual preamble, for translation, of, for instance, that of the opening lines of the Pāltānā plates, No 1, edited by Prof Konow, *Ep Ind*, Vol XI, p 108.]

(Ll 12-16) Be it known to you that for the purpose of increasing the religious merit of (my) mother and father, and for the sake of the attainment of the desired reward both in this world and in the next, I have confirmed, as *brahma-dēya*, with libation of water, (the enjoyment of) one hundred and sixty *pādāvarittas*, on the northern boundary of the *Jyēssthānaka* village belonging to the *Akshasaraka-prāvēśya* in the *Hastavapra-haranī*, which had (formerly) been and are (still) being enjoyed (by the donee^१), for (the benefit of) the resident of the same village, (namely,) the *Brāhmaṇa Mādhava* of the *Śunaka gōtra*, a student of the *Chhandōga* School,—to last for the same time as the moon, sun, ocean, earth, the rivers and mountains, to be enjoyed by the succession of his sons and sons' sons,—with (२) *śarbara*, with gold (and) *ādēya*, with *bhūta*, *vāta*, and (३) surety of holding (*pratyāya*)

(Ll 17-19) Wherefore, no enquiry should be made or obstruction caused (to him) by any one, while he is, according to the proper conditions of a *brahma-dēya*, enjoying, cultivating, or assigning (it to others) And thus our gift should be assented to by those born in our lineage, and by future good kings, bearing in mind that power is perishable, the life of man is uncertain, and that the reward of a gift of land is common And he who confiscates it or assents to its confiscation incurs the guilt of the five great sins together with the minor ones

(Ll. 20-22) There are also two verses sung by Vyāsa about this

[Here follow two of the customary verses]

(L 23) The *dūtaka* is the *pratihāra* *Mammaka* (Dated the) 5th (*tithi*) of the dark (fortnight) of *Varṣākha* (in the) year 200 7

(L 24) (This is) the sign-manual of me *Mahārāja Dhruvasēna* [I]. Written by *Kikkaka*

B—ANOTHER PLATE OF [DHURVASENA I.]

This plate, which contains only the opening portion of a land-grant of the *Maitraka* king *Dhruvasēna* I, is inscribed on one side only and measures roughly 10 $\frac{1}{2}$ " broad by 6 $\frac{1}{2}$ " high The

^१ Read इत्य

^२ Over मा there is a peculiar sign, the meaning of which is not apparent [I think it is *upadānīya*—Ed]

^३ Read व

^४ Read हौ

^५ Read वैशख

^६ Read नेति.

^७ The construction of line 14 is somewhat confused ; it is not clear who the donee was, or who, at the time of the grant, was in possession of the land which is the object of the grant. As it stands, the text does not make any sense ; my rendering is conjectural

A 1

2
 4
 6
 8
 10
 12

2
 4
 6
 8
 10
 12

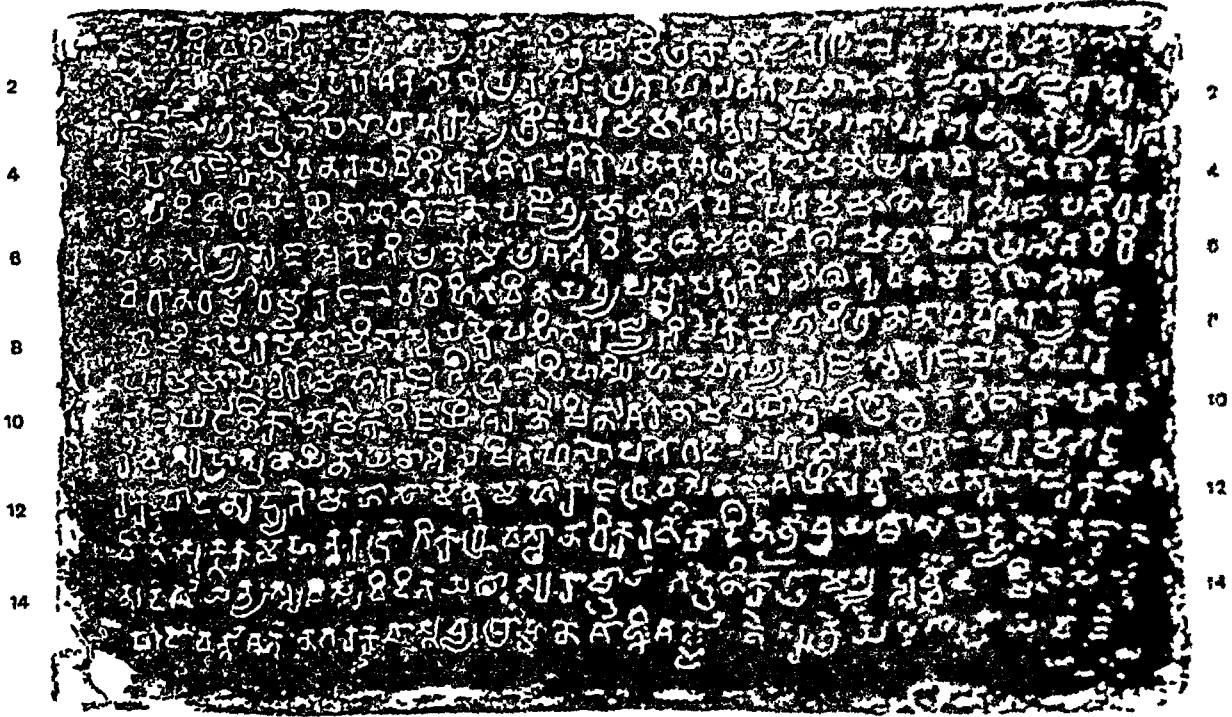
This block contains the first inscription, labeled 'A 1'. It consists of approximately 12 lines of text in an ancient script, likely Gujarati. The text is densely packed and appears to be a grant or legal document. The script is highly stylized and difficult to decipher without specialized knowledge.

A u

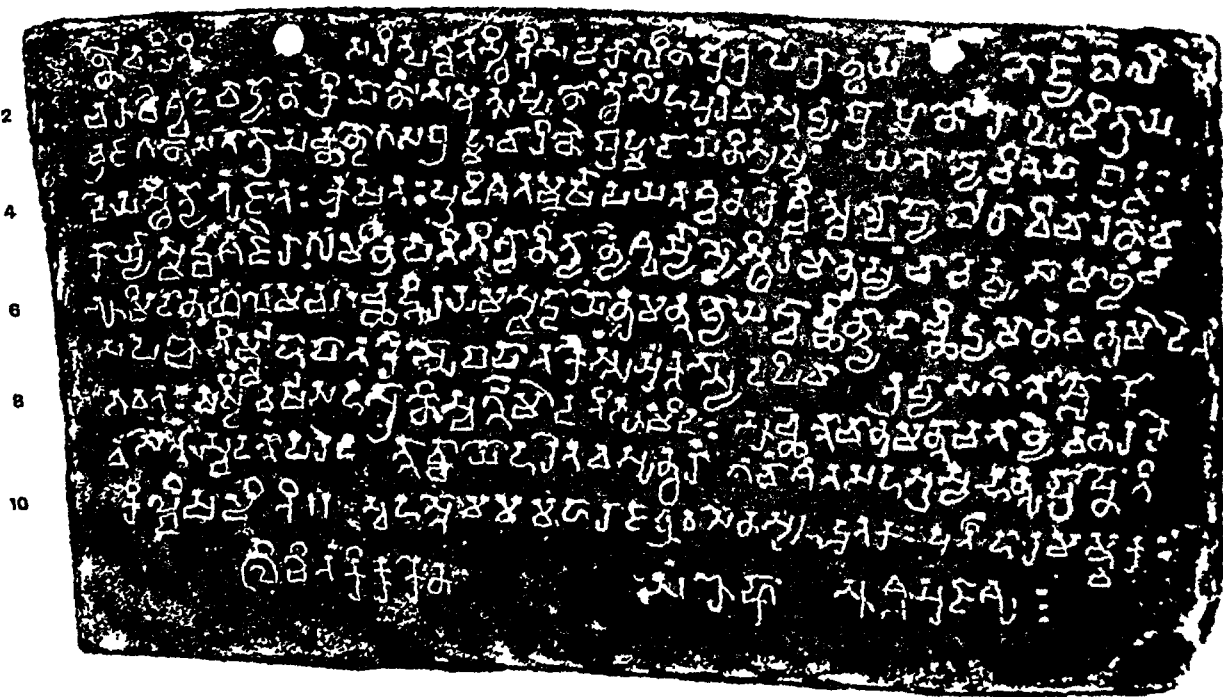
14
 16
 18
 20
 22
 24

14
 16
 18
 20
 22
 24

This block contains the second inscription, labeled 'A u'. It also consists of approximately 12 lines of text in the same ancient script as the first block. The text is similarly dense and appears to be a grant or legal document.



Kathiawad Plate of Dhruvasena [1] · Samvat 206.



SCALE ONE-HALF

edges are just slightly raised, in order to protect the writing, which is in a state of excellent preservation throughout. The letters, which are deeply incised, show through on the reverse side of the plate. The engraving is well executed. The plate has a pair of holes bored at two adjacent corners and intended for receiving the ring and seal, which are missing. Its weight is 56 *tolas*. It contains fifteen lines of writing. The letters are of the period to which the plate refers itself, and of the type met with on other plates of the Mastraka dynasty. In short, this record is exactly like any of the large number of grants of Dhruvasēna I that have latterly been brought to light. A detailed description of the characters, language and orthography of these plates, or even an English rendering of the text, seems superfluous. We may take it for granted that the *dūtaka* of this grant was the *patihāra* Mammaka, and the writer Kikkaka.

The grant was issued from Valabhi by the *Mahāsāmanta Mahārāja* Dhruvasēna [I] to the Brāhmana Śāntisarman of the *Ātrēya gōtra*, [a student of] the Vāṅi[śanēya] School and a resident of Nagaraka, either bestowing upon him or confirming him in the possession of one hundred *pādāarttas* of land on the south-eastern boundary of the village of Bhadiēnikā, situated in Surāshtrā.

I am unable to identify Bhadiēnikā. Nagaraka is probably Vadnagar, the home of the Nāgar Brāhmins.

TEXT.¹

Plate B

- 12 . . . २महासामन्तमहाराजध्रुवसेनकुशली सर्वानिव खानायुक्तक-
 13 विनियुक्तकमहत्तरद्रागिकध्रुवस्थानाधिकरणिकादीनन्यांश्च यथासबद्धमानकान-
 14 नुदर्शयत्यस्तु वसंविदितं यथा सुराद्रायां भद्रेणिकाग्रामस्य पूर्वदक्षिण-
 सिन्धि^३
 15 पादावर्त्तशतं नगरकवास्तव्यब्राह्मणशान्तिशर्मणे आत्रेयसगोत्राय वाजि^४-

POSTSCRIPT.

A PLATE OF DHRUVASENA DATED SAM. 206

Since writing the above I have come across a new Valabhi plate containing the concluding portion of a grant of Dhruvasēna dated in *sam* 206, about which I should like to add a few words in continuation of the above note on the Bhavnagar plates. This new plate was placed in my hands for decipherment by Mr. J C Chatterjee, Dharmādhyaksha (Secretary in the Ecclesiastical Department) to the Government of His Highness the Gaikwar of Baroda. It was sent to him, he told me, officially from Kathiawad for decipherment that is all that I could elicit from him regarding its previous history. The plate is 11¼ inches long by 6½ inches broad, the edges are raised to protect the writing, which is in a state of perfect preservation, and the characters belong to the period to which the plate refers itself. In one word, the grant is similar in every respect to the records of the Valabhi kings that have hitherto come to light.

¹ From the original plate, and a set of estampages

² Up to this the text is practically identical with the text of the Pālitānā Plate of Dhruvasēna I (dated 206), published above, Vol XI, pp 105 ff. In l 6, read °*t-pād-ābhīpranāma*° for °*t-pābhīpranāma*°, and *Manvādīnā* for °*dānā*

³ Read °सिन्धि.

⁴ The rest of the inscription is missing

The inscription is one of *Māhārāja Dhruvasēna* [I.] and records the grant of a village (of which the name must have occurred in the missing portion of the grant and is therefore now lost) to a Brāhmana named *Rotghamitra* of the *Vrajagana gōtra*, a student of the *Chhandōga School*, and resident of *Simhapura*, for the maintenance of certain sacrifices. The grant is dated *sam. 200 6, Āsvina śukla 3*. The *samrat* year, when referred to the *Valabhi* era, yields A.D. (206 + 319) 525. The *dātā* was *Mammaka*, and the writer *Kikkaka*, as usual.

The only point worthy of notice in this grant is the village-name *Simhapura*, which is mentioned in it as the residence of the grantee. It is tempting to identify it with *Siñōr* in the east of the *Katbawād* peninsula, a junction on the *Bhavanagar-Wadhwan Railway*, not far from *Valā* the ancient *Valabhi*.

[KATHIAWAD PLATE OF DHRUVASENA [I.]]

TEXT 1

- 1 mahārājakūṭi-sarit-parvata-sthiti-samakālinam putra-pautr-ānvaya-bhōjyam balī-
- 2 chāra-vāśadī-ādhyānām kṛyānām samutsarppan-ārttham Simhapura-vāstavya-
brāhmana-Rōtghamitrāya
- 3 Vrajagana-gōtrāya (Ch)Chhandōga-sa-brahmachārinē brahma-dāyam nṛṣiṣṭam
[i*] yatō-sy-ōchitayā brahma-
- 4 dāya-sthityā bhūmijatah kṛishatah pradīśatah=karshāpayataś=cha na kaiś=chit=svalp-
āpy-ibādā vichāranē vā
- 5 kirīy-ā-mad-vamsājair-āgummi²-nīpatibhiś=ch=ānityāny-anīsvaryyāny-asthiram mānu-
shyam ch=ācckshya sāmānyam cha
- 6 bhūmi-dana-phalam-avagachchadbhir=ayam=asmad-dāyō=numantavyō yaś=ch=āchchhin-
dyid-āchchhidyamānam v=ānumōdēt
- 7 sa pāñchabhir=manahē-pātakais=s-opapātakais=samyuktas-syād=apī ch=ātra Vyāsa-gitan
śloka
- 8 bhavatah [i*] shashtim[*] varsha-sahasrāpi svarggō mōdati bhūmidāh[i*] āchchhetā
ch=ānumantā cha tāny-ēva narakē
- 9 vasit [i*] sva-dattām para-dattā[m*]=vā yō harēta vasundharām [i*] gavām
śata-sahasraya hantu[h*] prāpnōti
- 10 kikkakāya[i*] sva-hastō mama mahārāja-Dhruvasēnasya [i*] dātakāh
prathāra Mammakāh [i*]
- 11 kikkakā Kikkakāna [i*] sam 200 6 Āsvayuja śu 3 [i*]

No 6 —SRIRANGAM COPPER-PLATE GRANT OF DEVARAYA II;
SAKA 1349 (1350)

By THE LATE T. A. GOPINATHA RAO, M.A., TRIVANDRUM

The temple of Śrī-Ranganātha at Śrīrangam possesses, among others, two sets of copper-plates inscribed in the reign of the Vijayanagara king Devarāya II. The inscriptions engraved upon these two sets are edited below from the impressions prepared under my supervision.

No 1. SAKA-SAMVAT 1349

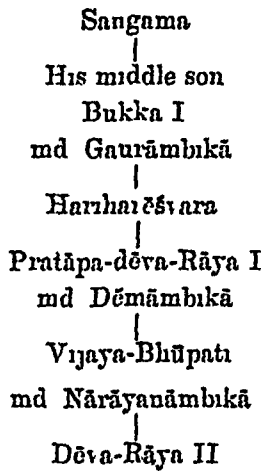
The copper-plate of three plates (size 10½ × 6½ in.), of which the first and the third bear inscriptions on the face only, namely, the second side of the first and the first side of the third.

¹ See the original plate and a set of impressions.

² [Read āgami.—Ed.]

The inscription is in good state of preservation. The alphabet in which the record is written is Nandināgarī, and the language partly Sanskrit and partly Kannada. The first section covers 41 and the second 34 lines, and the remaining portion contains the usual admonitory and imprecatory verses. At the end appears as is usual with the documents of the kings of the first dynasty of Vijayanagara, the word *Śrī-Virūpākṣha*, the sign-manual of the king, written in the Telugu-Kannada alphabet. The same sort of mistakes, careless execution of the engraving, leaving room for a number of corrections, erasures, interlineations, etc., and other faults common to the other grants of this period are to be found in these two sets of copper-plates also, there is no necessity for them to be noticed in detail here, they are noted in the foot-notes at the appropriate places.

The record is dated Śaka 1349, which is expressed by the chronogram *dhavalōka*, this year corresponded to the cyclic year *Plavanga*. In the Kannada portion the Śaka year is given as 1350, and the same *Plavanga* is said to be current. On a Sunday, which was the *Utthāna dvādāsī tithi* in the bright half of the month *Kārttika*, the king *Dēva-Rāya II* granted to the God *Ranganātha* of *Śrīrangam* the village of *Pādamangalam* together with the sub-villages, *Tīrunalūr*, *Sēranabanda-perumā-nallūr*, and *Sunepuha-nalūr*, in the name and for the merit of his mother *Nārāyanāmbikā*. The genealogy of the king is traced thus —



Dēva-Rāya II bears the *birudas*, *Rāj-ādhirāja*, *Rāja-param-ēśvara*, *Bhāsh-ātīlanghri-bhūpāla-bhujanga* (= *Dhāshege-tappura-rāyara-ganda*), *Māru-rāyara-ganda* and *Hindu-rāya-suratrāna*. Having ascended his ancestral throne and while protecting the kingdom, residing in his capital *Vijayanagara*, which is situated on the bank of the river *Tungabhadrā*, king *Dēva-Rāya* made the grant mentioned above in the presence of the god *Virūpākṣha* on the bank of the *Tungabhadrā*. The villages *Pādamangalam*, *Tīrunalūr* and *Sēranabanda-perumā-nallūr* are said to have been situated in the *Rājagambhīra valanādu* on the south side of the river *Kāvērī*, and *Sunepuha-nalūr* in the *Mēlmuri* of the *Maḷa nādu*, a sub-division of the *Rājārāja valanādu*, on the north of the same river. The Kannada portion adds that the villages belonged to the *Amarada hōbaḷi*. All of them belonged also to the *Tiruchchirāppalli rājya* or *chāvadi*. The purpose for which the grant is made is given in full detail in the Kannada portion. From the income of the villages twelve perpetual lamps should be burned, flower-garlands dedicated and one festival celebrated. The grant was made as an auxiliary to the *Gō-sahasra Mahādāna* performed by the king. The grant was ordered to be executed from the first *tithi* of the bright fortnight of the month *Āshādha*. The income from the villages situated on the south of the *Kāvērī* was 1403 *coms* (*kula-gadyāna*), and that from the village on the north of the river 420, total 1,823

gadyānas. A number of taxes leviable in these villages are included in the grant. they are taxes on the *naṅṣey*, *puṅṣey*, *pūm-payir*, *vāsal*- and *maṅṅai-ppēru-kaḍamai*, *taṅṅi-kaḍamai*, *maṅṅaḍai*, *maravaḍai*, *kulavadaḍai*, *kalāyam*, *tirigai-āyam*, *pēr-kaḍamai* (*taṅṅi-kaḍamai*), *āḷukku-nīr-pāṭṭam*, *mahamai*, *kattigai-avasaram*, *patai-kānikkai*, *Āḍi-Kārttigai-pachechai*, and all old and new taxes. Several of these have remained unexplained up till now. It is easy to understand the nature of the first four, they are levied on wet and dry cultivation, on inferior crops, on houses and compounds and on looms, *māraḍai*, *maravadaḍai* and *kuḷavaḍai* are taxes on animals, trees and tanks—that is, perhaps, when animals are sold in markets, on fruit-bearing trees and for fishing in tanks. *Kalāyam* literally means tax on stone, it is very likely a tax payable for quarrying stones from hills, what tax is meant by *tirigai-āyam* is not known. *Pēr-kaḍamai* means taxes on persons, a sort of poll-tax evidently. *Āḷukku-nīr-pāṭṭam* is a tax for maintaining the person appointed for making regular supply of water to the fields; this appears to be the same as *nīrānikkam*. *Maḡamai* is a corrupt form of *maḡammai*, the nature of being a son to another, this levy is still in force among certain merchants in the Tanjore and Trichinopoly districts. On all sales and purchases the merchants collect a small, but fixed, sum and utilize the money thus collected for some public purpose. Compare similar words, as *kōyimai* corrupted into *kōyima*, *ārānma*, etc. *Kattigai-avasaram* appears to be some sort of tax on fire-wood, and *patai* (*paḍai*)-*kānikkai* is the contribution to be made for the maintenance of the army. *Pachechai* means a *kānikkai*, a *nazar*, a present on important occasions. In this sense the word is employed in contemporary literature, for instance, in *Śrī-tachana-bhūṣhanam*, I, 33 and 34. Such *kānikkai*s seem to be given in the months of *Āḍi* and *Kārttigai*.

The following places and rivers are mentioned in the inscription —Tūṅgabhadrā, Vijayanagara, Tiruchchirāppalli, Kāvēri, Rājagambhira *rajanāḍu*, Pāṇḍa-maṅḡalam, Tirunalūr, Śērānabanda-perumā-nallūr, Rājārāja *valanāḍu*, Mēlmūṅi-of the Maḡa *nāḍu* and Śunepuha-nalūr. Of these the Tungabhadrā and the Kāvēri are the well-known rivers of South India. Tiruchchirāppalli is the modern town of Trichinopoly, the head-quarters of the district of the same name. The part of the country immediately to the south of the river Kāvēri was known to medieval inscriptions as the Rājagambhira *rajanāḍu*, and that on the north of the same as the Rājārāja *valanāḍu*. Maḡa *nāḍu* is a sub-division of this territory and has given its name to a section of the Tamil Brāhmanas, i. e. the Bṛhach-charana community of Maḡa *nāḍu*. Vijayanagara, the capital of the famous Hindu kings of Southern India, is the modern Hampi on the Tungabhadrā. Pāṇḍa-maṅḡalam is a village a mile and a half west of Trichinopoly, this and Tirunalūr are in the Trichinopoly *Tālūk*, the correct form of the name Śērānabanda-perumā-nallūr is Śērāṅai-venṅa-perumā-nallūr. There is a village some distance south of Pāṇḍa-maṅḡalam called Vēṇḍarāya-nallūr. This is perhaps the same. Śunepuha-nalūr is situated at a distance of seven and a half miles to the north-west of Trichinopoly.

TEXT

[Metres - vv 1-25, *Anushtubh*, and v. 26, *Śālīrī*]

First Plate Second Side.

- 1 श्रीगणाधिपतये नमः [॥*] नमः(ः)स्ते [॥*] नमः(ः)स्ते [॥*] नमः(ः)स्तुगदि
- 2 रघुविंशद्दशम[र*][चा]रवे [॥*] त्रैलोक्यनगरारंभमूल-

¹ From impressions prepared under my supervision

² Read °रघुविंशद्दशम-

- 3 स्तंभाय संभवे¹ (तु) ।[। 1^{*}] भू[य*]क्षे² भवतां भूते³ भूयादाच्छयं⁴
 4 कुंजरः[।*] आहुर्विहारकांतार अ[।*]⁵गमान्यस्य [यो]-
 5 गिनः ।[। 2^{*}] क्षेमं वः प्रचुरीक्षुर्यात्क्षोणीमभ्युहङ्गनयं⁶[।*] [क्रो]-
 6 डाहतेरभूद्यस्य क्रोडापल्व[ल]मबुधि⁷[:॥ 3^{*}] अस्ति क्षीरा[णं]-
 7 वोद्भूतमपां पु[प्य]मनुत्तमं⁸ । अस्तानदं निर्मात्यमाध-⁹
 8 त्ते शिरसीश्वरः [॥ 4^{*}] सदासोदनिधेस्तस्य संतानेयद्र[सं]-¹⁰
 9 [न्नि]ते [।*] अभूदाश्चर्यम[।*]धुर्यं वसुधायास्तपःफलं [॥ 5^{*}]
 10 संगमो नाम रा[जा]भू[त्सा]रभूते तदन्वये [।*] रेजे यस्य
 11 यशःशिंधौ¹¹ सर[णी]व सुरापगा [॥ 6^{*}] सर्वरत्ननिधि]-
 12 स्तस्य सप्ताडासीत्तनूभुवं¹² । मध्ये बुक्कमहीपालो म-
 13 णीनामिव कौस्तुभः [॥ 7^{*}] तस्य गौरांबिकाजानेस्त(नयो वि)-
 14 नयोभूङ्गणे¹³न्नतः [।*] [हा]रगौरयश.पु¹⁴रहारिहरिह[रे]-
 15 श्वरः [॥ 8^{*}] ¹⁵यषोडशमहादानयशसां दिग्विहारिणां [।*] भूय[सा]-
 16 मभवंनाल¹⁶ भुवनानि चतुर्दश [॥ 9^{*}] प्रतापदेवरायाख्यः
 17 पुत्रोभू[ङ्गु]वि विश्रुतः [।*] प्रमोद इव मूर्त्तौ यः प्रजानां स्वैर्गु-
 18 णैर[भु]¹⁷त् [॥ 10^{*}] प्रत्य[र्थि]समिधो हुत्वा प्रतापान्गौ रणांकणे [।*]¹⁸
 19 विजितो येन(।) वीरेण विजयश्रीकरग्रहः [॥ 11^{*}] तस्य दे-
 20 मांबिकाजानेस्तनयो विनयोन्नतः [।*] विद्यानिधि-
 21 विशेषज्ञो वीरो विजयभूपतिः [॥ 12^{*}] दयानिधेर[भू]-
 22 त्तस्य देवीनारायणांबिका [।*] श्रीरेरिव महालक्ष्मीः शं-
 23 [क]रस्येव पार्धती [॥ 13^{*}] पुत्ररूपं तयो [।*] स्नाद्यं पु²⁰र्वजन्म त-

Second Plate - First Side

- 24 पःफलं [।*] देवरायमहीपालो दाता दीव्यति भूतले [॥ 14^{*}]
 25 विक्रमे विक्रम[।*]दित्यं भोगे भोजमिवापरं [।*] राजराजं वि-

¹ Read शं

⁴ Read °दाद्यं.

⁷ Read °सम्बुधिः

¹⁰ Read सन्तान यदुसंज्ञितम्.

¹⁸ Read णी

¹⁸ Read °वसुधालं

¹⁹ Read रणाङ्गणे

² Read भूयस्ये

⁵ Read कान्तारमा°.

⁸ Read °मम्.

¹¹ Read यशः शिन्धोः

¹⁴ Read पु.

¹⁷ Read °हु.

²⁰ Read पु.

³ Read भूत्ये

⁶ Read °हृत्प्रयम्.

⁹ Read अस्तान यदनिर्माद्यं°.

¹² Read साप्ताडासीत्तनूभवाम्.

¹⁵ Read यषोडश°.

¹⁸ Read °भू.

- 26 तरणे राजानं यं प्रचक्षते [॥ 15*] असंगमंगकाकिंगवंगवाद्या-
 27 श्चामरादिभिः [1*] रात्रानो यं क्षिपेवंते¹ राजचिन्हैः स्वयं[ष्ट]-
 28 तैः [॥ 16*] राजाधिराजः)स्तेजस्वी यो राजपरमे[श्च]रः [1*] भापाति-
 29 लंघिभूपालभुजंगविं[क्त]दोन्नतः² [॥ 17*] मूरुरायरगडाकः³
 30 परराजभयंकरः [1*] हिंदूराय[स्तु]रचाणी⁴ वंदिवर्गेण वं-⁵
 31 र्णते [॥ 18*] श्रीतुंगभद्रापरिवे नगरे विजयाप्तये [1*] पियं
 32 सिंहासन प्राप्य पालयन्पृ[थि]वीति⁶मां [॥ 19*] पुंख⁷श्ले[1*]क्ता-
 33 ग्रं[स्थो]⁸शौ देवरायमहीपतिः[1*] धिवलीके सकशा-⁹
 34 [ब्दे] झ[वंगा]ह्वय[वच्छ¹⁰रे] [॥ 20*] क[र]र्तिके मासि सुंधायां¹¹ द्वाद[श्या]-
 35 मार्कवासये¹² [1*] तुंगभद्रानदीतो[रे] श्रीविरूपाक्षसंनि-
 36 [धी] [॥ 21*] त्रि[सि]रापक्षिरा[ज्ये] राजगंभीरवलभिदे¹³ कावेरिय-
 37 दक्षिणे पाडसंगलया[म*] [इ]लुभी तिरुनलूरपि¹⁴ सेरनेवंड-
 38 पेरुमानलुरपि उत्तरेयाह्वकान्यायां¹⁵ राजराजवलभि-
 39 धे प्रवृजपदे सुनेपुह्ननलुरधा उभौ श्रीरंगराजश्च परि-
 40 यार्थं¹⁶ नारायणवभिध[1*]न्तः येनैव¹⁷ देवराजेन दत्तं शोव-
 41 नावुधारया¹⁸ ॥ स्वस्ति श्री जयावुदाय सेक्वर्ष¹⁹ १३५० झवं-
 42 गसंवच्छ²⁰रद कार्तिकसुध उत्तानुह[1*]दसि²¹पुण्यकालद
 43 श्रीमं²²न्महाराजाधिराजपरमेस्वर²³ श्रीवीरप्रतापदे-
 44 वरायमहारायश्च श्रीरंगनाथदेवरिगे नारायणदेवी-
 45 श्ले[1*]वगल हेखरक्षि श्रीदु अवसरव नखसुव श्रदके²⁴ दिन
 46 [श्री]दके²⁵ हन्नेरडु. परिवाणनंदादीविगीयगमाले श्री-

Second Plate. Second Side

- 47 दु तिरुनालु ग(र)डवुदके²⁴ कोष्ट दर्मशासन²⁶ [1*] उत्तानह²¹[1]-

¹ Read निषेवन्ते

² Read हिन्दु°

³ Read पुण्य

⁴ Read रत्न

⁵ Read राजगंभीरवलभिधकावेर्या.

⁶ Read श्रीरङ्गराजश्च परिधर्याधं .

⁷ Read जयानुदयमक.

⁸ Read म

⁹ Read आन्दरे

¹⁰ Read भुजङ्गविरुदोन्नतः.

¹¹ Read य.

¹² Read गस्थोशौ.

¹³ Read शुद्धायां.

¹⁴ Read पाण्डुसङ्गलयाम पत्युभी-

¹⁵ Read पाल्याभिषागत, तिमैव.

¹⁶ Read रत्न.

¹⁷ Read च

¹⁸ Read धर्म°.

¹⁹ Read गस्थाङ्क.

²⁰ Read °मि.

²¹ Read श्रवणेचाब्दे.

²² Read रे.

²³ Read सत्यकन्याया .

²⁴ Read स्वर्णानुधारया.

²⁵ Read उत्तानुहारशौ.

²⁶ Read °वदही.

48 दगिदिनालुनरुं वः ; दीदरुं र्कासवदुं तानदुं
 48 इत्तीवाम्मानदलुं तुगतकागी चरलिसीधिवुप
 50 नुं वृद्धिप्रियसिनाडुं काहिरुसरुं तणादनायाव
 50 निराभ्यानायदवसिमांयाना नानाप्रसिभिनरु
 52 ब्रह्मिणांरुवकुं मरुं मारुंरुंरुंरुं मारुंरुंरुंरुं
 54 नानिदिधिप्रवसिवावहिरुं यन्नाभुंरुंरुं
 54 नारुंरुंरुंरुंरुंरुंरुंरुंरुंरुंरुंरुंरुंरुंरुं
 58 नारुंरुंरुंरुंरुंरुंरुंरुंरुंरुंरुंरुंरुंरुं
 60 नारुंरुंरुंरुंरुंरुंरुंरुंरुंरुंरुंरुंरुं
 62 नारुंरुंरुंरुंरुंरुंरुंरुंरुंरुंरुंरुं
 64 नारुंरुंरुंरुंरुंरुंरुंरुंरुंरुंरुं
 68 नारुंरुंरुंरुंरुंरुंरुंरुंरुंरुं



48
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 64
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68 निरुंरुंरुंरुंरुंरुंरुंरुंरुंरुंरुंरुं
 70 निरुंरुंरुंरुंरुंरुंरुंरुंरुंरुं
 72 निरुंरुंरुंरुंरुंरुंरुंरुंरुं
 74 निरुंरुंरुंरुंरुंरुंरुंरुं
 76 निरुंरुंरुंरुंरुंरुंरुं
 78 निरुंरुंरुंरुंरुंरुं
 80 निरुंरुंरुंरुंरुं
 82 निरुंरुंरुंरुं



68
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 80
 82

- 48 दसोपुंख'कालदलु तुंगभद्रातीरदलि त्रीविरूप[1]-
 49 चसंनिधियसि नाज' माडिद सहस्रगोदानागव[1]-²
 50 नि श्रीरंगनाथदेवरिगे अंगरंगभोग अमिरितु-
 51 पडिगे तत्सवच्छरद आमाड सुय पाद्य' आरभ्य-
 52 वागि चिरिअ'पल्लिचावडिय राजगंभीर श्रीक
 53 नाड अमरदहोभलिय पांडमगलद ग्राम १ इ-
 54 दरनुहमि तिरनालूर ग्राम १ सेरनेभंडपेरु-
 55 मालेनलूर' ग्राम १ अतु' पिडाकैसह ग्राम श्रीद-
 56 के कुल १४०३ [1*] वडकर' राजराजवळना-
 57 ड भलनाड मेलेसुरिय सुनेपुहनलुर गा-
 58 म श्रीदके' कुल ४२० [1*] उभय(:)ग्रामयेरड-
 59 कं कुळगद्य[1*]ण १८२३ [1*] कंदग्राम एर-
 60 डर चतुसीमेगे सलुव नंचै पुंचै वां-
 61 नूपयिर पुंपौर वांसलुमनेपेरुका-
 62 डमे¹⁰ तरिकडमी¹¹ मावडे मरवडे
 63 कुळवडे कलायं तिरिगे आयं पे-
 64 कडमे¹² तरिकडमै श्रीलुङ्गनीपा-
 65 टं महमै कठिगेअवसर पटे-¹³
 66 काणिके आडिकातिकै(1)पचै म-
 67 तु¹⁴ एनुळता होसवरि¹⁵ हलिव-

Third Plate First Side.

- 68 रि मुंताद सकल सुवर्नादाय सकलभता-¹⁶
 69 दाय निधिनिक्षेपजलपाषाण अक्षिणि आगामि
 70 सिद्धसाध्य मुंताद अष्टभोगतेज[:*]स्वास्थ्यस[हि]तव[1]-
 71 गिमाचंद्रार्क स्ता¹⁷यियागि सर्वमान्यवागि सेरिसि,
 72 कोटेवागि श्रीरंगनाथदेवरिगे अंगरंगभो-
 73 ग असुतपडियनु नडसि सुकदिं अनुभविसु-
 74 वदु ॥ दानपालनयोर्मध्ये¹⁸ दानाच्छेयोनुपालनं [1*] दा-

¹ Read पुण्य.

² Read नायु.

³ Read 'नाडवागि

⁴ Read तत्सवच्छरद आमाडगुल पायसे

⁵ Read तिरुविरापलि.

⁶ Read श्रीरनेवेनूरपेरुमाळु गूळूर.

⁷ Read अन्तु.

⁸ Read वडकरे

⁹ Read आन्दके

¹⁰ Read पुनूपयिर वाशळु मनेपेरुकाडमे.

¹¹ Read कडमे.

¹² Read चेकडमे. This and tari-kadama: are repeated unnecessarily

¹³ Read डे.

¹⁴ Read 'कातिकै पच मयु.

¹⁵ Read होसवरि.

¹⁶ Read दा.

¹⁷ Read स्ता.

¹⁸ The letter न in दालन looks like व.

- 75 नात्स्वर्गमवाप्नोति पालनादद्भुतं पदं ॥ [22*] स्वदत्तां [प]-
 76 रदत्तां वा यो हरति वसुंधरा[म् १'] षष्टिवर्षसह[स्रा]-^३
 77 णि विष्टायां जायते क्लमिः^६ ॥ [23*] एकैव भगिनी लोके स-
 78 वेषासेव भूसुजां [१*] न भोग्या न करग्राह्या विप्रद-
 79 ता वसुंधरा ॥[24*] स्वदत्तांदिगुणं पुण्यं परदत्तानुपाल-
 80 नं [१*] परदत्तापदारिण^७ स्वदत्तं निष्फलं भवेत् ॥[25*] सामान्यो-
 81 यं धर्मसेतुं नृपाणां काले काले पालनीयो भवद्भिः । सर्वा-
 82 नियतानु^{१०}न्नाविन[ः*] पार्थिवेन्द्रान् भुयो भुयो^{११} याचते रामचंद्रः[॥26*]
 83 श्रीविरूपाक्ष^{१२}

ABSTRACT OF CONTENTS.

Verse 1 Adoration to Śambhu (Śiva)

V 2 Adoration to Gaṇeśa

V 3 Adoration to Varāha

V 4-5 On earth, as the fruit of its *tapas*, was born Yaśu in the family of the Moon, which came out of the ocean of milk and is worn by Śiva on his head

V 6-7 In his race was born a king named Sangama His middle son was Bukka, who resembled the jewel *kaustabha* among other jewels

V 8-9 To him by Gaurāmbikā was born a son, named Harihara, who was gentle and famous The renown of his making the sixteen great gifts (*mahādāna*) redounded even beyond the fourteen worlds

V 10-12 His son was Pratāpa-dēva-Rāya, who appeared the embodiment of the happiness of his subjects He conquered his enemies in battles by the prowess of his arms and obtained the favour of Vijaya-Lakshmi (goddess of Victory) To him, as husband of Dēvāmbikā, was born the prince Vijaya-Bhūpati

V 13-18 The queen of Vijaya-Bhūpati was Nārāyanāmbikā. As the fruit of the meritorious acts done by them in their previous birth, Dēva-Rāya was born to Vijaya-Bhūpati and Nārāyanāmbikā and distinguished himself on earth He is compared to Vikramāditya in valour, to Bhōja in his *bhōga* (P) and to Rāja-rāja (i.e. Kubēra) in his munificence The kings of the Anga, Kahnga, Vanga, etc, countries did homage to this king, holding *chāmaras* and other royal insignia in their hands He bore the *birudas* Rāj-ādhirāja, Rāj param-śvara, Bhāsh-ātlanghi-bhūpāla-bhujanga, Mūru-rāyara-ganda, Para-rāja-bhayan-kāra and Hindu-rāja-suratāna

V 19 to the end of line 41 Dēva-Rāya, who, seated on his ancestral throne in Vijayanagara, which has the Tungabhadra as its ditch, ruled the earth, made the grant of the villages of Pānda-mangalam, Tirunālūr, Śēraṇabanda-perumā-nalūr and Śunepuha-nalūr to the god Ranganāthe The gift was made in the Śaka year 1349, which is given by the chronogram *dh. a. l. a* and which corresponded to the (cycle) year Plavanga, on a Monday

¹ Read शु

⁴ Read ए

⁷ [Read "दरिण-ए"]

¹⁰ Read "नानाम् भाविन."

¹² This line is written in Telugu-Kannada characters.

² Read दत्ता

³ Read क्लमि.

⁶ Read "पदारिण स्वदत्त"

¹¹ Read भुयो भुयो.

³ Read षष्टिं द्वावि.

⁶ Read "दि

⁷ Read कृ

the twelfth *tithi* of the bright fortnight in the month Kārttika, in the presence of the god Virūpāksha on the bank of the river Tungabhadā. The villages Pānda-mangalam, Tirunālūr and Sēranaibanda-perumā-nalūr are said to have been situated on the south bank of the river Kāvērī, in the Rājagambhīra *valanādu*, belonging to the Trisīrāppalli *rājya*, and Sunapuhanalūr in the Rājarāja *valanādu* of the same *rājya*, but situated on the northern bank of the Kāvērī.

Lines 41-74. In the Śaka year 1350, Plavanga, on the auspicious occasion of the Utthāna-dvādaśī in the bright half of the month Kārttika, the king Vira-Pratāpa-deva-Rāja Mahārāja gave the following *sāsana* (order) for performing one *avasara* consisting of twelve *harivānas* of perpetual lamps, garlands and one festival every day to the god Ranganātha in the name of Nārāyanadēvi-auva the gift of the villages of Pānda-mangalam, Tirunālūr and Sēranaibanda-perumā-nalūr, yielding 1,403 *kula-gadyānas*, and Sunepuhanalūr, yielding 420 *kula-gadyānas*, was made for the *unga, ranga*, etc., of the god Śī-Ranganātha, as an auxiliary to the *gō-sahasra mahādīna* made by the king on the auspicious occasion of Utthāna-dvādaśī in the presence of the god Virūpāksha on the bank of the river Tungabhadrā. The villages Pānda-mangalam, Tirunālūr and Sēranaibanda-perumā-nalūr were in Amarada *hōbali* of the Rājagambhīra *valanādu* in the Chirichrāpalli *chāvadi*, whereas Sunepuhanalūr was situated in the Mēlamurī of the Mala *nādu*, a sub division of the Rājarāja *valanādu* in Vadagaraī (northern bank of the Kāvērī). These villages were to be enjoyed from the first *tithi* of the bright fortnight of the month Āshādha of the same year. The king granted these villages with the following rights of enjoyment namely, the taxes on the lands under wet and dry cultivation, as also *vān-payir* and *puṇ-payir*, the taxes called *thev āsal*-, *manai-pēru-kadamai*, *tarikkadamai*, *māvadaī*, *maravadaī*, *kulavadaī*, *hal-āyam*, *tirugar-āyam*, *pēr-ikkadamai*, *tarikkadamai*, *ālukkumpāttam*, *mahamai*, *kattige-avasara*, *padai-kānikkai*, *Ādi-Kārttikar-pachchai* and all other new and old taxes, all income in gold and paddy and the eight kinds of enjoyment, *madhi*, *nikshēpa*, etc.

Vv 22-26 The usual admonitory and imprecatory verses

Line 83 contains the words Śrī-Virūpāksha, the king's signature

No 9.—MOMIGATTI INSCRIPTION OF THE 49TH YEAR OF VIKRAMADITYA VI.

By LIONEL D BARNETT

Momigatti is a village in Dhārwar District, a few miles to the north-west of Dhārwar town, in lat 15° 30½' and long. 74° 59', according to the Bombay Survey¹. The present inscription, now published for the first time, was found in the local temple of Kalamēśvara, on the left side of the image. An ink-impression was prepared for the late Dr. Fleet, which is now in the British Museum, from it I have edited the text. The stone has a rounded top decorated with sculptures, namely, in the centre a *linga*, on the proper right of which is a priest standing facing it, while another upright figure stands to the proper left, all three being in a shrine, to the proper right of the priest, a cow and calf, to the right of the latter, a scimitar; in the opposite corner, a bull, above these, the sun (on proper right) and moon (on left). Below this is the inscribed area, in two compartments the first of these, comprising lines 1-2, is 2 ft. 3½ in wide and 2½ in high, and the second, containing lines 3-30, is of the same width and 2 ft 9 in high.—The character is good Kanarese, of an upright rounded type that was beginning to come into use about the middle of the twelfth century. The height of the letters varies from ½ in to ⅔ in. The *jh* (19) and *ñ* (11, 19, 26) may be noted.—The language is Old Kanarese, with two

¹ The "Meemooguttee" of the Indian Atlas seems to be intended for Momigatti; but its position does not quite tally with that of the latter as given in the Survey

formal Sanskrit verses (Nos 1 and 5) The ancient *ḷ* has been changed to *l* in *kūlam* (l. 14), *bēḷpa* (l. 16), *ahdavaragey*= (l. 27), *ēl-kōti* (l. 28), and to *r* in *garddoy*[*u**] *man* (l. 22); it is falsely used for *r* in *toḷald*= (l. 16) *P* is changed to *h* in *halli*^o (ll. 19, 20), but elsewhere retained Three words are of some lexical interest, viz *tyāga-jāga-jhampī jhampalāchāryya* (l. 9), on which see above, Vol. XII, p. 251, and *nruta* (l. 14), which is abstracted from the ordinary *sūnruta*, and is parallel to *anrutika*, "untruthful" in *Aśvaghōsha's Buddha-charita*, II 11



The record, after referring itself in ll. 2-4 to the reign of Tribhuvanamalla (Vikramāditya VI), introduces the Kadamba feudatory Jayakēsi [II], who is decorated with the characteristic titles of his dynasty, and his senior queen Mailala-dēvi (the daughter of Vikramāditya VI), as jointly reigning (ll. 4-13) On the historical points involved herein it suffices to refer the reader to Vol. XIV above, p. 299 f Then follow verses in praise of Vāmaśakti, a Śaiva divine, and Udayamma Gāvunda (ll. 13-17), after which comes the formal statement of a gift of land and houses by the latter to the sanctuary presided over by Vāmaśakti (ll. 17-24)

The date is given on ll. 17-18 as the cyclic year Krōdhi, the 49th of the Chālukya Vikrama era, Āshādha śuddha 5, Sunday This is irregular The given *tithi* was current at sunrise on Wednesday, 18 June, A.D. 1124, and ended about 9 h 16 m after mean sunrise¹

The only places mentioned are Kundūr (l. 19), Eranigereyahallī (l. 19), Konnasageṛe (l. 21), and the *tīrthas* (l. 25) Kundūr is the modern Narēndra, on which see above, Vol. XIII, p. 298

TEXT.²

[Metres vv. 1, 5, *Anushtubh*, vv. 2-4, *Kanda*]

- 1  Namas=tumga-s[*1**]raś-chumbi-chandra-chāmara-chāravē [*1**] trailōkya-nagar-ārambha-māla-stambhāya Sa(śa)mbhavē || [*1**]
- 2  Svasti samasta-bhuvan-āśraya Śri-Prī(ṇī)thvi-vallabha mahārājādhirāja paramōśvara paramabhatt[ā]-
- 3 rakam Satyāśraya-kula-talakam Chālukya-ābharanam śrīma[*t**]-Tribhuvanamalladēvara vijaya-rājyam=u-
- 4 ttarōttar-ābhivṛddhī-pravardhdhamānam=ā-chamdr-ārka-tāram-baram salnttam-ire ||
 © Tat-pāda-pādm-ōpajivī || © ©
- 5 svasti samasta-bhuvana-samstūyamāna Hara-Dharani-prasūta-Trilōchana-Kadamba-vamśa-mah-ōda[ya]
- 6 Mahīdharēmdhra(dra)-śikhar-ābhyudayamāṇa-mahā-prachanda-mārttānda mārttānda-kar-ātittva-nīja-pratā[pa]-
- 7 vaśikri(kri)ta-sakala-mahī-mamdalān=uttumga-simha-lāmochchhanam vānara-mahā-dhvajam permattī-tūryya-nirghōshanam
- 8 chaturā(ra)śīti-nagar-ādhishtit-āshtādaś-āśvamēdha-dikshā-dikshita-kula-prasūta Himsavad-girindra-rumdra-sikhara-
- 9 sthāpita-mahā-śakti-prabhāvam tyāga-jāga-jhampī jhampalāchāryya nśśamka-Rāmaśu(su)bhata-kanaka-nikash-ōpala

¹ I have to thank Mr R Sewell for his kindness in verifying my calculations.

² From the ink-impresion.

- 10 śaran-āgata-vajra-pīākāra lōk-aika-kalpa-druma samkiṁti-dhavaḷa mūitti-Nārāyana
kirtti-mārttamda
- 11 mandahka-lalāta-patṭa vaira-gharatta śu(su)bhata-iāja-sikhāmani Kādamba-
chādāman=ity-akhala-nām-āva-
- 12 li-samā(ma)lamkṣitar=appa śrīman-mahāmamdaśvaiam Jayakēsi-dēvar śīmat-
pūry-arasi Maialala-ma-
- 13 hādēviyaru sukha-samkathā-vinōdadim rājjam-geyyuttam-ire || ⊙ Pasid=āi=
bband=una bōdidod=osed=a-
- 14 tt=ill=ennad=ikkut-irppare kūḷam vasudhātalam-ellam bannisuvinegam Vāmaśakti-
pamḍita-dēvar || [2*] Nṛta-vākyam vamdī-ja-
- 15 n-āsṛita-sura-taru Malla-Gāvumdan=arra(gra)-tanūjam matimantam Hara-bhaktam
kshitiy-olag=Udayamma-Gavu-
- 16 dan=uttama-puruṣa || [3*] Sidil=unam rīpu-nichayam todaḷd(īd)=edeyol bēlpa
janako sura-taruv=annam kudut=e-
- 17 deyol Bānana vol Mṛda-bhaktam dharanitaladol=Udayama-Gavumda¹ || [4*] ⊙
Svasti śīmach-Chālukya-
- 18 Vikrama-varshada 40noya Krōdhi-samvatsarad-Āshāda(dha) su(śu)ddha 5
Āditjavāradamdu śrīman-mahā-pa-
- 19 itavam Kundūra padinaṣuvav=ggāvumḍgala Pañcha-matha-sthānada sannidhiyol=
Erangereyahally=A-
- 20 karika(P)² Malla-Gāvumdana magan=Udayama-Gāvumdam halliyindam paduval=
kal-pumjkey=adaṣim mū-
- 21 dal=ondu muttar=pparala keyyuman=ūr=umba Konnasageṛeya mūdana kōṭyalu nūru
ka-
- 22 mma garddey[u*]mam dēvaiam tenkal=eradu maueya nivēsanamumam Kali-dēva-
svāmya sthān-āchā[ryya Vū]-
- 23 maśakti-panditargge kāl-garchelu dharā-pūrvvakam mādi sarvva-namaśya(sya)-
sarvva-bādhā-parihāram=[ūgi]-
- 24 y=Udayama-Gāvumdamn=ā-chandra-sthāyiy=ūgi bitta dhaimma || Ī dharmmamam
pratipāl[si]-
- 25 davargge Gamge Vāranāśi Kurukshētra Prayāgey=emba punya-tīrtha-sthānamgalol
sāsira kavī[le]-
- 26 ya kōdum kolagumam pañcha-ratnadol=kattasi vēda-pāragar=appa mahā-brāh-
manargge dānam-geyda [pha]-
- 27 la Ī dharmmamam-ahdavarggey=ā sās[ī*]ra kaviley[n*]man=ā vēda-pāragar=appa
mahā-brāhmaṇa[ru]-
- 28 mam ēl-kōṭi tapōdhanaruman=ā punya-tīrtha-sthānamgalol=konda mahā-pātakan=
akku || ⊙
- 29 Sva-datt[ā*]m para-datt[ā*]m vā yam(yō) harēti(ta) vasumdharā[m*] shashtir=
virisha-shāsani³ vi=
- 30 shṭa(shṭhā)yām jāyatō krimi⁴ [5*] ⊙ ⊙

¹ The syllable *ma* is metrically superfluous² Read *varsha-sahasrāni*.³ Apparently so, but the first *ka* may be read as *ra* or *ga*.⁴ Read *kṛimīḥ*.

TRANSLATION.

(Verse 1) Homage to Śambhu chattering with the yak-tail fan which is the moon kissing his lofty head, the foundation-column for the construction of the city of the three worlds

(Lines 2-4) While the victorious reign of—hail!—the refuge of the whole world, favourite of Fortune and Earth, great Emperor, supreme Lord, supreme Master, ornament of Satyāśraya's race, embellishment of the Chālukyas, king Tribhuvanamalla, was advancing in a course of successively increasing prosperity, (to endure) as long as moon, sun, and stars —

(Lines 4-13) While he who finds sustenance at his lotus-feet,—hail!—the Mahāmandalēśvara Jayakēśi-dēva, who is decorated with the whole series of titles of honour, to wit, "the noble scion of the Trilōchana-Kadamba lineage sprung from Hara and the Earth which is praised over the whole world, great august sun rising upon the peaks of the Lord of Mountains, fascinating the whole circle of the earth by peculiar majesty exceedingly intense as the sun shines, having for crest a stately lion, having a banner (bearing the device) of a great ape; who is (saluted) with the noise of *permatte* drums and (other) musical instruments, who is sprung from the race presiding over eighty-four cities and consecrated in the consecratory rites of eighteen horse-sacrifices, who has established the puissance of his might upon the massive summits of the Lord of Mountains, the Himavat, a *ghumpalāchārya* surpassing the world in bounty, a Rāma in intrepidity, a touchstone for the gold of warriors, an adamant castle for seekers of protection, a unique tree of desire for the world, white (of fame) as the time of conjunction¹, a Nāiāyana incarnate, a sun of glory, a frontal fillet of feudatory princes, a grindstone to foes, a crest-jewel of warrior kings, a crest-gem of the Kādambas," and the Senior Queen Mūlāla-mahā-dēvi, were reigning with enjoyment of pleasant conversations —

(Verse 2) If any, being hungry, should come and ask for food, Vāmaśakti Pandita-dēva will gladly give to him rice without saying nay, so that the whole earth praises (*him*)

(Verse 3) Of Malla Gāvunda, who is pleasant of speech, a celestial tree to panegyrists and dependents, the eldest son is Udayamma Gāvunda, who is sage, devoted to Hara, a right noble man on earth

(Verse 4) Like a thunderbolt on occasions when hosts of foes assail (*him*), like a celestial tree on occasions when he makes gifts to suitors, devoted to Mṛda like Bāna, is Udayama Gāvunda on earth

(Lines 17-24) Hail! On Sunday, the 5th day of the bright fortnight of Āshādha in the cyclic year Krōdhi, the 49th (year) of the Chālukya-Vikrama era, in the presence of the Sixteen Gāvundus of the great city of Kundūr (and) the establishment of the Five Maṭhas, Udayama Gāvunda, son of the Ākarika(?) Malla Gāvunda of Eṅgareyaballi, having laved the feet of Vāmaśakti Pandita, Āchārya of the establishment of Kali-dēva-svāmi, with pouring of water granted for as long as the moon shall endure a pious foundation on *sarvanamasya* tenure, immune from all conflicting claims, (comprising) a gravel-field of one *mattar* west of the village (and) east of the stone-heap, and a paddy-field of one hundred *kamma* at the eastern corner of the Konnaṣageṛe used by the town, and two dwelling-houses south of (the sanctuary of) the god

(Lines 24-28 a prose formula of the usual type)

(Verse 5 a common Sanskrit verse)


¹ Cf. *divāñichara-dhavaṇam*, above, Vol. XII, p. 269. The phrase probably refers to the *Dīpāvalī* or *Dīvāñi* festival, from *Asvina* kr. 14 to *Kārttika* su. 2

No 10—ARASIBIDI INSCRIPTION OF THE REIGN OF SOMESVARA I SAKA 969

BY LIONEL D BARNETT.

Arasibidi, the ancient Vikramapura, is a decayed village in the Hungund taluka of Bijāpūr District, situate in lat. 15° 54' and long 75° 58' (cf *Ind. Ant*, Vol 30, p 260) Its name is written as *Arsubidda* on the Indian Atlas sheet 58 and the Hyderabad Survey sheet 30 In the local temple known as the Sūlegudi was found a broken tablet containing the present record, an ink-impresion was prepared for the late Dr. Fleet, which is now in the British Museum, and from it I now edit the text

The upper part of the stone is decorated with some sculpture Immediately over the inscribed area, on a plinth, is a figure of a squatting Jina, with a cow and sucking calf on his proper left, between two columns, and above this is a series of architectural divisions culminating in a vase-shaped *sikhara* The inscribed area below is about 2 ft 2½ in broad and 2 ft 2 in. high, but a line or two at the bottom is lost.—The character is a fair Kanarese of the period, the letters vary from ½ in. to ⅔ in. in height. The *ri* of *rishyargga*[*m**] in l 8 is denoted

by a modified *ri* with a tail attached —The language is Old Kanarese prose, except for the Sanskrit verse-formula of which the first two letters appear on l 22 The archaic *l* is changed to *l*, except in *eppattara* (l 12, for *ēlp*°, through *ērpp*°) The word *surugi* (l 7) is of some lexical interest

The record, after referring itself to the reign of Trailōkyamalla-dēva, i e Sōmēśvara I (ll. 1-4), relates that Akkā-dēvi, while in the camp around the fortress of Gōkāge,¹ made a grant of lands to the Gonada-bedangi² Jain temple at Vikramapura, for the maintenance of the establishment and of the attached friars and nuns, among whom special mention is made of Nāgasēna Pandita of the Hogari³ Gachchha of the Varasēna Gana of the Mūla Sangha (ll. 4-9) The rest of the inscription is taken up with the details of the endowment, among these we learn that some of the land was purchased from Dadigarasa (l 17), who was very possibly a member of the Bappura family which has left a record of its history in the Sūdi inscription no. K. (above, Vol. XV, p 106, cf *Ind Ant*, Vol XXX, p 266)

The date is given on ll 9-11 as Śaka 969, the cyclic year Sarvajit, the new-moon of Chaitra, a Sunday, an eclipse of the sun These details are perfectly regular The given *titni* corresponded to Sunday, 29 March, A D 1047, on which day it ended 6 h 14 m after mean sunrise⁴ On the same day, at 5 h 5½ m after mean sunrise, there was an eclipse of the sun (*Indian Calendar*, p 121)

The following place names are mentioned Gōkāge (l 6), Vikramapura (ll 6, 13), the Kīrukādu Seventy (ll 11-12), Gānada Hālūr (l 12), Muruvadina Pālu (l 13), Rāyagatte (l 15), the tank of Kappadi (l 18), Benares (l 19) Gōkāge is the modern Gōkāk, the headquarters of the Gōkāk taluka, in Belgaum District, situate in 16° 10' lat and 74° 49' long. Vikramapura is Arasibidi (see above) On Kīrukādu see *Ind Ant.*, Vol XXX, p 259-ff Gānada Hālūr is given on the Indian Atlas as "Ganudihal," about 3 miles SE of Arasibidi in lat. 15° 52½' and long. 76° 1' (cf *ibid*, p 261) The other local names I cannot trace


¹ See *Dyn Kan Distr*, pp 435, 439 Dr Fleet understood the words *suttirāda* to mean "beginning," which is possible, but not necessary

² This title is evidently derived from Akkā dēvi's title *gunada bedangiyar*, and shows that the temple was under her especial patronage

³ This name occurs also, in the older form *Pogari*, in *Ind Ant*, Vol XIX, p 272, and *Ep Carn VII* 1. Sk

⁴ I have to thank Mr R Sowell for his kindness in verifying my calculations

TEXT.¹

- 1  Svasti samasta-bhuvan-āśraya Śrī-Pṛithvi-vallabha mahārājādhirāja
paramēśvara-pa-
- 2 ramabhattāraka Satyāśraya-kula-tilaka Chāluky-ābharāṇa śrīma[t*]-Trailōkyama-
- 3 Ila-dēvara vijaya-rājyam=uttarōttar-ābhivṛi(vṛi)ddhi-pravarddhamānam-ā-chamdr-
ārka-tā-
- 4 ram-baram saluttam-ire [I*] Svasti ari-nri(nṛi)pa-makuta-ghatita²-charaṇ-āravi-
(vi)mdeyar=Ggamgā-snāna-
- 5 pavitreyar-ddīn-ānātha-chi(chi)ntāmaṇigal=ēka-vākje[ya*]r=ggunada bedamgiyṛ=rappa
śrīmad-A-
- 6 kkā-dēvi[ya*]r Gōkāgeya kōteya vu(su)tt-irdda bidinalu Vikramapurada
Gopada-bedamgiya
- 7 Jm-ālayakke khaṇḍa-sphutita-sudhā-kaimmakam gandha-dhūpa-dīpakam
sarugiga[m] Mūla-samga(gha)-
- 8 Va[ra*]sēna-gaṇada Hogariya gachchada Nāgasēna-panditargga[m*] all-irppa
rūshiyargga[m*] ajiya-
- 9 rgga[m*] āhāra-dānakkam ajiyara kappadak[k*]am kuduva bhūmi Sa(śa)ka-
varsha 969 neya
- 10 Sarvvaṇit-samvatsarada Chaim(chai)trad=amāsyē Ādityavāradamdina sūryya-gra-
- 11 haṇa-nimittam dhārā-pūrvvakam mādi nagaradh(d)=anubhavaṇe(ne?) mukhyam=
āgi Kisu-
- 12 kād=eppattara baliya sarvva-namasyam-āgi bitta bādam Gānada Hālūr=omdu
- 13 Vikramapurada yīśānyada des[e*]y[im*] tōmtam mattar=omdu ūrim temka
Muṇuvadina pā-
- 14 la nairiyada deseyim pandita-Nāgadēvamge sarvva-namasya marita³ pamn-
neradu allim temka
- 15 paṛekāra Kētōjamge sarvva-namasya mattar=irppatta-nālku ūrim badaga Rāya-
gaṭteyim
- 16 mūda paṛekāra Kētōjamge tōmta mattar=omdu allim paduva kalkutiga
Sūrōjamge sa-
- 17 rbba-namasyam mattaru panneradu tōmṭa mattar=omdu Dadigarasana kayyalu
māru-goṇdu dēvargge koṭ[ta]
- 18 bhūmi Kappadiya keṛeyim temka manneya-v[o]ladalu sarvva-namasya mattaru
50 [||*]
- 19 I(1) dharmmamam sva-dharmmadim rakshishu(su)davar Vāranāsīyalu ondu kōti
kavileyu-
- 20 mam vēda-pālanar-appa br[ā*]hmanarge koṭṭa pha[la]mam paḍavar I(1)
dharmmaman-aḷidava-
- 21 r ā sthānadol-anitu kavileyuman=anirpe(tu) brāhmaṇar[umam]
- 22 sā* || Sāmā[nyō-yam]

¹ From the ink-impression² The engraver has written *ghata*, and added *ṭ*: in smaller script under the line.³ Read *mattar*.

TRANSLATION.

(Lines 1-4) While the victorious reign of—hail!—the asylum of the whole world, favourite of Fortune and Earth, great Emperor, supreme Lord, supreme Master, ornament of Satyaśraya's race, embellishment of the Chālukyas, king Trailōkyamalla, was advancing in a course of successively increasing prosperity, (*to endure*) as long as moon, sun, and stars —

(Lines 4-9.) Hail! she whose foot-lotuses are touched by the diadems of opponent kings, who is pure through bathing in the Ganges, a wishing-jewel to the distressed and masterless, uniform in speech, adorned with virtues, Akkē-dēvi, in the camp around the fortress of Gōkāgē, granted land for (*the expenses of*) plastering the broken and burst (*masonry*) of the Gonada-bedangi Jina temple at Vikramapura, and for (*the supply of*) scent, incense, and lamps, and for *sarugi*,¹ and for the maintenance of Nāgasēna Pandita, (*a friar*) of the Hogariya Gachchha of the Varasēna Gana of the Mūla Sangha, and of the friars and nuns residing there and for the cloaks of the nuns —

(Lines 9-18) The lands given (*by her*) to the god, which she purchased of Dadigarasa, on Sunday, the new-moon day of Chaitra in the cyclic year Srvvajit, the 969th (*year*) of the Śaka era, on the occasion of an eclipse of the sun, with the performance of pouring of water, were · Gāpada Hālār, a town forming part of the Kisukādu Seventy, granted on *sarva-namasya* tenure, in its entirety,² with usufruct of the citizens (?), one *mattar* of garden on the north-east of Vikramapura, south of the town, on the south-west of the Muṣuvadu Waste-land, twelve *mattar* on *sarva-namasya* tenure for Pandita Nāgadēva; to the south thereof, twenty-four *mattar* on *sarva-namasya* tenure for the drummer Kētōja; north of the town, east of Rāyagaṭṭe, one *mattar* of garden for the drummer Kētōja; on the west thereof twelve *mattar* on *sarva-namasya* tenure (*and*) one *mattar* of garden for the stone-mason Sūrōja, (*furthermore*), 50 *mattar* on *sarva-namasya* tenure in the estate of the seignory south of the Kappadi tank.

(Lines 19-21 a prose formula of the usual type.)

(Lane 22 · the beginning of a common Sanskrit verse.)

No 11 —THE BRAHMA-SIDDHANTA OF BRAHMAGUPTA (A.D 628)

WORKING TABLES FOR COMPUTATION OF ANCIENT DATES BY THE TRUE, OR APPARENT, MOTIONS OF SUN AND MOON

BY ROBERT SEWELL (I C S, RETIRED)

A continuation of the author's "Indian Chronography"

311. In para 257 of my article on "*The true longitude of the sun in Hindu astronomy, the Siddhānta-Śrōmanī*" (*above*, Vol. XIV, p 241), and again in a later article on *The Siddhānta-Śrōmanī*, § 271 (Vol. XV, pp 159 sqq), I discussed the question of the values assigned in the seventh century A.D. by Brahmagupta to the twenty-four base-sines of angles in the quadrant, and expressed the opinion that when, but not until, definite assurance was obtainable that the values stated in the only available copies of the *Brahma-Siddhānta* were³ really those fixed by its author, working Tables framed according to its postulates might safely be prepared for the computation of ancient dates.

¹ This term occurs elsewhere, e.g. in *Ep. Carn. II (Śravana Belgola)*, No 56, p 52.

² Literally, "one."

³ One MS. copy in the India Office, London, and Benares printed edition

In response to my appeal Mr G R Kaye (Curator, Board of Education, Simla) has been kind enough to assist me. He tells me that there can be no doubt but that the values given for the several base-sines in the edition of the *Brahma-Siddhānta*, printed and published in Benares, are correct, and that Brahmagupta certainly made his calculations with a radius (sin 90°) of 3270', discarding that of 3438', which seemingly had been in use in India since the time of the Greeks.¹ Mr Kaye went fully into the subject in a very learned article, "Ancient Hindu Spherical Astronomy" published in the *Journal of the Asiatic Society of Bengal* in 1919 (New Series, Vol XV, No 3), which contains (Table 8, p 187) a list of the sine values as determined by the authors of the *Paulīsa*-, *Ārya*-, and *Brahma-Siddhāntas*. He points out that, when properly applied, the equations of the sun's and moon's centres obtained from the sine-values of Brahmagupta agree with those derived from the values assigned by the other authorities.

Accordingly I have prepared the Table of Brahmagupta's sines and resulting base-equations of the sun's centre (Table LXXXIX below), and a comparison between these and the equations of the *Siddhānta-Śrōmanī* (Table XLVII above, Vol XIV, col. 9, and Prof Jacobi's Tables, XXIV above Vol I) proves that there is only a very trifling difference whether we use Brahmagupta's, or the older—and later—sine-values. By the *Siddhānta-Śrōmanī*, with radius 3438', the sun's greatest equation that of 96° = 2° 10' 31", exact. By the *Brahma-Siddhānta*, with radius 3270', it = 2° 10' 31" 19. We may therefore safely use Table LXXXIX (below)² and Table LIX (above, Vol XI) for the sun's and moon's equations by the *Brahma-Siddhānta*.

312 The *Brahma-Siddhānta* was composed by Brahmagupta in A D 628 and is said to have been extensively used in some parts of India, its principal rival being the *Ārya-Siddhānta* of Āryabhata, known in later years as the *Laghu-Ārya* to distinguish it from the *Mahā-Ārya-Siddhānta* of the tenth century. This last, called also the *Second Ārya-Siddhānta*, seems to have had no great following. The *Rājamrigāṇha*, an astronomical work of A D 1012 introduced, according to the information available to the late Sankarā Bālikūshna Dikshī,³ some important changes into the system of Brahmagupta, but unfortunately no complete copy of it has yet been obtained, and the necessary particulars are not to be found in those fragments which have come to light. It is not possible therefore to frame any accurate Tables for calculation by the *Rājamrigāṇha*, and we must rest satisfied with the assurance of Mr S B Dikshī³ that the *Siddhānta-Śrōmanī* is the same as the *Rājamrigāṇha* in the matter of calculation of a *pañchāṅg*. Tables for use by the former have already been published by me, comprising the period A D 1100-1750 (above, Vol XV).

All the authorities appear to arrive at similar or almost similar results in their computation of the lunar tithis, when worked by the true or apparent motions of sun and moon, but, since they differ in their estimate of the position of the sun's apsis at a given date, they necessarily differ somewhat in their estimate of the moment in each year when the true sun reaches long 0°, the moment, that is, of "true Mēsha-samkrānti". This difference leads to differences in the lengths of the true solar months, and consequently to differences in the intercalation and suppression of true lunar months, which differences, again, occasionally cause differences of a whole lunar month in the beginning of the luni-solar year and differences in the names of some of the lunar months therein.

¹ It would be interesting to learn his reason for the change. Later Indian astronomers reverted to the radius of 3438', which is correct. With $\pi = 3.14159$ the radius = 3437.74967. Brahmagupta's radius 3270 implies a ratio $\pi = 3.303$. The ratio according to Archimedes (BC 250) was 3.14286. The ratio $1/\sqrt{10}$ mentioned in the *Sūrya-Siddhānta* = 3.16228.

² Or Table XLVII (above, Vol XIV), col 9, also Professor Jacobi's Tables XXIVA, XXIVB (Vol. I).

³ *Indian Calendar*, p 8.

But we are now better able to deal with these matters than before. Dates can be easily computed by the true motions of sun and moon according to the *Sūrya-Siddhānta* for the whole historical period from A D 300 to 1900 (*Indian Calendar*)¹, according to the *Ārya-Siddhānta* from A D. 900 downwards (*above, Vol XVI*), according to the *Brahma-Siddhānta* (*the present paper*) from A D 600 to 1200, and according to the *Siddhānta-Śrōmanī*, *Rājamerigāṅka* and other works of the time of Bhāskarāchārya from A D 1100 to 1750 (*above, Vol XV*), these periods comprising the outside limits of use.

And, as regards computation by the mean motions of sun and moon, which system is believed to have been in universal use down to about A D 1100, and perhaps in some places to a considerably later date, we now have Tables for work by the *Ārya-Siddhānta* from A D 500 to 1400 (*above, Vol XVII*), while I hope to be able to publish here after a set of similar Tables for the *Brahma-Siddhānta*, also embracing the outside period of use.

All these Tables are framed on the same system, so as to enable calculation to be made as easily and rapidly as possible.

Elements of the Brahma-Siddhānta

313 (i) The length of the mean solar sidereal year is 365 2584375 days, or 365^d 6^h 12^m 9^s. The *Siddhānta-Śrōmanī* adhered to this estimate.

(ii) Brahmagupta's sines of angles of the quadrant differ from those of the other authorities. His sine of 90°, the radius, = 3270' instead of 3438'. His sine of 3° 45' = 214' instead of 225'. The 24 base-sines are given in Table LXXXIX below.

(iii) The equations, however, which are based on these sine-values are practically the same as those of the *Siddhānta-Śrōmanī* (*compare Table XLVII above, Vol XIV, col 9, and Table LXXXIX below*). Tables LV, LVI, LIX (*above, Vol XV*) may be therefore used as well for the *Brahma-Siddhānta* as for the *Siddhānta-Śrōmanī*.

(iv) The greatest equation of the sun's centre, that of 90°, is, in 10,000ths of the circle, 60 425925. The greatest equation of the moon's centre is, in similar measurement, 139 858101852. The sum of the two is 200 284027.

(v) The epoch of the Kaliyuga era was mean sunrise, taken as 6 A M, on Friday, 18 February, B C 3102, that moment being 0^h 0^m 0^s Lankā time. This was the moment of mean Mēsha-samkrānti, when the mean sun's centre reached long. 0°. True Mēsha-samkrānti, when the true sun's centre reached long 0°, occurred on Tuesday, 15 February, B C. 3102, at 19^h 52^m 21^s 5 after mean sunrise at Lankā.

(vi) The circumference of the sun's epicycle is 13° 40', that of the moon 31° 46'. The epicycles are not contracted at any point. In this the *Siddhānta-Śrōmanī* concurs (*Jacobi, Vol I above, p 441*).

(vii) The line of apsides of the sun's orbit has a constant forward shift, the perigee-point (on the longitude of which my calculations are based) moving 0" 144 per ann, or 14" 4 in a century. According to the *Siddhānta-Śrōmanī* the movement is more rapid, amounting to 1" 044 per ann (*Jacobi, op. cit.*).

(viii) The *sōdhya*, or time-interval between true and mean Mēsha-samkrāntis, was, in K.Y 0 or at the epoch of the Kaliyuga era, according to Dr Schram,² 2^d 171971 or 2^d 4^h 7^m 38^s 5. With this the *Siddhānta-Śrōmanī* agrees. But in later years the *sōdhya*, as postulated by the two authorities, differs in value owing to the difference between the two *Siddhāntas* in their estimate of the movement of the sun's apsis (*See vi above*).

¹ Also by the *Indian Chronology* of Dewan Bahadur L. D. Swamikannu Pillai, M A, whose Tables are framed on a different system.

² *Indian Chronography*, § 39 D, p 16.

(ix) The position of the sun's apsis (perigee) at K.Y 0, the epoch of the Kaliyuga, was $257^{\circ} 45' 36''$,¹ and his mean anomaly was $102^{\circ} 14' 24''$, or, in 10,000ths of the circle, 284 0

(x) The position of the moon's apsis (perigee) at the same moment was $305^{\circ} 29' 46''$ ²; and her mean anom. was $54^{\circ} 30' 14''$, or, in 1,000ths of circle, 151 399691358

(xi) The sun's mean velocity (he is treated as a planet) and the length of the mean solar year being the same both by the *Brahma-Siddhānta* and the *Siddhānta-Sirōmani*, his mean long. at any moment must be the same by both, and so also the length of the mean solar month. But the two authorities are not in exact accord as to his true long. and the length of the true solar month

Shift of sun's apsis The śōdhya Length of true solar year

314 The length of the mean solar year being the same, viz $365^d 6^h 12^m 9^s$, by both the *Brahma-Siddhānta* and the *Siddhānta-Sirōmani*, the first portion of § 273 above (Vol XV) and accompanying Table A apply as well to the former as to the latter. But for the latter portion that section and its Table B, the following must be substituted when dealing with the *Brahma-Siddhānta*, the two authorities not being in accord as concerns the matter in question

315 As stated above, the sun's perigee-point according to the *Brahma-Siddhānta* advances annually $0^{\circ} 144'$ along the ecliptic, and in consequence of this shift the true sun's velocity at long 0° is a little greater every year than the year before, i.e. the true sun reaches long. 0° , or the moment of true Mēsha-samkrānti occurs, a little earlier each year. In every year there is a slight increase in the distance and time-difference (our *śōdhya*) between the mean and true suns at that point of the orbit. Dr Schram has carefully calculated the value of this *śōdhya* at the moment of true Mēsha-samkrānti at the beginning of several millenniums, and his results for the period embraced in my general working Table LXXXII are stated in the following Table B

TABLE B
VALUE OF ŚŌDHYA BY THE BRAHMA-SIDDHĀNTA

K Y year expired	A.D.	EXACT VALUE OF ŚŌDHYA AT BEGINNING OF CENTURIES				
		days and decimals.	d	h	m	s
3700	599-600	2 1729145	2	4	8	59 8128
3800	699-700	2 1729400	2	4	9	2 0160
3900	799-800	2 1729655	2	4	9	4 2192
4000	899-900	2 1729910	2	4	9	6 4224
4100	999-1000	2 1730165	2	4	9	8 6256
4200	1099-1100	2 1730420	2	4	9	10 8288
4300	1199-1200	2 1730675	2	4	9	13 0320

One result of this shift of apsis is that, by the *Brahma-Siddhānta*, the true sun reaches the 0° point of long. $0^{\circ} 022032'$ earlier every year than the year before, and in consequence the length of the true solar year, or the time needed for the true sun to travel from true Mēsha-samkrānti

¹ Jacobi, *above*, Vol I, p 442, § 83, where he gives the place of the apsis (apogee) as $77^{\circ} 45' 36''$. See also E. Burgess's "*Sūrya-Siddhānta*"

² Moon's apogee given by Jacobi as $125^{\circ} 29' 46''$.

in one year to true Mēsha-samkrānti in the next, is (365^d 6^h 12^m 9^s - 0^s 022032) 365^d 6^h 12^m 8^s 977968 [The exact moment of true Mēsha-samkrānti in each year from A D 599 to 1200 is given in the general Table LXXXII below, cols 13-17. It can be tested by the use of Table A, § 273, referred to above, and Table B here given, using the "longer rule" stated in § 273 or in *Indian Chronography*, p 61]

Another result of the shift is that the sun's mean anomaly, or the mean sun's distance from the sun's perigee-point, decreases every year by 0^o 144 or 14[′] 4 in a century. Reckoning in 1,000ths of circle for valuation of our *c* (sun's mean anom) in the Tables, 14[′] 4 = 0 01. The value of *c* therefore decreases 0 01 in a century, and this decrease has to be taken into account from K. Y. 0, the epoch of the Kaliyuga. This has been done in the preparation of the Tables which follow.

The increase of a, b, c, in centuries, years, days and fractions of days.

316 Following on what has been stated, we learn that Tables LIVA and B, which deal with the periodical increases of *a*, *b* and *c* according to the *Siddhānta-Śrōmanī*, may safely be used for calculation by the *Brahma-Siddhānta*, with the one reservation as to the increase of *c* in a century. *a* being the distance of mean moon from mean sun, and the *longitude* of the mean sun not being affected by the shift of apsis, but only his *mean anom*, or distance from the point of the apsis, it appears that the rate of increase of *a* must be same by both authorities.

As to the rate of increase of *c* it is, by the *Siddhānta-Śrōmanī*, centennially less by 0 0805 (§ 273 above), and this was taken into account in the preparation of the heading of Table LIVA, where a footnote is appended shewing what the rate of increase would be per century if no such deduction had been made. This rate is, in thousandths of a circle, 997 690008075 in a century of 36525 days, and 0 427795618 in a century of 36526 days. By the *Brahma-Siddhānta*, the centennial decrease in the sun's mean anomaly being 0 01, the amount of increase of *c* per century is, for a century of 36525 days, 997 678896964, and for a century of 36526 days is 0 416684507. The difference between the two authorities in shorter periods may be ignored except in some extraordinarily close case. If it is ever needed, the increase in *c* in one year may be reduced by 0 0001 from the Table quantity.

Otherwise Tables LIVA and B stand good for calculations by the *Brahma-Siddhānta*.

The values of a, b, c at the beginning of K Y 3700

317 The general Table LXXXII below begins from the beginning of K Y 3700 expired. Table LXXXVI states the value of *a*, *b*, *c* at that moment, and at the similar moment at the beginning of subsequent centuries. It is necessary therefore to explain how these figures were calculated.

(1) *The value of a (distance of mean moon from mean sun) in K Y 3700*. According to Hindu astronomers mean moon and mean sun were in conjunction at the moment of mean Mēsha-samkrānti in K. Y. 0, the epoch of the Kaliyuga, or, in other words, at that moment *a* = 0. In the 37 succeeding centuries there were 32 common and 5 defective centuries. Taking the century values of *a* given in the heading of Table LIVA and multiplying for 32 common and 5 defective centuries, we arrive at the figure 6567 108945284 as the value of *a* at the beginning of the 37th century K Y., whole revolutions of 10,000 each being omitted. From this figure has to be deducted,—according to the working system of the *Indian Calendar*, which follows Largeteau and Jacobi,—the sum of the greatest equations of sun and moon, viz 200 284027 (above § 313, *v*). This gives us the value of *a* at the beginning of K Y 3700 (expired) as 6366 824917506¹

¹ Professor Jacobi differs by about 17 units. He gives the figure 6384 0 (*Fol XI above, p 167, Table IXA*). I can give no explanation of the reason for this, and can only state fully, as in the text, my bases of calculation.

Now this value stands for mean sunrise of Sunday, 22 March, A D 599, i.e. for the sunrise succeeding the moment of occurrence of mean *M̐shī-samkrānti* in K Y 3700, but in all my Tables the calculation is for mean sunrise on the actual day of that occurrence, and we have therefore to deduct one day's value of a (i.e. 333 631985412—Table LIVA above) from the above estimate. This done, we have, for mean sunrise on Saturday, $a = 6028 192932094$

(i) *The value of b (moon's mean anom) at the same moment.* At the epoch of the Kalyuga the moon's mean anom was, as stated above (§ 313, x), in 1,000ths of a circle, 151 399691358. Using the century figures of b in the heading of Table LIVA, and multiplying for 32 common and 5 defective centuries, it is found that, excluding whole revolutions of 1,000 each, the result is 604 144838202. Adding the value of b at K Y 0, as above, we have at beginning of K.Y. 3700, for the value of b , 755 514529560¹. But this (see above, i) was its value at mean sunrise on Sunday, 22 March, A D 599. Deducting one day's value of b (36 291649786) the figure for mean sunrise on Saturday, 21 March, amounts to 719 252579774.

(ii) *The value of c (the sun's mean anom) at the same moment.* The correct increase of c by the *Brahma-Siddhānta* in centuries of 36525 and 36526 days has been given above in the latter part of § 316. Multiplying those quantities for 32 common and 5 defective centuries, and discarding whole revolutions of 1,000 each, we arrive at the increase, after 37 centuries, of 1 728389044. To this has to be added the value of c at K Y 0 (above, § 313, x), i.e. 284 0. The value of c , therefore, at mean sunrise of Sunday 22 March, A D 599, was 285 728389044². Deducting the c for one day (2 737787543) we have finally, for mean sunrise on Saturday, 21 March, $c = 282 990601501$.

The entries, therefore, for the aforesaid Saturday of K Y 3700 in Table LXXXVI below are

$$a = 6028 1929$$

$$b = 719 2529$$

$$c = 282 9906$$

The rest of that Table follows by addition of the proper century values

Duration of true solar months

318 It has been mentioned above (§ 313, xi) that, while the length of the mean solar month must be the same both by the *Brahma-Siddhānta* and the *Siddhānta-Śīrōmanī*, the lengths of the true solar months according to the two authorities differ because of their different estimate of the shift of the sun's apsis. Thus in K Y 4000, the middle year of my general Table LXXXII below, the sun's perigee-point according to the *Siddhānta-Śīrōmanī* was at long 258° 55' 12", while by the *Brahma-Siddhānta* it was at long 257° 55' 12". Hence the velocity of the true sun (he is always considered as a planet) at the several true solar *samkrāntis*, when the true sun's centre enters the several signs, is not the same by the two authorities quoted. And this has necessitated the preparation of a new Table (LXXXIII below), giving the lengths of the true solar months and increase of a , b , c therein individually and collectively according to the *Brahma-Siddhānta*.

There being in K Y 4900 a difference of only 4' 48" between the positions of the sun's perigee, as estimated by the *Brahma-Siddhānta* and by the *First Ārya-Siddhānta*, the former placing it at 257° 55' 12" and the latter at 258°, it was considered sufficiently safe to use Table XLIX (above, Vol. XIV) for the true sun's velocity at different points of his orbit in hours and minutes, and Table L-A for seconds. His true long at each *samkrānti* was computed from his known mean longitude + the equation of the centre, which was calculated in each case

¹ Professor Jacobi's figure for this is 755 1, in my notation, against my 755 5

² This agrees with Professor Jacobi's figure, which, measured from perigee and in my notation, is 285.7.

Thus was obtained the length of each month in days, hours, etc. For the increase of a , b , c during the periods so determined Tables LIVA and B, which are applicable to the *Brahma-Siddhanta* as well as to the *Siddhanta-Sirōmani*, were used.

Note on work for the nakshatra

319. In our method of work s = the true sun's longitude and t = the *tithi*-index (which shews the true moon's distance from the true sun) at the given moment $s + t$ = the *nakshatra*-index n , which gives the true moon's place in the heavens, or her apparent longitude. The value of t is ascertained by the ordinary calculation for a date. The value of s has to be found.

By the *Ārya-Siddhanta* the formula for finding s , c being the sun's mean anom. at the given moment, is $s = (c \times 10) + 7226 - \text{eqn. } c$, where the factor 7226, which represents in 10,000ths of circle the long of sun's perigee plus the sun's greatest equation, is a constant¹

By the *Sūrya-Siddhanta*, as exemplified in the *Indian Calendar Tables*, the numerical factor is not 7226, but varies in the period A.D. 900 to 1900 from 7206 5077 to 7207 4035 being fixed for rough work at 7207. The variation is due to the postulated shift of the sun's perigee-point.

By the *Siddhanta-Sirōmani* there is, for the same reason, a variation in the numerical factor, viz. from 7252 6466 in A.D. 900 to 7259 0910 in A.D. 1700,—roughly from 7253 to 7259.

By the *Brahma-Siddhanta* the numerical factor varies from 7224 5370 in A.D. 600 to 7225 2037 in A.D. 1200 (the limits of the general Table LXXXII below) For rough work therefore by this authority the formula is $s = (c \times 10) + 7225 - \text{eqn. } c$

For more accurate work the value of c should be calculated (by the Tables) with decimals and instead of multiplying c by 10 its value should be changed from thousandths of circle (as in the Table-result) to ten thousandths by moving the decimal point one place to the right²; the value of eqn. c can be obtained from Table LVI with great accuracy, [and the numerical factor can be taken from the following summary.

K.Y. century.	A D century	Exact factor in formula	Roughly.
3700	599-600	7224 5370	} 7225
3800	699-700	7224 6481	
3900	799-800	7224 7592	
4000	899-900	7224 8703	
4100	999-1000	7224 9814	
4200	1099-1100	7225 0925	
4300	1199-1200	7225 2037	

Examples.

It is not necessary to give a number of examples of work by the present Tables. The system of calculation being exactly the same as that of the *Indian Calendar* and throughout the present series of articles, the examples already published for computation by other authorities

¹ See *Indian Calendar*, § 156 p 97, article on the *Siddhanta-Sirōmani*, above, Vol XV, § 273, "Note on work for the nakshatra", article on the *First Ārya-Siddhanta*, Vol XV above, § 302, and the several examples given in those papers

² Whole revolutions are not necessary for present purposes, and in our system when $a=10,000$ a whole synodic revolution of the mean moon has been completed

will suffice, the proper Tables being used, for work by the *Brahma-Siddhānta*. These Tables are specified in the following pages.

Examples have been given in all my foregoing papers, but perhaps the fullest series is to be found in the article on the *First Ārya-Siddhānta* (above, Vol. XVI).

Tables for calculation by the Brahma-Siddhānta

The system of work for computation of an Indian date will be readily understood by perusal of examples 2 to 11 appended to my paper (above, Vol. XVI) on the *First Ārya-Siddhānta*, but the Tables used are of course not all the same. The following list shews how accurate results by the *Brahma-Siddhānta* are to be obtained in calculation by the movements of true sun and true moon.

Table LXXXII below is the general working Table for the *Brahma-Siddhānta* for the period A. D. 599 to 1200 (K. Y. 3700 to 4300 expired).

For names of months and of nakshatras in different parts of India, see Table LXII above (Vol. XVI, "The First Ārya-Siddhānta").

For collective duration of mean lunar months see Table LXIIIA of the same article, or Table III, Part I, *Indian Calendar*.

Table LXXXIIIA below gives, by the *Brahma-Siddhānta*, the length of the true solar months and their collective duration, with the corresponding increases of a , b , c .

Table LXXXIIIB states the exact value of c and of "equation c " at the several true *samkrāntis*, or moments of the true sun's centre reaching the several signs.

Table LXXXIIIC shews the value of c and of "equation c " at the beginning of each century of the Kalyuga.

For the increase of a , b , c respectively in defective and common centuries, and in common years and Leap-years, see Table LIVA, heading, but note that by the *Brahma-Siddhānta* the increase of c in a defective century of 36525 days is 997 678896964 and in a common century of 36526 days is 0 416684507. Tables LIVA and B contain the necessary figures for days, hours, minutes and seconds.

Table LXXXIV gives the values of "equation b ," and Table LXXXV those of "equation c ," for easy calculation by whole numbers, corresponding respectively to Tables VI and VII of the "*Indian Calendar*," which stand for the *Sūrya-Siddhānta*.

For the more detailed values of "equation b " and "equation c " of moon and sun use Tables LV and LVI above, Vol. XV, as framed for the *Siddhānta-Sirōmani*.

For the indices of *tithis* (t), *karanas*, *yōgas* (y) and *nakshatras* (n) see Table VIII, "*Indian Calendar*," or Table LXVIII (above, Vol. XVI, "The First Ārya-Siddhānta").

For serial numbers of days of a year reckoned from January 1st use Table IX, "*Indian Calendar*," or Table LXIX (above, Vol. XVI, "The First Ārya-Siddhānta").

For conversion of *tithi*-indices and *tithi*-parts into time Table X, "*Indian Calendar*," is to be used, or Table LXX (above, Vol. XVI, "The First Ārya-Siddhānta").

For finding the week-day according to the European Calendar for any century from A. D. 0 to 2300 see Table LXXI (above, Vol. XIV, "The First Ārya-Siddhānta"), or Tables XLIA and B (pp. 176, 177, "*Indian Chronography*").

Table LXXXVI gives the values of a , b , c at the beginning of each century of the Kalyuga by the *Brahma-Siddhānta*.

Table LXXXVII gives the same for odd years of those centuries.

Table LXXXVIII states the daily sunrise values of a , b , c for a month previous to the day of *Mēṣa-samkrānti*.

Table LXXXIX sets forth the 24 base-sines of angles of the quadrant according to *Brahmagupta*, and the corresponding equations of the sun's centre.

TABLE LXXXII

CONSTRUCTION OF TABLE

The Table is constructed on the lines of Table I of the *Indian Calendar* and is to be used in the same way. The columns are numbered similarly.

Col 7. The *samvatsara*-name,—i.e. the name of the Jovian cycle,—of the year is given as determined by my previous calculations (*above, Vol XIII Table XLII*). Entries in italics point to cases where this *samvatsara*-name differs from that given to the same year by *Sūrya-Siddhānta* reckoning.

Col 8. Months noted in roman characters are intercalated (*adhika*) lunar months. Those in italics are suppressed (*ashaya*) months.

Cols 13, 19. Figures in brackets give the serial number of the day [measured from January 1st.

Col 23 a = distance, at mean sunrise, of mean moon from mean sun, or phase of moon stated in 10,000ths of circle, and reduced by the sum of the greatest equations of sun and moon so that calculation of the equations of b and c may always be additive.

Col. 24 b = mean anomaly of moon or mean moon's distance from perigee-point of apsis stated in 1,000ths of circle.

Col. 25 c = mean anomaly of sun or mean sun's distance from perigee, stated in 1,000ths of circle.

REMARKS

A.D 629-630, *cols. 19, 20* A very close case. The moment of true new moon was less than half a minute after mean sunrise at Lankā on Wednesday, 1st March. And the first *sukla tithi* of the year ended after mean sunrise on Thursday, 2nd March, which was therefore by rule the first civil day of the lun-solar year. If new moon had taken place more than half a minute earlier the first civil day of the year, "Chaitra sukla 1," would have been 1st March.

A.D 968-69, *col 8* At the Kumbha *samkrānti* the true moon was waning. The moment of the next, the Mīna, *samkrānti* occurred about 2½ minutes after the moment of true new moon, so that the true moon was waning at the Mīna *samkrānti*. Hence the lunar month Phālguna was intercalated. According to the 19-year sequence we should have expected an intercalation of the lunar month Chaitra next following. The sequence shows similar irregularities when examined by other authorities, but only very rarely.

A.D 974-75, *cols 19, 20* Close case. The 1st true new moon after the Mīna *samkrānti* occurred 3 minutes before mean sunrise at Lankā on 25th February A.D 974. That therefore was the day "Chaitra sukla 1."

A.D 963-64, 982-83, *col 8* In both these years an intercalation of the lunar month Śrāvana instead of Āshādhā would have been more in accordance with the 19-year sequence, seeing that Śrāvana was the intercalated month in A.D 1001 and 1020, but prior to A.D 963 at intervals of 19 years there had been eight intercalations of Śrāvana, and towards the close of such a run a change of conditions generally becomes apparent.

A.D. 1001-2, 1020-21, *col 8* See the previous note. If in these two years the conditions had made necessary an intercalation of Āshādhā, the 19-year sequence would have been uninterrupted.

A.D 1128-29, *col 8* By the *Brahma-Siddhānta* the intercalation of Phālguna was clearly demanded. See Remarks preceding Table LX (*above, Vol XV*), on the same year as worked by the *Siddhānta-Sirōmani*.

TABLE

GENERAL TABLE FOR CALCULATION

Conforming to Table I " Indian Calendar "

(See notes on

CONCURRENT YEAR								
Kali	Śaka.	Chaitrādi Vikrama	Mēshādi solar year in Bengal	Kollam	A D	JOVIAN SAMVATSARA		Intercalated (<i>adhika</i>) and suppressed (<i>kshaya</i>) true lunar months
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8
3701	522	657	6		599 600	50 Anala . .		
3702	523	658	7		*600 01	51 Pingala . .		3 Jyēshtha
3703	524	659	8		601 02	52 Kālayukta .		
3704	525	660	9		602 03	53 Siddhārthin .	{ 7 Āśvina 11 Māgha (<i>ksh</i>) }	
3705	526	661	10		603 04	54 Raudra . .		1 Chaitra
3706	527	662	11		*604 05	55 Durmatī .		
3707	528	663	12		605 06	56 Dundubhī		5 Śrāvana .
3708	529	664	13		606 07	57 Rudhurōdgārin		
3709	530	665	14		607-08	58 Raktāksha		..
3710	531	666	15		*608 09	59 Krōdhana		4 Āshādha .
3711	532	667	16		609 10	60 Kshaya .		.
3712	533	668	17		610 11	1 Prabhava .		
3713	534	669	18		611-12	2 Vibhava		2 Vaiśākha
3714	535	670	19		*612-13	3 Śukla		
3715	536	671	20		613 14	5 Pramōda		6 Bhādrapada
3716	537	672	21		614 15	6 Prajāpatī		
3717	538	673	22		615 16	6 Angirasa .		
3718	539	674	23		*616 17	7 Śrīmukha .		4 Āshādha .
3719	540	675	24		617 18	8 Dhāva .		.
3720	541	676	25		618 19	9 Yuvan		
3721	542	677	26		619-20	10 Dhātṛi .		3 Jyēshtha .
3722	543	678	27		*620-21	11 Īśvara . .		.

LXXXII.

BY THE BRAHMA-SIDDHANTA

the columns being similarly numbered
preceding page.)

COMMENCEMENT OF THE								
SOLAR YEAR			LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)					Kali
Day and month A D	Week-day	Time of true M̄śha saṁkrānti	Day and month A D	Week-day	a	b	c	
13	14	17	19	20	23	24	25	1
		H M S						
19 Mar (78)	5 Thur	1 6 0	3 Mar (62)	3 Tues	9932 8171	66 0032	233 7104	3701
18 Mar (78)	6 Fri	7 18 0	21 Feb (52)	1 Sun	147 1720	949 5390	205 6250	3702
18 Mar (77)	0 Sat	13 30 18	11 Mar (70)	0 Sat	181 8544	885 5324	256 9354	3703
18 Mar (77)	1 Sun	19 42 27	28 Feb (59)	4 Wed	57 5772	732 7766	226 1121	3704
19 Mar (78)	3 Tues	1 54 36	18 Feb (49)	2 Mon	271 9320	616 3122	203 5023	3705
18 Mar (78)	4 Wed	8 6 45	7 Mar (67)	0 Sat	9907 9825	516 0140	246 5994	3706
18 Mar (77)	5 Thur	14 18 54	24 Feb (55)	4 Wed	9843 7052	363 2681	215 7762	3707
18 Mar (77)	6 Fri	20 31 3	15 Mar (74)	3 Tues	9878 3876	299 1516	267 0865	3708
19 Mar (78)	1 Sun	2 43 12	4 Mar (63)	0 Sat	9754 1105	146 4956	236 2624	3709
18 Mar (78)	2 Mon	8 55 21	22 Feb (53)	5 Thur	9968 4653	30 0312	208 1780	3710
18 Mar (77)	3 Tues	15 7 30	12 Mar (71)	4 Wed	3 1477	966 0247	259 4884	3711
18 Mar (77)	4 Wed.	21 19 39	2 Mar (61)	2 Mon	217 5025	849 5604	231 4029	3712
19 Mar (78)	6 Fri	3 31 48	19 Feb (50)	6 Fri	93 2254	696 8045	200 5797	3713
18 Mar (78)	0 Sat	9 43 57	9 Mar (60)	5 Thur	127 9077	632 7980	251 8902	3714
18 Mar (77)	1 Sun	15 56 6	26 Feb (57)	2 Mon	3 6306	480 0421	221 0669	3715
18 Mar (77)	2 Mon	22 8 15	16 Mar (75)	0 Sat	9999 6810	379 7440	269 0395	3716
19 Mar. (78)	4 Wed	4 20 24	6 Mar (65)	5 Thus	9914 0358	263 2795	241 5542	3717
18 Mar (78)	5 Thur	10 32 33	23 Feb (54)	2 Mon	9789 7587	110 5236	210 7310	3718
18 Mar (77)	6 Fri	16 44 42	13 Mar (72)	1 Sun	9824 4420	46 5171	262 0414	3719
18 Mar (77)	0 Sat	22 56 51	3 Mar (62)	6 Fri	38 7959	930 0528	233 9559	3720
19 Mar (78)	2 Mon	5 9 0	21 Feb (52)	4 Wed	253 1507	813 5885	205 8705	3721
18 Mar (78)	3 Tues	11 21 9	11 Mar (71)	3 Tues	267 8331	749 5820	257 1810	3722

TABLE

CONCURRENT YEAR						JOVIAN SAMVATSARA		Intercalated (adhika) and suppressed (Lshaya) true lunar months
Kali	Saka	Chaitrādi Vikrama.	Mēshādi solar year in Bengal	Kollam	A D	Southern system	Northern system	
1	2	3	3a	4	5	6	7		8
3723	544	679	28		621-22	12 Bahudhānya . . .		7 Āsvina . .
3724	545	680	29		622-23	13 Pramāthin . . .		..
3725	546	681	30		623 24	14 Vikrama . . .		
3726	547	682	31		*624 25	15 Vṛisha . . .		5 Śrāvāṇa . .
3727	548	683	32		625 26	16 Chitrabhānu . . .		..
3728	549	684	33		626 27	17 Subhānu . . .		..
3729	550	685	34		627-28	18 Tārāṇa . . .		4 Āshādha . .
3730	551	686	35		*628-29	19 Pārthra . . .		.
3731	552	687	36		629 30	20 Vyaya . . .		.
3732	553	688	37		630 31	21 Sarvajit . . .		2 Vaiśākha . .
3733	554	689	38		631 32	22 Sarvadhārin . . .		.
3734	555	690	39		*632 33	23 Virōdhin . . .		6 Bhādrapada
3735	556	691	40		633 34	24 Vikṛita . . .		..
3736	557	692	41		634-35	25 Khara . . .		.
3737	558	693	42		635 36	26 Nandana . . .		4 Āshādha . .
3738	559	694	43		*636 37	27 Vijaya . . .		.
3739	560	695	44		637-38	28 Jaya . . .		.
3740	561	696	45		638 39	29 Manmatha . . .		3 Jyēshṭha . .
3741	562	697	46		639 40	30 Durmukha . . .		.
3742	563	698	47		*640 41	31 Hēmalamba . . .		7 Āsvina . .
3743	564	699	48		641-42	32 Vikamba . . .		.
3744	565	700	49		642 43	33 Vikārin . . .		.
3745	566	701	50		643 44	34 Śārvarin . . .		5 Śrāvāṇa . .
3746	567	702	51		*644-45	35 Plava . . .		..
3747	568	703	52		645-46	36 Śubhakṛit . . .		..

LXXXII—Contd

COMMENCEMENT OF THE								
SOLAR YEAR			LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)					Kali.
Day and month A D	Week-day	Time of true Mēsha sam-krānti	Day and month A D	Week-day	a	b	c	
13	14	17	19	20	23	24	25	1
		H M S						
18 Mar (77)	4 Wed	17 33 18	28 Feb (59)	0 Sat.	103 5560	590 8261	226 3577	3723
18 Mar (77)	5 Thur	23 45 27	18 Mar (77)	5 Thur.	9859 6063	496 5279	274 9303	3724
19 Mar (78)	0 Sat	5 57 36	8 Mar (67)	3 Tues	73 9612	380 0635	246 8449	3725
18 Mar (78)	1 Sun	12 9 45	25 Feb (56)	0 Sat	9949 6840	227 3076	216 0218	3726
18 Mar (77)	2 Mon	18 21 54	15 Mar (74)	6 Fri	9084 3664	103 3011	267 3321	3727
19 Mar (78)	4 Wed	0 34 3	4 Mar (63)	3 Tues	9860 0892	10 5451	236 5089	3728
19 Mar (78)	5 Thur	6 46 12	22 Feb (53)	1 Sun	74 4441	894 0800	208 4235	3729
18 Mar (78)	6 Fri	12 58 21	12 Mar (72)	0 Sat	109 1265	830 0742	259 7340	3730
18 Mar (77)	0 Sat	19 10 30	2 Mar (61)	5 Thur ††	323 4813	713 6100	231 6485	3731
19 Mar (78)	2 Mon	1 22 39	19 Feb (50)	2 Mon	199 2041	560 8540	200 8252	3732
19 Mar (78)	3 Tues	7 34 47	9 Mar (68)	0 Sat	9895 2545	461 5558	249-3979	3733
18 Mar (78)	4 Wed	13 46 56	26 Feb (57)	4 Wed	9770-9774	307 7999	218 5748	3734
18 Mar (77)	5 Thur	19 59 5	16 Mar (75)	3 Tues	9805 6597	243 7934	269 8851	3735
19 Mar (78)	0 Sat	2 11 14	6 Mar (65)	1 Sun	20 0146	127 3290	241 0922	3736
19 Mar (78)	1 Sun	8 23 23	23 Feb (54)	5 Thur	9895 7375	974 5731	210 9765	3737
18 Mar (78)	2 Mon	14 35 32	13 Mar (73)	4 Wed	9930 4199	910 5666	262 2870	3738
18 Mar (77)	3 Tues	20 47 41	3 Mar (62)	2 Mon	144 7746	794 1023	234 2015	3739
19 Mar (78)	5 Thur	2 59 50	20 Feb (51)	6 Fri	20-4975	641 3463	203 3783	3740
19 Mar (78)	6 Fri	9 11 59	11 Mar (70)	5 Thur	55 1799	577 3398	254 6887	3741
18 Mar (78)	0 Sat	15 24 8	28 Feb (59)	2 Mon	9930 9027	424 5838	223 8055	3742
18 Mar (77)	1 Sun	21 36 17	18 Mar (77)	1 Sun	9965 5851	360 5774	275 1759	3743
19 Mar (78)	3 Tues	3 48 26	7 Mar (66)	5 Thur	9841 3081	207 8213	244 3527	3744
19 Mar (78)	4 Wed	10 0 35	25 Feb (56)	3 Tues	55 6628	91 3571	216 2673	3745
18 Mar (78)	5 Thur	16 12 44	15 Mar (75)	2 Mon	90 3451	27 3506	267 5776	3746
18 Mar (77)	6 Fri	22 24 53	4 Mar (63)	6 Fri	9966 0680	873 8747	236 7545	3747

†† See "Remarks," above, on page preceding the Table.

TABLE

CONCURRENT YEAR.								Intercalated (<i>adhika</i>) and suppressed (<i>kshaya</i>) true lunar months.
Kal.	Saka	Chaitradī Vikrama	Mēshkī solar year in Bengal	Kollam	A. D	JOVIAN SAMVATSARA		
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8
3748	569	704	53		646-47	37 Śōbhana		4 Āshādha .
3749	570	705	54		647-48	38 Krōdhm . . . .		.
3750	571	706	55		*648-49	39 Viśvāvasu† . . . .		...
3751	572	707	56		649-50	41 <i>Plavanga</i>		2 Vaiśākha .
3752	573	708	57		650-51	42 <i>Kīlala</i> . . . .		.
3753	574	709	58		651-52	43 <i>Saumya</i>		6 Bhādrapada .
3754	575	710	59		*652-53	44 <i>Sādhārana</i> . . . .		.
3755	576	711	60		653-54	45 <i>Vrōdhakṛst</i> . . . .		..
3756	577	712	61		654-55	46 <i>Paridhāvin</i>		4 Āshādha .
3757	578	713	62		655-56	47 <i>Pramādin</i> . . . .		..
3758	579	714	63		*656-57	48 <i>Ānanda</i> . . . .		..
3759	580	715	64		657-58	49 <i>Rākshasa</i>		3 Jyēshtha .
3760	581	716	65		658-59	50 <i>Anala</i> . . . .		.
3761	582	717	66		659-60	51 <i>Pingala</i>		7 Āsaina .
3762	583	718	67		*660-61	52 <i>Kālayukta</i> . . . .		...
3763	584	719	68		661-62	53 <i>Siddhārthm</i> . . . .		.
3764	585	720	69		662-63	54 <i>Raudra</i>		5 Śrāvāṇa .
3765	586	721	70		663-64	55 <i>Durmatr</i> . . . .		..
3766	587	722	71		*664-65	56 <i>Dundubhi</i> . . . .		..
3767	588	723	72		665-66	57 <i>Rudhrōdgārm</i> . . . .		.
3768	589	724	73		666-67	58 <i>Raktāksha</i>		4 Āshādha
3769	590	725	74		667-68	59 <i>Krōdhana</i> . . . .		..
3770	591	726	75		*668-69	60 <i>Kshaya</i> . . . .		.
3771	592	727	76		669-70	1 <i>Prabhava</i>		1 Chaitra
3772	593	728	77		670-71	2 <i>Vibhava</i> . . . .		...
								5 Śrāvāṇa .

† 49 *Prabhava* was suppressed.

LXXXII—Contd

COMMENCEMENT OF THE								
SOLAR YEAR.			LUKI-SOLAR YEAR (MEAN SUNRIS ^E OF CIVIL DAY ON WHICH CHAITRA 4 TH UKLA 1 ST LANDS)					Kali
Day and month A D	Week-day.	Time of true MCsha sath-kranti	Day and month A D	Week-day	a	b	c	
13	14	17	19	20	23	24	25	1
		H M. S.						
19 Mar (78)	1 Sun .	4 37 2	22 Feb (53)	4 Wed	160 4229	758 1223	208 6691	3748
19 Mar. (78)	2 Mon.	10 49 11	13 Mar. (72)	3 Tues	215 1032	604 1237	250 9795	3749
18 Mar. (78)	3 Tues	17 1 20	1 Mar (61)	0 Sat .	90 8281	541 3679	229 1662	3750
18 Mar. (77)	4 Wed	23 13 29	18 Feb (49)	4 Wed	0906 5500	388 6119	198 3330	3751
19 Mar (78)	6 Fri .	5 25 38	9 Mar. (68)	3 Tues	1 2333	324 6053	249 6435	3752
19 Mar (78)	0 Sat. .	11 37 47	26 Feb (57)	0 Sat .	9876 9561	171 8494	218 8203	3753
18 Mar (78)	1 Sun .	17 49 56	16 Mar (76)	6 Fri. .	9911 6385	107 8429	270 1306	3754
19 Mar (78)	3 Tues.	0 2 5	6 Mar (65)	4 Wed	125 9934	991 3786	242 0453	3755
19 Mar (78)	4 Wed.	6 14 14	23 Feb (54)	1 Sun	1 7162	838 6227	211 2221	3756
19 Mar. (78)	5 Thur	12 26 23	14 Mar (73)	0 Sat	36 3986	774 6161	262 5325	3757
18 Mar (78)	6 Fri .	18 38 32	3 Mar (63)	5 Thur	250 7534	658 1518	234 4470	3758
19 Mar. (78)	1 Sun.	0 50 41	20 Feb (51)	2 Mon.	126 5863	505 3958	203 6238	3759
19 Mar. (78)	2 Mon. .	7 2 50	10 Mar (69)	0 Sat .	9822 5266	405 0977	252 1965	3760
19 Mar (78)	3 Tues .	13 14 59	28 Feb. (59)	5 Thur.	36 8815	288 6334	224 1110	3761
18 Mar. (78)	4 Wed.	19 27 8	17 Mar (77)	3 Tues. .	9732 9319	188 3353	272 6836	3762
19 Mar. (78)	6 Fri. .	1 39 17	7 Mar (66)	1 Sun .	9947 2867	71 8709	244 5982	3763
19 Mar (78)	0 Sat. .	7 51 26	25 Feb (56)	6 Fri. .	161 6415	955 4066	216 5129	3764
19 Mar (78)	1 Sun. .	14 3 35	16 Mar (75)	5 Thur	196 2239	891 4001	267 8232	3765
18 Mar. (78)	2 Mon	20 15 44	4 Mar (64)	2 Mon	72 0468	738 6441	237 0600	3766
19 Mar (78)	4 Wed. .	2 27 53	21 Feb (52)	6 Fri .	9947 7696	585 8882	206 1768	3767
19 Mar (78)	5 Thur.	8 40 2	12 Mar (71)	5 Thur.	9982 6410	521 6617	257 4873	3768
19 Mar (78)	6 Fri. .	14 52 11	1 Mar. (60)	2 Mon.	9858 1749	309 1257	226 6640	3769
18 Mar (78)	0 Sat. .	21 4 20	18 Feb. (49)	6 Fri .	9733 8977	216 3699	195 8407	3770
19 Mar (78)	2 Mon	3 16 29	8 Mar (67)	5 Thur	9768 5801	152 5632	247 1512	3771
19 Mar. (78)	3 Tues.	9 28 38	26 Feb (57)	3 Tues.	9982 9349	35 8889	216 0679	3772

TABLE

CONCURRENT YEAR								Intercalated (<i>adhika</i>) and suppressed (<i>ishaya</i>) true lunar months
Kal	Saka	Chaitradī Vīkrama	Mēshūdi solar year in Bengal	Kollam	A D	JOVIAN SAMVATSARA		
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8
3773	594	729	78		671 72	3 Śukla		
3774	595	730	79		*672 73	4 Pramōda		
3775	596	731	80		673 74	5 Prajāpati	4 Āshādha	
3776	597	732	81		674-75	6 Angirasa		
3777	598	733	82		675 76	7 Śrīmukha		
3778	599	734	83		*676 77	8 Bhāva	2 Vaiśākha	
3779	600	735	84		677-78	9 Yuvan		
3780	601	736	85		678-79	10 Dhātṛi	7 Āśvina	
3781	602	737	86		679 80	11 Īvara		
3782	603	738	87		*680 81	12 Bahudhānya		
3783	604	739	88		681 82	13 Pramāthun	5 Śrāvana	
3784	605	740	89		682 83	14 Vikrama		
3785	606	741	90		683 84	15 Vṛisha		
3786	607	742	91		*684 85	16 Chitrabhānu	3 Jyēshṭha	
3787	608	743	92		685 86	17 Subhānu		
3788	609	744	93		686 87	18 Tūraṇa		
3789	610	745	94		687 88	19 Pārthiva	1 Chaitra	
3790	611	746	95		*688 89	20 Vijaya		
3791	612	747	96		689 90	21 Sarvajit	5 Śrāvana	
3792	613	748	97		690 91	22 Sarvadhārin		
3793	614	749	98		691 92	23 Virō lhin		
3794	615	750	99		*692 93	24 Vikṛita	4 Āshādha	
3795	616	751	100		693 94	25 Khara		
3796	617	752	101		694 95	26 Nandana		
3797	618	753	102		695 96	27 Vijaya	2 Vaiśākha	

LXXXII—Contd.

COMMENCEMENT OF THE								
SOLAR YEAR.			LUNI-SOLAR YEAR (MFAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).					Kali.
Day and month A. D	Week-day	Time of true M̄t̄sha-sam-kr̄anti.	Day and month A. D	Week-day.	a	b	c	
13	14	17	19	20	23	24	25	1
		H. M S						
19 Mar (78)	4 Wed.	15 40 47	17 Mar. (76)	2 Mon	17 6173	971 8924	270 3762	3773
18 Mar (78)	5 Thur.	21 52 56	6 Mar (66)	0 Sat .	231 9621	855 4281	242 2907	3774
19 Mar (78)	0 Sat .	4 5 5	23 Feb (54)	4 Wed.	107 6950	702 6722	211 4676	3775
19 Mar (78)	1 Sun .	10 17 14	14 Mar (73)	3 Tues.	142 3774	628 6656	262 7781	3776
19 Mar (78)	2 Mon	16 29 23	3 Mar (62)	0 Sat .	18 1001	485 9097	231 9548	3777
18 Mar (78)	3 Tues	22 41 31	20 Feb (51)	4 Wed.	9893-8230	333 1537	201 1315	3778
19 Mar (78)	5 Thur	4 53 40	10 Mar (69)	3 Tues	9928 5054	269 1472	252 4420	3779
19 Mar (78)	6 Fri .	11 5 49	27 Feb (58)	0 Sat .	9804 2283	116 3913	221 6188	3780
19 Mar (78)	0 Sat .	17 17 58	18 Mar. (77)	6 Fri .	9838 9106	52 4848	272 9292	3781
18 Mar. (78)	1 Sun. .	23 30 7	7 Mar (67)	4 Wed	53 2655	935 9205	244 8437	3782
19 Mar (78)	3 Tues	5 42 16	25 Feb (56)	2 Mon	267 6203	819 4561	216 7584	3783
19 Mar (78)	4 Wed.	11 54 25	16 Mar (75)	1 Sun. .	302 3027	755 4496	268 0688	3784
19 Mar (78)	5 Thur	18 6 34	5 Mar (64)	5 Thur	178 0255	602 6936	237 5456	3785
19 Mar (79)	0 Sat. .	0 18 43	22 Feb (53)	2 Mon	53 7384	449 9378	206 4223	3786
19 Mar (78)	1 Sun	6 30 52	12 Mar (71)	1 Sun. .	88 4308	385 9312	257 7328	3787
19 Mar (78)	2 Mon	12 43 1	1 Mar (60)	5 Thur	9964 1536	233 1752	227 1096	3788
19 Mar (78)	3 Tues	18 55 10	18 Feb (49)	2 Mon	9839 8765	80 4194	196 0863	3789
19 Mar (79)	5 Thur.	1 7 19	8 Mar (68)	1 Sun. .	9874 5589	16 4127	247 3967	3790
19 Mar (78)	6 Fri. .	7 19 28	26 Feb (57)	6 Fri .	88 9137	899 9484	219 3114	3791
19 Mar (78)	0 Sat. .	13 31 37	17 Mar (76)	5 Thur	123 5960	835 9419	270 6218	3792
19 Mar (78)	1 Sun .	19 43 46	6 Mar (65)	2 Mon	9999 3189	683 1860	239 7986	3793
19 Mar (79)	3 Tues	1 55 55	24 Feb (55)	0 Sat. .	213 6738	566 7217	211 7131	3794
19 Mar (78)	4 Wed	8 8 4	13 Mar. (72)	5 Thur.	9909 7241	466 4235	260 1858	3795
19 Mar (78)	5 Thur	14 20 13	2 Mar. (61)	2 Mon	9785 4470	313 6675	229 4626	3796
19 Mar (78)	6 Fri. .	20 32 22	20 Feb (51)	0 Sat. .	9999 8018	197 2032	201 8771	3797

TABLE

CONCURRENT YEAR								Intercalated (<i>adhika</i>) and suppressed (<i>lshaya</i>) true lunar months
Kali	Śaka	Chaitrādi Vikrama	Mēshādi solar year in Bengal	Kollam	A D	JOVIAN SAMVATSARA		
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8
3798	619	754	103		*696 97	28 Jaya . . .		
3799	620	755	104		697-98	29 Manmatha . . .		6 Bhādrapada
3800	621	756	105		698 99	30 Durmukha . . .		...
3801	622	757	106		699 700	31 Hēmalamba . . .		.
3802	623	758	107		*700 70	32 Vilamba . . .		5 Śrāvāṇa .
3803	624	759	108		701 02	33 Vikārin . . .		.
3804	625	760	109		702 03	34 Śārvarin . . .		..
3805	626	761	110		703 04	35 Plava . . .		3 Jyēshṭha .
3806	627	762	111		*704-05	36 Śubhakṛt . . .		.
3807	628	763	112		705 06	37 Sōbhana . . .		..
3808	629	764	113		706 07	38 Krōdhn . . .		1 Chaitra .
3809	630	765	114		707-08	39 Viśvāvasu . . .		..
3810	631	766	115		*708 09	40 Parābhava . . .		5 Śrāvāṇa .
3811	632	767	116		709 10	41 Plavaṅga . . .		...
3812	633	768	117		710 11	42 Kīlaka . . .		.
3813	634	769	118		711-12	43 Saumya . . .		4 Āshāḍha .
3814	635	770	119		*712-13	44 Sādharana . . .		..
3815	636	771	120		713 14	45 Virōdhakṛt . . .		.
3816	637	772	121		714-15	46 Paridhāvin . . .		2 Vaiśākha
3817	638	773	122		715 16	47 Pramādin . . .		.
3818	639	774	123		*716 17	48 Ānanda . . .		6 Bhādrapada
3819	640	775	124		717-18	49 Rākshasa . . .		.
3820	641	776	125		718-19	50 Anala . . .		.
3821	642	777	126		719 20	51 Pingala . . .		5 Śrāvāṇa .
3822	643	778	127		*720 21	52 Kālayukta

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COMMENCEMENT OF THE								
SOLAR YEAR			LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).					Kal.
Day and month A D	Week-day	Time of true M̄c̄sha s̄m̄-kr̄ānti	Day and month A D	Week-day.	a	b	c	
13	14	H M S	19	20	23	24	25	
19 Mar (79)	1 Sun	2 44 31	10 Mar (70)	6 Fri	34 4841	133 1967	252 6875	3798
19 Mar (78)	2 Mon	8 56 40	27 Feb (58)	3 Tues	9910 2070	980 4408	221 8643	3799
19 Mar (78)	3 Tues	15 8 49	18 Mar (77)	2 Mon	9944 8894	916 4343	273 1748	3800
19 Mar (78)	4 Wed	21 20 58	8 Mar (67)	0 Sat	159 2443	799 9700	245 0671	3801
19 Mar (79)	6 Fri	3 33 7	25 Feb (56)	4 Wed	34 9671	647 2140	214 2440	3802
19 Mar (78)	0 Sat	9 45 16	15 Mar (74)	3 Tues	69 6496	583 2074	265 5543	3803
19 Mar (78)	1 Sun.	15 57 25	4 Mar (63)	0 Sat	9945 3723	430 4516	234 7311	3804
19 Mar (78)	2 Mon	22 9 34	21 Feb (52)	4 Wed	9821 0852	277 6956	203 9079	3805
19 Mar (79)	4 Wed	4 21 43	11 Mar (71)	3 Tues	9855 7776	213 6890	255 2184	3806
19 Mar (78)	5 Thur.	10 33 52	1 Mar (60)	1 Sun	70 1324	97 2248	227 1329	3807
19 Mar (78)	6 Fri	16 46 1	18 Feb (49)	5 Thur	9946 0956	944 4986	196 3096	3808
19 Mar (78)	0 Sat	22 58 10	9 Mar (68)	4 Wed	9980 5376	880 4623	247 6201	3809
19 Mar (79)	2 Mon	5 10 19	27 Feb (58)	2 Mon	194 8924	773 9979	219 5348	3810
19 Mar. (78)	3 Tues	11 22 28	17 Mar (76)	1 Sun	230 5748	699 9914	270 8451	3811
19 Mar (78)	4 Wed.	17 34 37	6 Mar (65)	5 Thur	105 2977	547 2355	240 0219	3812
19 Mar (78)	5 Thur	23 46 46	23 Feb (54)	2 Mon	9981 0206	394 4796	209 1987	3813
19 Mar (79)	0 Sat	5 58 55	13 Mar (73)	1 Sun	15 7029	330 4730	260 5092	3814
19 Mar (78)	1 Sun.	12 11 4	2 Mar (61)	5 Thur	9891 4258	178 7171	229 6859	3815
19 Mar (78)	2 Mon	18 23 13	20 Feb (51)	3 Tues	105 7806	61 2528	201 6004	3816
20 Mar (79)	4 Wed	0 35 22	11 Mar (70)	2 Mon	140 4629	997 2462	252 9109	3817
19 Mar (79)	5 Thur	6 47 31	28 Feb (59)	6 Fri	16 1858	844 4903	222 0877	3818
19 Mar (78)	6 Fri.	12 59 40	18 Mar (77)	5 Thur	50 8682	780 4838	273 3981	3819
19 Mar (78)	0 Sat	19 11 49	8 Mar (67)	3 Tues	265 2231	604 0195	245 3126	3820
20 Mar (79)	2 Mon	1 23 58	25 Feb, (56)	0 Sat	140 9458	511 2635	214 4895	3821
19 Mar (79)	3 Tues	7 36 7	14 Mar (74)	5 Thur	9836 9963	410 9654	263 0622	3822

EPIGRAPHIA INDICA.

TABLE

CONCURRENT YEAR.						JOVIAN SAMVATSARA		Intercalated (<i>adhika</i>) and suppressed (<i>k haya</i>) true lunar months
Kali	Śaka	Chaitradī Vikrama	Viśvādi solar year in Bengal	Kollam.	A. D.	Southern system.	Northern system	
1	2	3	3a	4	5	6	7	8
3823	644	779	128		721-22	53 Siddhārthin		3 Jyēshtha
3824	645	780	129		722-23	54 Raudra		
3825	646	781	130		723-24	55 Durmati		{ 7 Āsvina 9 Mārgaśīrṣa (ksh) }
3826	647	782	131		*724-25	56 Dundubhi		1 Chaitra
3827	648	783	132		725-26	57 Rudhirōdgārīn . . . . .		..
3828	649	784	133		726-27	58 Raktāksha		5 Śrāvaṇa
3829	650	785	134		727-28	59 Krōdhana . . . . .		..
3830	651	786	135		*728-29	60 Kshaya . . . . .		..
3831	652	787	136		729-30	1 Prabhava		4 Āshāḍha
3832	653	788	137		730-31	2 Vibhava . . . . .		..
3833	654	789	138		731-32	3 Śukla . . . . .		..
3834	655	790	139		*732-33	4 Pramōda		2 Vaiśākha
3835	656	791	140		733-34	5 Prajāpati . . . . .		..
3836	657	792	141		734-35	6 Aṅguraśī		6 Bhādrapada
3837	658	793	142		735-36	8 Bhāva . . . . .		..
3838	659	794	143		*736-37	9 Yuvan . . . . .		..
3839	660	795	144		737-38	10 Dhātī		5 Śrāvaṇa
3840	661	796	145		738-39	11 Itara . . . . .		..
3841	662	797	146		739-40	12 Bahudhānya . . . . .		..
3842	663	798	147		*740-41	13 Pramāthin		3 Jyēshtha
3843	664	799	148		741-42	14 Vikrama . . . . .		..
3844	665	800	149		742-43	15 Vṛisha		{ 7 Āsvina 11 Māgha (ksh) }
3845	666	801	150		743-44	16 Chitrabhānu		1 Chaitra
3846	667	802	151		*744-45	17 Subhānu
3847	668	803	152		745-46	18 Tāraṇa

† 7 Śrimukha, was suppressed.

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COMMENCEMENT OF THE								
SOLAR YEAR			LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)					Kal
Day and month A. D.	Week-day	Time of true M̄śha sath-krānti.	Day and month A D	Week-day.	a	b	c	
13	14	17	19	20	23	24	25	1
		H M S						
19 Mar. (79)	4 Wed	13 48 15	4 Mar (63)	3 Tues	51 3511	294 5011	234 9767	3823
19 Mar (78)	5 Thur	20 0 24	21 Feb (52)	0 Sat	9027 0739	141 7452	204 1534	3824
20 Mar (79)	0 Sat	2 12 33	12 Mar (71)	0 Fri	9901 7563	77 7385	255 4693	3825
10 Mar (79)	1 Sun	8 24 42	1 Mar (61)	4 Wed	176 1112	901 2743	227 3785	3826
10 Mar (78)	2 Mon.	14 30 51	18 Feb (49)	1 Sun	51 8342	808 5184	196 5552	3827
19 Mar (78)	3 Tues	20 49 0	9 Mar (68)	0 Sat	86 5163	744 5118	247 8656	3828
20 Mar (79)	5 Thur	3 1 9	26 Feb (57)	4 Wed	9962 2392	591 7559	217 0425	3829
19 Mar (79)	6 Fri	9 13 18	16 Mar (70)	3 Tues	9996 9216	527 7493	268 3529	3830
19 Mar. (79)	0 Sat	15 25 27	5 Mar (64)	0 Sat	9872 0444	374 9934	237 5297	3831
19 Mar (78)	1 Sun	21 37 36	22 Feb (53)	4 Wed	9748 3673	222 2374	206 7064	3832
20 Mar (79)	3 Tues	3 49 45	13 Mar (72)	3 Tues	9783 0497	158 2309	258 0169	3833
19 Mar (79)	4 Wed	10 1 54	2 Mar (62)	1 Sun	9997 4046	41 7666	229 9215	3834
19 Mar (78)	5 Thur	16 14 3	20 Feb (51)	6 Fri	211 7493	925 3023	201 8460	3835
19 Mar (78)	6 Fri	22 26 12	11 Mar (70)	5 Thur	246 4417	861 2958	253 1564	3836
20 Mar (79)	1 Sun	4 38 21	28 Feb (59)	2 Mon	122 1046	708 5398	222 3332	3837
19 Mar (79)	2 Mon.	10 50 30	18 Mar (78)	1 Sun	156 8460	644 5333	274 6437	3838
19 Mar (78)	3 Tues	17 2 39	7 Mar (66)	5 Thur	32 5698	501 7773	242 8204	3839
19 Mar (78)	4 Wed	23 14 48	24 Feb (55)	2 Mon.	9908 2926	339 0214	211 9973	3840
20 Mar (79)	6 Fri	5 26 57	15 Mar (74)	1 Sun	9942 9751	275 0149	263 2077	3841
19 Mar. (79)	0 Sat	11 39 6	3 Mar (63)	5 Thur	9818 6978	122 2588	232 4845	3842
19 Mar (78)	1 Sun	17 51 16	21 Feb (52)	3 Tues	33 0527	5 7947	204 3990	3843
20 Mar (79)	3 Tues	0 3 24	12 Mar (71)	2 Mon	67 7351	941 7880	255 7105	3844
20 Mar (79)	4 Wed	6 15 33	2 Mar (61)	0 Sat	282 0900	825 3238	227 0240	3845
19 Mar (79)	5 Thur.	12 27 42	19 Feb (50)	4 Wed	167 8127	672 5678	196 8007	3846
19 Mar. (78)	6 Fri	18 39 51	9 Mar (68)	3 Tues	192 4951	608 5613	248 1112	3847

TABLE

CONCURRENT YEAR								Intercalated (adhika) and suppressed (kshaya) true lunar months.
Kalī	Śaka	Chaitrādi Vikrama.	Mgatiādi solar year in Bengal.	Kollam.	A D.	JOVIAN SAMVATSARA.		
						Southern system.	Northern system.	
1	2	3	3a	4	5	6	7		8
3848	660	804	153		746 47	19 Pārthiva . . .		5 Śrāvapa .
3849	670	805	154		747-48	20 Vyaya . . .		...
3850	671	806	155		*748-49	21 Sarvajit . . .		...
3851	672	807	156		749 50	22 Sarvadhārin . . .		3 Jyēshṭha .
3852	673	808	157		750 51	23 Virōdhin . . .		...
3853	674	809	158		751-52	24 Vikṛita . . .		..
3854	675	810	159		*752-53	25 Khara . . .		2 Vaiśākha .
3855	676	811	160		753 54	26 Nandana . . .		..
3856	677	812	161		754-55	27 Vijaya . . .		0 Bhādrapada
3857	678	813	162		755-56	28 Jaya . . .		...
3858	679	814	163		*756 57	29 Manmatha . . .		..
3859	680	815	164		757-58	30 Durmukha . . .		4 Āshāḍha .
3860	681	816	165		758 59	31 Hēmalamba . . .		...
3861	682	817	166		759 60	32 Vilamba . . .		...
3862	683	818	167		*760 61	33 Vikārin . . .		3 Jyēshṭha
3863	684	819	168		761-62	34 Śārvarin . . .		...
3864	685	820	169		762-63	35 Plava . . .		7 Āvina .
3865	686	821	170		763 64	36 Śubhakṛit . . .		...
3866	687	822	171		*764-65	37 Śobhana . . .		...
3867	688	823	172		765 66	38 Krōdhin . . .		5 Śrāvana
3868	689	824	173		766 67	39 Viśvāvasu . . .		...
3869	690	825	174		767-68	40 Parābhava . . .		...
3870	691	826	175		*768 69	41 Plavaṅga . . .		3 Jyēshṭha
3871	692	827	176		769-70	42 Kilaka . . .		...
3872	693	828	177		770 71	43 Saumya . . .		...

LXXXII—Contd.

COMMENCEMENT OF THE								
SOLAR YEAR.			LUNI SOLAR YEAR (MFAN SURRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA I FDS)					Kal.
Day and month A D	Week-day	Time of true M̄c̄ha sañ krānti	Day and month A D	Week-day	a	b	c	
13	14	17	19	20	23	24	25	1
		H M S						
20 Mar. (79)	1 Sun	0 52 0	26 Feb (57)	0 Sat .	68 2180	455 8054	217 2881	3848
20 Mar (79)	2 Mon	7 4 9	17 Mar (76)	6 Fri .	102 9003	391 7988	268 4984	3849
19 Mar (79)	3 Tues	13 16 18	5 Mar (65)	3 Tues	9978 6232	239 0429	237 7752	3850
10 Mar (78)	4 Wed	19 28 27	22 Feb (53)	0 Sat .	9854 3461	86 2869	206 9520	3851
20 Mar (79)	6 Fri .	1 10 36	13 Mar (72)	6 Fri	9889 0285	22 2804	258 2625	3852
20 Mar (79)	0 Sat .	7 52 45	3 Mar (62)	4 Wed	103 3633	905 8161	230 1770	3853
19 Mar. (79)	1 Sun .	14 4 54	21 Feb (52)	2 Mon	317 7384	789 3518	202 0915	3854
19 Mar (78)	2 Mon	20 17 3	10 Mar (69)	0 Sat	13 7885	689 0537	250 6642	3855
20 Mar (79)	4 Wed	2 29 12	28 Feb (59)	5 Thur	228 1433	572 5894	222 5788	3856
20 Mar (79)	5 Thur	8 41 21	18 Mar (77)	3 Tues.	9924 1937	472 2911	271 1514	3857
19 Mar (79)	6 Fri .	14 53 30	6 Mar. (66)	0 Sat .	9799 9166	319 5352	240 3282	3858
19 Mar (78)	0 Sat.	21 5 39	21 Feb (55)	5 Thur	14 2714	203 0709	212 2428	3859
20 Mar (79)	2 Mon	3 17 48	15 Mar (74)	4 Wed	48 9538	139 0644	263 5533	3860
20 Mar (79)	3 Tues	9 29 57	4 Mar (63)	1 Sun .	9924 6766	986 3084	232 7300	3861
19 Mar (79)	4 Wed	16 42 6	22 Feb. (53)	6 Fri .	139 0315	869 8442	204 6445	3862
19 Mar (78)	5 Thur	21 54 15	12 Mar (71)	5 Thur.	173 7138	805 8377	255 9550	3863
20 Mar (79)	0 Sat .	4 6 24	1 Mar (60)	2 Mon	49 4307	653 0816	225 1318	3864
20 Mar (79)	1 Sun	10 18 33	20 Mar (79)	1 Sun	84 1191	589 0751	276 4422	3865
19 Mar (79)	2 Mon	16 30 42	8 Mar (68)	5 Thur	9959 8420	436 3192	245 6189	3866
19 Mar (78)	3 Tues	22 42 51	25 Feb (56)	2 Mon	9835 5647	283 5633	214 7958	3867
20 Mar (79)	5 Thur	4 55 0	16 Mar (75)	1 Sun	9870 2472	219 5507	266 1062	3868
20 Mar (79)	6 Fri .	11 7 8	6 Mar (65)	6 Fri .	84 6020	103 0923	238 0208	3869
19 Mar (79)	0 Sat	17 19 17	23 Feb (54)	3 Tues	9960 3248	950 3365	207 1975	3870
19 Mar (78)	1 Sun	23 31 26	13 Mar (72)	2 Mon	9995 0072	886 3299	258 5080	3871
20 Mar (79)	3 Tues	5 43 35	3 Mar (62)	0 Sat	209 3621	769 8656	230 4226	3872

TABLE

CONCURRENT YEAR								Intercalated (<i>adhika</i>) and suppressed (<i>lshaya</i>) true lunar months
Kal	Śaka	Chaitrādi Vikrama	Mēshādi solar year in Bengal	Kollam	A D	JOVIAN SAMVATSARA		
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8
3873	694	829	178		771-72	44 Sādhārana	.	2 Vaiśākha .
3874	695	830	179		*772-73	45 Virōdhakṛit	.	
3875	696	831	180		773 74	46 Paridhāvin	. .	6 Bhādrapada
3876	697	832	181		774 75	47 Pramādin	. .	.
3877	698	833	182		775 76	48 Ānanda	. .	
3878	699	834	183		*776-77	49 Rākshasa	.	4 Āshādha
3879	700	835	184		777-78	50 Anala	. . .	
3880	701	836	185		778 79	51 Pingala	. . .	
3881	702	837	186		779 80	52 Kālayukta	. . .	3 Jyēshtha
3882	703	838	187		*780 81	53 Siddhārthm	. . .	..
3883	704	839	188		781-82	54 Raudra	. . .	7 Āvina .
3884	705	840	180		782-83	55 Durmatī	. . .	
3885	706	841	190		783 84	56 Dundubhi	. . .	
3886	707	842	191		*784 85	57 Rudhurōdgārīn	. . .	5 Śrāvana .
3887	708	843	192		785 86	58 Raktāksha	. . .	
3888	709	844	193		786 87	59 Krōdhana	. . .	..
3889	710	845	194		787 88	60 Kshaya	. . .	3 Jyēshtha .
3890	711	846	195		*788 89	1 Prabhava	. . .	
3891	712	847	196		789-90	2 Vibhava	. . .	
3892	713	848	197		790 91	3 Śukla	. . .	2 Vaiśākha .
3893	714	849	198		791-02	4 Pramōda	. . .	
3894	715	850	199		*792 93	5 Prajāpatī	. . .	6 Bhādrapada
3895	716	851	200		793 94	6 Angras	. . .	
3896	717	852	201		794 95	7 Śrīmukha	. . .	
3897	718	853	202		795 96	8 Bhāva	. . .	4 Āshādha .

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COMMENCEMENT OF THE								
SOLAR YEAR.			LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)					Kah.
Day and month A D	Week-day.	Time of true Mēsha sath-krāntī	Day and month A. D.	Week-day	a	b	c	
13	14	H M S	19	20	23	24	25		1
20 Mar (79)	4 Wed	11 55 44	20 Feb (51)	4 Wed	75 0849	617 1097	199 5993	3873
19 Mar (79)	5 Thur	18 7 53	10 Mar (70)	3 Tues	119 7672	553 1032	250 9097	3874
20 Mar (79)	0 Sat	0 20 2	27 Feb (58)	0 Sat	9995 4901	400 3472	220 0866	3875
20 Mar. (79)	1 Sun	6 32 11	18 Mar (77)	0 Fri	30 1725	336 3306	271 3970	3876
20 Mar (79)	2 Mon	12 44 20	7 Mar (66)	3 Tues	9905 8953	183 5848	240 5738	3877
19 Mar (79)	3 Tues	18 56 29	25 Feb (56)	1 Sun	120 2501	67 1204	212 4883	3878
20 Mar (79)	5 Thur	1 8 38	15 Mar (74)	0 Sat	154 9326	3 1139	263 7988	3879
20 Mar (79)	0 Fri	7 20 47	4 Mar (63)	4 Wed.	30 6554	850 3579	232 9756	3880
20 Mar (79)	0 Sat	13 32 56	22 Feb (53)	2 Mon	245 0102	733 8937	204 8901	3881
19 Mar (79)	1 Sun	19 45 5	12 Mar (72)	1 Sun	279 6926	609 8872	256 2005	3882
20 Mar (79)	3 Tues	1 57 14	1 Mar (60)	5 Thur	155 4155	517 1311	225 3773	3883
20 Mar (79)	4 Wed	8 9 23	10 Mar (78)	3 Tues	9851 4059	416 8330	273 9500	3884
20 Mar (79)	5 Thur.	14 21 32	8 Mar (67)	0 Sat	9727 1887	264 0770	243 1167	3885
19 Mar (79)	6 Fri	20 33 41	26 Feb (57)	5 Thur	9941 5435	147 0128	215 0413	3886
20 Mar (79)	1 Sun	2 45 50	16 Mar (75)	4 Wed	9976 2260	83 6062	266 3517	3887
20 Mar (79)	2 Mon	8 57 59	6 Mar (65)	2 Mon	190 5807	967·1418	238 2064	3888
20 Mar (79)	3 Tues	15 10 8	23 Feb (54)	6 Fri.	66 3036	814 3852	207 4431	3889
19 Mar (79)	4 Wed	21 22 17	13 Mar. (73)	5 Thur	100 9860	750 3794	258 7535	3890
20 Mar (79)	6 Fri	3 34 26	2 Mar (61)	2 Mon	9976 7089	597 6235	227 9303	3891
20 Mar (79)	0 Sat	9 46 35	19 Feb (50)	6 Fri	9852 4317	444 8676	197 1071	3892
20 Mar (79)	1 Sun	15 58 44	10 Mar (69)	5 Thur	9887·1140	380 8610	248 4175	3893
19 Mar (79)	2 Mon	22 10 53	27 Feb (58)	2 Mon	9762 8369	228 1051	218 4943	3894
20 Mar (79)	4 Wed	4 23 2	17 Mar (76)	1 Sun	9797 5192	104 0986	268 9047	3895
20 Mar (79)	5 Thur	10 35 11	7 Mar (66)	6 Fri	11 8741	47 6342	240 8194	3896
20 Mar (79)	6 Fri	16 47 20	25 Feb (56)	4 Wed	226 2289	931 1699	212 7339	3897

TABLE

CONCURRENT YEAR								Intercalated (<i>adhika</i>) and suppressed (<i>ishaya</i>) true lunar months
Kali	Śaka	Chartrādi Vikrama	Mēshādi solar year in Bengal	Kollam	A D	JOVIAN SAMVATSARA		
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8
3898	719	854	203		*796-97	9 Yuvan .	.	.
3899	720	855	204		797-98	10 Dhātri .	.	.
3900	721	856	205		798-99	11 Īvara .	.	3 Jyēshtha .
3901	722	857	206		799 800	12 Bahudhānya .	.	.
3902	723	858	207		*800 01	13 Pramāthin .	.	7 Āsvina .
3903	724	859	203		801 02	14 Vikrama . .	.	.
3904	725	860	209		802 03	15 Vṛisha . .	.	...
3905	726	861	210		803 04	16 Chitrabhānu .	.	5 Śrāvana .
3906	727	862	211		*804-05	17 Subhānu . . .	.	..
3907	728	863	212		805 06	18 Tārana . . .	.	.
3908	729	864	213		806 07	19 Pārthiva . . .	.	3 Jyēshtha .
3909	730	865	214		807 08	20 Vyaya . . .	.	..
3910	731	866	215		*808-09	21 Sarvaṇ . . .	.	.
3911	732	867	216		809-10	22 Sarvadhārin .	.	1 Chaitra .
3912	733	868	217		810 11	23 Virōdhin . . .	.	.
3913	734	869	218		811-12	24 Vikṛita . . .	.	5 Śrāvana .
3914	735	870	219		*812-13	25 Khara . . .	.	.
3915	736	871	220		813-14	26 Nandana . . .	.	..
3916	737	872	221		814 15	27 Vijaya . . .	.	4 Āshādha .
3917	738	873	222		815 16	28 Jaya . . .	.	...
3918	739	874	223		*816-17	29 Manmatha . . .	.	.
3919	740	875	224		817-18	30 Durmukha . . .	.	3 Jyēshtha .
3920	741	876	225		818-19	31 Hēmalamba . . .	.	...
3921	742	877	226		819-20	32 Vilambaṭ . . .	.	7 Āsvina .
3922	743	878	227		*820 21	34 Śāritarin . . .	.	...

† 33 Vikāna was suppressed.

LXXXII—Contd

COMMENCEMENT OF THE								
SOLAR YEAR			LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS).					Kali
Day and month A. D.	Week-day	Time of true Mūsha sam krānti	Day and month A. D.	Week-day	a	b	c	
13	14	17	19	20	23	24	25	1
		H M S						
19 Mar (79)	0 Sat	22 59 29	15 Mar (75)	3 Tues	260 9113	807 1634	264 0442	3898
20 Mar (79)	2 Mon	5 11 38	4 Mar (63)	0 Sat	136 6341	714 4074	233 2211	3899
20 Mar (79)	3 Tues	11 23 47	21 Feb (52)	4 Wed	12 3570	561 6515	202 3979	3900
20 Mar (70)	4 Wed	17 35 56	12 Mar (71)	3 Tues	47 0394	497 6449	253 6621	3901
19 Mar (79)	5 Thur	23 48 5	19 Feb (60)	0 Sat	9922 7023	344 8890	222 8629	3902
20 Mar (79)	0 Sat	6 0 14	19 Mar (78)	6 Fri	9957 4347	230 8825	274 1733	3903
20 Mar (79)	1 Sun	12 12 23	8 Mar (67)	3 Tues	9833 1675	128 1265	243 3500	3904
20 Mar (79)	2 Mon	18 24 32	26 Feb (57)	1 Sun	47 5223	11 6622	215 2647	3905
20 Mar (80)	4 Wed.	0 36 11	16 Mar (76)	0 Sat	82 2048	947 6557	266 5751	3906
20 Mar (79)	5 Thur	6 48 50	6 Mar (65)	5 Thur	296 5595	831 1914	238 4897	3907
20 Mar (79)	6 Fri.	13 0 59	23 Feb (54)	2 Mon	172 2824	678 4354	207 6664	3908
20 Mar (79)	0 Sat.	19 13 8	14 Mar (73)	1 Sun	206 9648	614 4289	258 9769	3909
20 Mar (80)	2 Mon	1 25 17	2 Mar (62)	5 Thur	82 6876	461-6730	228 1537	3910
20 Mar. (79)	3 Tues.	7 37 26	19 Feb (50)	2 Mon	9958 4105	308-9171	197 3304	3911
20 Mar (79)	4 Wed	13 49 35	10 Mar (69)	1 Sun	9993 0928	244-9104	248 6408	3912
20 Mar (79)	5 Thur	20 1 44	27 Feb (58)	5 Thur	9868 8157	92 1545	217 8177	3913
20 Mar (80)	0 Sat	2 13 52	17 Mar (77)	4 Wed	9903 4980	28 1481	269 1281	3914
20 Mar (79)	1 Sun	8 26 1	7 Mar (66)	2 Mon	117 8529	906 6837	251 0427	3915
20 Mar (79)	2 Mon	14 38 10	24 Feb (55)	6 Fri	9993 5758	758 9278	210 2194	3916
20 Mar (79)	3 Tues	20 50 19	15 Mar (74)	5 Thur	28 2581	694 9212	264 5299	3917
20 Mar. (80)	5 Thur	3 2 28	3 Mar (63)	2 Mon	9903 9810	542 1653	230 7067	3918
20 Mar. (79)	6 Fri	9 14 37	21 Feb (52)	0 Sat	118 3358	425 7009	202 6212	3919
20 Mar (79)	0 Sat	15 26 46	11 Mar (70)	5 Thur	9814 3862	325 4028	251 1938	3920
20 Mar (79)	1 Sun	21 38 55	1 Mar (60)	3 Tues	28 7410	208 9389	223-1084	3921
20 Mar (80)	3 Tues	3 51 4	19 Mar (79)	2 Mon	63 4234	144-9321	274 3989	3922

TABLE

CONCURRENT YEAR								Intercalated (<i>adhika</i>) and suppressed (<i>kshaya</i>) true lunar months	
Kalī	Śaka	Chaitrādi Vikrama	Mūshādi solar year in Bengal	Kollam	A D	JOVIAN SAMVATSARA			
						Southern system	Northern system		
1	2	3	3a	4	5	6	7	8	
3923	744	879	228		821-22	35 <i>Plava</i>	.	.	
3924	745	880	229		822-23	36 <i>Śubhakarī</i>	.	.	5 Śrāvana .
3925	746	881	230		823-24	37 <i>Śūchana</i>	.	.	
3926	747	882	231		*824-25	38 <i>Krōdhm</i>	.	.	
3927	748	883	232	0 1	825 26	39 <i>Viśvāvasu</i>	.	.	3 Jyēshtha .
3928	749	884	233	1-2	826 27	40 <i>Parābhava</i>	.	.	
3929	750	885	234	2-3	827-28	41 <i>Plavanga</i>	.	.	
3930	751	886	235	3 4	*828 29	42 <i>Kilaka</i>	.	.	1 Chaitra .
3931	752	887	236	4-5	829 30	43 <i>Saumya</i>	.	.	
3932	753	888	237	5 6	830 31	44 <i>Sādhārana</i>	.	.	5 Śrāvana .
3933	754	889	238	6-7	831-32	45 <i>Virōdhakarī</i>	.	.	
3934	755	890	239	7-8	*832-33	46 <i>Paridhāvin</i>	.	.	
3935	756	891	240	8 9	833 34	47 <i>Pramādin</i>	.	.	4 Āshādha .
3936	757	892	241	9 10	834 35	48 <i>Ānanda</i>	.	.	
3937	758	893	242	10 11	835 36	49 <i>Rākshasa</i>	.	.	
3938	759	894	243	11 12	*836 37	50 <i>Anala</i>	.	.	2 Vaiśākha .
3939	760	895	244	12 13	837 38	51 <i>Prīgala</i>	.	.	
3940	761	896	245	13 14	838 39	52 <i>Kālayukta</i>	.	.	6 Bhādrapada .
3941	762	897	246	14 15	839 40	53 <i>Siddhārthm</i>	.	.	
3942	763	898	247	15 16	*840-41	54 <i>Raudra</i>	.	.	
3943	764	899	248	16 17	841 42	55 <i>Durmatī</i>	.	.	5 Śrāvana .
3944	765	900	249	17 18	842 43	56 <i>Dundubhī</i>	.	.	
3945	766	901	250	18 19	843 44	57 <i>Rudhirōdgārī</i>	.	.	
3946	767	902	251	19 20	*844-45	58 <i>Raktākṣha</i>	.	.	3 Jyēshtha .
3947	768	903	252	20-21	845 46	59 <i>Krōdhana</i>	.	.	

LXXXII—Contd

COMMENCEMENT OF THE								
SOLAR YEAR			LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS)					Kali
Day and month A D	Week-day	Time of true M̄cshu sam-krānti	Day and month A D	Week-day	a	b		
13	14	17	19	20	23	24	25	
20 Mar (79)	4 Wed	11 M S 10 3 13	8 Mar (67)	6 Fri	9939 1463	992 1760	243 5956	3923
20 Mar (79)	5 Thur	16 15 22	26 Feb (57)	4 Wed	153 5010	875 7118	215 5102	3924
20 Mar (79)	6 Fri	22 27 31	17 Mar (76)	3 Tues	188 1834	811 7052	266 8206	3925
20 Mar. (80)	1 Sun	4 39 40	5 Mar (65)	0 Sat	63 9063	658 9493	235 9975	3926
20 Mar (79)	2 Mon	10 51 49	22 Feb (53)	4 Wed	9939 6292	506 1933	205 1642	3927
20 Mar (79)	3 Tues	17 3 58	13 Mar (72)	3 Tues	974 3115	442 1868	256 4846	3928
20 Mar (79)	4 Wed	23 16 7	2 Mar (61)	0 Sat	9850 0344	289 4309	225 6614	3929
20 Mar (80)	6 Fri	5 28 16	20 Feb (51)	5 Thur	64 6593	172 9666	197 5760	3930
20 Mar (79)	0 Sat	11 40 25	10 Mar (69)	1 Wed	98 8015	108 9590	248 8864	3931
20 Mar (79)	1 Sun	17 52 34	27 Feb (58)	1 Sun	9974 7944	956 2040	218 0632	3932
21 Mar (80)	3 Tues	0 4 43	18 Mar (77)	0 Sat	9 4768	892 1976	269 3736	3933
20 Mar (80)	4 Wed	6 16 52	7 Mar (67)	5 Thur	223 8317	775 7333	241 2883	3934
20 Mar (79)	5 Thur	12 29 1	24 Feb (55)	2 Mon	99 5545	622 9773	210 4650	3935
20 Mar (79)	6 Fri	18 41 10	15 Mar (74)	1 Sun	134 2369	558 3708	261 7754	3936
21 Mar (80)	1 Sun	0 53 19	4 Mar (63)	5 Thur	9 9598	406 2148	230 9522	3937
20 Mar (80)	2 Mon	7 5 28	21 Feb (52)	2 Mon	9885 6826	253 4589	200 1290	3938
20 Mar (79)	3 Tues	13 17 37	11 Mar (70)	1 Sun	9920 3649	189 4523	252 4294	3939
20 Mar (79)	4 Wed	19 29 46	28 Feb (59)	5 Thur	9796 0878	36 6964	220 6162	3940
21 Mar (80)	6 Fri	1 41 55	20 Mar (79)	5 Thur	169 4022	8 9816	274 6644	3941
20 Mar (80)	0 Sat	7 54 4	8 Mar (68)	2 Mon	45 1250	856 2255	213 8412	3942
20 Mar (79)	1 Sun	14 6 13	26 Feb (57)	0 Sat	259 4798	739 7613	215 7558	3943
20 Mar. (79)	2 Mon	20 18 22	17 Mar (76)	6 Fri	294 1622	675 7547	267 0662	3944
21 Mar (80)	4 Wed	2 30 31	6 Mar (65)	3 Tues	169 8851	522 9988	230 0900	3945
20 Mar (80)	5 Thur	8 42 40	23 Feb (54)	0 Sat	45 5979	370 2428	205 4197	3946
20 Mar (79)	6 Fri	14 54 49	13 Mar (71)	5 Thur	9741 6583	269 9446	253 9924	3947

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LXXXII—Contd

COMMENCEMENT OF THE

SOLAR YEAR.			LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)					Kalā
Day and month A D	Week-day.	Time of true Mēsha saṁkrānti.	Day and month A. D	Week-day.	a	b	c	
13	14	17	19	20	23	24	25	1
20 Mar (79)	0 Sat.	H. M S 21 6 58	2 Mar (61)	3 Tues.	9956-0132	153 4804	226 0070	3948
21 Mar (80)	2 Mon.	3 19 7	19 Feb (50)	0 Sat.	9832 2167	0 7839	195 0837	3949
20 Mar (80)	3 Tues.	9 31 16	10 Mar (70)	0 Sat.	205 0503	973-0095	249 2319	3950
20 Mar (79)	4 Wed.	15 43 25	27 Feb (58)	4 Wed.	80 7732	820 2535	218 4088	3951
20 Mar. (79)	5 Thur	21 55 34	18 Mar (77)	3 Tues.	116 4556	756 2470	269 6192	3952
21 Mar (80)	0 Sat.	4 7 43	7-Mar (66)	0 Sat.	9991 1784	603 4911	238 7960	3953
20 Mar (80)	1 Sun.	10 19 52	24 Feb (55)	4 Wed.	9866 9013	450-7353	207 9727	3954
20 Mar (79)	2 Mon.	16 32 1	14 Mar (73)	3 Tues.	9900 5837	386 7286	259 2832	3955
20 Mar (79)	3 Tues.	22 49 10	3 Mar (62)	0 Sat.	9777 3065	233 9727	228 4600	3956
21 Mar (80)	5 Thur	4 56 19	21 Feb (52)	5 Thur	9991 6613	117 5034	200 3745	3957
20 Mar (80)	6 Fri.	11 8 28	11 Mar (71)	4 Wed.	26 3437	53 5018	251-6849	3958
20 Mar (79)	0 Sat.	17 20 37	1 Mar. (60)	2 Mon.	240 4285	937 0375	223 5995	3959
20 Mar. (79)	1 Sun.	23 32 45	20 Mar. (79)	1 Sun.	275 3809	873 0310	274-9100	3960
21 Mar (80)	3 Tues.	5 44 54	9 Mar (68)	5 Thur	151 1038	720-2751	244 0867	3961
20 Mar (80)	4 Wed.	11 57 3	26 Feb (57)	2 Mon.	26 8266	567-5191	213 2635	3962
20 Mar (79)	5 Thur.	18 9 12	16 Mar (75)	1 Sun.	61 5090	503 5126	264 5739	3963
21 Mar (80)	0 Sat.	0 21 21	5 Mar. (64)	5 Thur	9937 2318	350 7566	233 5708	3964
21 Mar (80)	1 Sun.	6 33 30	22 Feb (53)	2 Mon.	9812 9547	198 0007	202 9275	3965
20 Mar (80)	2 Mon.	12 45 39	12 Mar. (72)	1 Sun.	9847 6371	132 9941	254 2379	3966
20 Mar (79)	3 Tues.	18 57 48	2 Mar (61)	6 Fri.	61 9919	17 5299	226 1525	3967
21 Mar. (80)	5 Thur.	1 9 57	19 Feb (50)	3 Tues.	9937 7149	864 7741	195 6293	3968
21 Mar (80)	6 Fri.	7 22 6	11 Mar (70)	3 Tues.	311 0291	837 0590	249 3775	3969
20 Mar (80)	0 Sat.	13 34 15	28 Feb (59)	0 Sat.	186 7519	684 3031	218 5543	3970
20 Mar (79)	1 Sun.	19 40 24	18 Mar (77)	6 Fri.	221 4343	620-2965	269 8647	3971
21 Mar (80)	3 Tues.	1 58 33	7 Mar (60)	3 Tues.	97 1572	467 5406	239 0416	3972

1	2	3	4	5	6	7	8	9	10
3045	700	900							
3046	701	901							
3047	702	902							
3048	703	903							
3049	704	904							
3050	705	905							
3051	706	906							
3052	707	907							
3053	708	908							
3054	709	909							
3055	710	910							
3056	711	911							
3057	712	912							
3058	713	913							
3059	714	914							
3060	715	915							
3061	716	916							
3062	717	917							
3063	718	918							
3064	719	919							
3065	720	920							
3066	721	921							
3067	722	922							
3068	723	923							
3069	724	924							
3070	725	925							
3071	726	926							
3072	727	927							

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COMMENCEMENT OF THE								
SOLAR YEAR.			LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)					Kal
Day and month A.D	Week-day.	Time of true Mēsha saṁkrānti.	Day and month A D	Week-day	a	b	c	
13	14	17	19	20	23	24	25	1
20 Mar (79)	0 Sat.	H M S 21 6 58	2 Mar. (61)	3 Tues.	0956 0132	153 4804	226 0070	3948
21 Mar (80)	2 Mon.	3 19 7	19 Feb (50)	0 Sat.	9832 2167	0-7839	195 0837	3949
20 Mar (80)	3 Tues.	9 31 16	10 Mar (70)	0 Sat.	205 0503	973 0095	249 2319	3950
20 Mar. (79)	4 Wed.	15 43 25	27 Feb (58)	4 Wed.	80 7732	820 2535	218 4088	3951
20 Mar (79)	5 Thur	21 55 34	18 Mar (77)	3 Tues.	115 4556	756 2470	269 6192	3952
21 Mar (80)	0 Sat.	4 7 43	7-Mar (66)	0 Sat.	9991 1784	603 4911	238 7960	3953
20 Mar (80)	1 Sun.	10 19 52	24 Feb (55)	4 Wed.	9866 9013	450 7353	207-9727	3954
20 Mar (79)	2 Mon.	16 32 1	14 Mar. (73)	3 Tues.	9900-5837	386 7286	259 2832	3955
20 Mar. (79)	3 Tues.	22 49 10	3 Mar (62)	0 Sat.	9777 3065	233 9727	228 4600	3956
21 Mar (80)	5 Thur.	4 56 19	21 Feb (52)	5 Thur	9991 6613	117 5034	200 3745	3957
20 Mar (80)	6 Fri.	11 8 28	11 Mar. (71)	4 Wed.	26 3437	53 5018	251-6849	3958
20 Mar (79)	0 Sat.	17 20 37	1 Mar. (60)	2 Mon.	240-4285	937 0375	223 5995	3959
20 Mar. (79)	1 Sun.	23 32 45	20 Mar. (79)	1 Sun.	275 3809	873-0310	274-9100	3960
21 Mar (80)	3 Tues.	5 44 54	9 Mar. (68)	5 Thur	151 1038	720-2751	244 0867	3961
20 Mar (80)	4 Wed.	11 57 3	26 Feb (57)	2 Mon.	26 8266	587-5191	213 2635	3962
20 Mar. (79)	5 Thur	18 9 12	16 Mar. (75)	1 Sun.	61 5090	503 5126	264 5739	3963
21 Mar (80)	0 Sat.	0 21 21	5 Mar. (64)	5 Thur.	9937 2318	350-7566	233 5708	3964
21 Mar (80)	1 Sun.	6 33 30	22 Feb (53)	2 Mon.	9812 9547	198 0007	202-9275	3965
20 Mar (80)	2 Mon.	12 45 39	12 Mar (72)	1 Sun.	9847 6371	132 9941	254 2379	3966
20 Mar. (79)	3 Tues.	18 57 48	2 Mar (61)	6 Fri.	61 9919	17-5299	226 1525	3967
21 Mar (80)	5 Thur.	1 9 57	19 Feb (50)	3 Tues.	9937 7149	864 7741	195 8293	3968
21 Mar. (80)	6 Fri.	7 22 6	11 Mar (70)	3 Tues.	311 0291	837 0590	249 3775	3969
20 Mar. (80)	0 Sat.	13 34 15	28 Feb (59)	0 Sat.	186 7519	684 3031	218 5543	3970
20 Mar (79)	1 Sun.	19 46 24	18 Mar (77)	6 Fri.	221 4343	620-2965	269 8647	3971
21 Mar (80)	3 Tues	1 58 33	7 Mar (66)	3 Tues.	97 1572	467 5406	239 0416	3972

Year	Month	Day	Event	Location	Notes
1971	Jan	1	...	...	...
1971	Jan	2	...	...	...
1971	Jan	3	...	...	...
1971	Jan	4	...	...	...
1971	Jan	5	...	...	...
1971	Jan	6	...	...	...
1971	Jan	7	...	...	...
1971	Jan	8	...	...	...
1971	Jan	9	...	...	...
1971	Jan	10	...	...	...
1971	Jan	11	...	...	...
1971	Jan	12	...	...	...
1971	Jan	13	...	...	...
1971	Jan	14	...	...	...
1971	Jan	15	...	...	...
1971	Jan	16	...	...	...
1971	Jan	17	...	...	...
1971	Jan	18	...	...	...
1971	Jan	19	...	...	...
1971	Jan	20	...	...	...
1971	Jan	21	...	...	...
1971	Jan	22	...	...	...
1971	Jan	23	...	...	...
1971	Jan	24	...	...	...
1971	Jan	25
1971	Jan	26
1971	Jan	27
1971	Jan	28
1971	Jan	29
1971	Jan	30
1971	Jan	31

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COMMENCEMENT OF THE								
SOLAR YEAR			LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)					Kal.
Day and month A. D.	Week-day	Time of true M̄śha sañkrānti	Day and month A. D.	Week-day	a	b	c	
13	14	17	19	20	23	24	25	1
		H M S						
21 Mar (80)	4 Wed	8 10 42	24 Feb (55)	0 Sat	9972 8801	313 7846	208 2183	3973
20 Mar. (80)	5 Thur .	14 22 51	14 Mar. (74)	6 Fri .	7 5624	250 7781	259 5087	3974
20 Mar (79)	6 Fri .	20 35 0	3 Mar (62)	3 Tues	9883 2853	98 0222	228 7055	3975
21 Mar (80)	1 Sun	2 47 9	21 Feb (52)	1 Sun. .	97-6401	981 5579	200 6101	3976
21 Mar (80)	2 Mon.	8 59 18	12 Mar (71)	0 Sat	132 3224	917 5514	251 9305	3977
20 Mar (80)	3 Tues .	15 11 27	29 Feb (60)	4 Wed	8 0453	764 7954	221 1072	3978
20 Mar (79)	4 Wed	21 23 36	19 Mar (78)	3 Tues	42 7277	700 7889	272 4177	3979
21 Mar. (80)	6 Fri .	3 35 45	8 Mar (67)	0 Sat .	9918 4506	548 0330	241 5146	3980
21 Mar (80)	0 Sat	9 47 54	26 Feb. (57)	5 Thur	132 8053	431 5686	213 5091	3981
20 Mar (80)	1 Sun .	16 0 3	15 Mar. (75)	3 Tues	9828 8558	331 2705	262 0817	3982
20 Mar. (79)	2 Mon	22 12 12	5 Mar. (64)	1 Sun	43 2106	214 8061	234 0013	3983
21 Mar (80)	4 Wed	4 24 21	22 Feb (53)	5 Thur	9918 9335	62 0502	203 1731	3984
21 Mar (80)	5 Thur	10 36 30	13 Mar (72)	4 Wed	9953 6158	998 0436	254 4935	3985
20 Mar (80)	6 Fri .	16 48 39	2 Mar (62)	2 Mon	167 9707	881 5794	226 3980	3986
20 Mar (79)	0 Sat .	23 0 48	19 Feb. (50)	6 Fri	43 6936	728 9235	195 5748	3987
21 Mar (80)	2 Mon .	5 12 57	10 Mar (69)	5 Thur	78 3759	664 8169	246 7165	3988
21 Mar (80)	3 Tues	11 25 6	27 Feb (58)	2 Mon	9954 0987	512 0610	216 0621	3989
20 Mar (80)	4 Wed	17 37 15	17 Mar (77)	1 Sun. .	9088 7811	448 0544	267 3724	3990
20 Mar (79)	5 Thur	23 49 24	6 Mar (65)	5 Thur.	9864 5040	294 2984	236 5493	3991
21 Mar (80)	0 Sat .	6 1 33	23 Feb (54)	2 Mon	9740 2268	142 5426	205 7261	3992
21 Mar (80)	1 Sun	12 13 42	14 Mar (73)	1 Sun.	9774 9092	78 5360	257 0365	3993
20 Mar (80)	2 Mon	18 25 51	3 Mar (63)	6 Fri	9989 2641	962 0717	228 9510	3994
21 Mar (80)	4 Wed	0 38 0	21 Feb (52)	4 Wed. .	203 6198	845 6075	200 6968	3995
21 Mar. (80)	5 Thur .	6 50 9	12 Mar (71)	3 Tues	238 3012	781-6009	252 0073	3996
21 Mar. (80)	6 Fri. .	31 2 18	1 Mar (60)	0 Sat	114 0241	628 8449	221 3528	3997

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COMMENCEMENT OF THE								
SOLAR YEAR			LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS)					Kali.
Day and month A D	Week-day	Time of true M̄csha-sam-krānti	Day and month A D	Week-day	a	b	c	
13	14	17	19	20	23	24	25	1
		H M S						
20 Mar (80)	0 Sat	19 14 27	19 Mar. (79)	6 Fri .	148 7064	564 8384	272 6632	3998
21 Mar (80)	2 Mon	1 26 36	8 Mar (87)	3 Tues	24 4293	412 0825	241 8401	3999
21 Mar (80)	3 Tues	7 38 45	25 Feb (56)	0 Sat .	9900 1522	259 3266	211 0169	4000
21 Mar (80)	4 Wed	13 50 54	16 Mar (75)	6 Fri	9934 8345	195 3200	262 3050	4001
20 Mar (80)	5 Thur	20 3 3	4 Mar (64)	3 Tues	9810 5573	42 5640	231 4818	4002
21 Mar (80)	0 Sat	2 15 12	22 Feb (53)	1 Sun	24 9122	926 0997	203 3963	4003
21 Mar (80)	1 Sun	8 27 21	13 Mar (72)	0 Sat .	59 5945	862 0930	254 7067	4004
21 Mar (80)	2 Mon	14 29 29	3 Mar (62)	5 Thur	273 9494	745 6289	226 6213	4005
20 Mar (80)	3 Tues	20 51 38	20 Mar (80)	3 Tues	9969 9998	645 3307	275 1940	4006
21 Mar (80)	5 Thur	3 3 47	10 Mar (69)	1 Sun	184 3546	528 8665	247 1085	4007
21 Mar (80)	6 Fri	9 15 56	27 Feb (58)	5 Thur	60 0774	376 1105	216 2853	4008
21 Mar (80)	0 Sat	15 28 5	17 Mar (76)	3 Tues	9756 1279	275 8123	264 8570	4009
20 Mar (80)	1 Sun	21 40 14	6 Mar (66)	1 Sun	9970 4827	159 3479	236 7726	4010
21 Mar (80)	3 Tues	3 52 23	23 Feb (54)	5 Thur	9846 2055	6 5921	205 9493	4011
21 Mar (80)	4 Wed	10 4 32	14 Mar (73)	4 Wed	9880 8879	942 5855	257 2597	4012
21 Mar (80)	5 Thur	16 16 41	4 Mar (63)	2 Mon	95 2428	826 1212	229 1743	4013
20 Mar (80)	6 Fri .	22 28 50	22 Feb (53)	0 Sat .	309 5975	709 6569	201 0889	4014
21 Mar (80)	1 Sun .	4 40 59	11 Mar (70)	5 Thur	5 6479	609 3587	249 6615	4015
21 Mar (80)	2 Mon	10 53 8	28 Feb (59)	2 Mon	9881 3708	456 6028	218 8383	4016
21 Mar (80)	3 Tues	17 5 17	19 Mar (78)	1 Sun .	9916 0531	392 5962	270-1487	4017
20 Mar (80)	4 Wed.	23 17 26	7 Mar (67)	5 Thur.	9791 7760	239 8403	239 3256	4018
21 Mar. (80)	6 Fri .	5 29 35	25 Feb (56)	3 Tues	6 1309	123 3760	211 2401	4019
21 Mar (80)	0 Sat .	11 41 44	16 Mar. (75)	2 Mon .	40 8133	59 3695	262 5505	4020
21 Mar (80)	1 Sun .	17 53 53	5 Mar (64)	6 Fri .	9916 5360	906 6135	231 6273	4021
21 Mar. (81)	3 Tues.	0 6 2	23 Feb (54)	4 Wed	130 8909	790 1493	203 6419	4022

TABLE

CONCURRENT YEAR								Intercalated (adhika) and suppressed (kṛaya) true lunar months
Kalī	Saka.	Chaitrādi Vikrama	Māghādi solar year in Bengal	Kollam	A D	JOVIAN SAMVATSARA		
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8
4023	844	979	328	96 97	921-22	15 Vṛiṣha . .	16 Chitrabhānu .	
4024	845	980	329	97 98	922-23	16 Chitrabhānu .	17 Subhānu	7 Āsvinā .
4025	846	981	330	98-99	923 24	17 Subhānu . .	18 Tārana . .	
4026	847	982	331	99 100	*924-25	18 Tārana . .	19 Pārthiva . .	
4027	848	983	332	100 01	925 26	19 Pārthiva . .	20 Vyaya . .	5 Śrāvāna .
4028	849	984	333	101-02	926 27	20 Vyaya . .	21 Sarvajit	
4029	850	985	334	102-03	927-28	21 Sarvajit	22 Sarvadhārin .	
4030	851	986	335	103 04	*928-29	22 Sarvadhārin	23 Virōdhan . .	3 Jyēṣṭhā .
4031	852	987	336	104-05	929 30	23 Virōdhan . .	24 Vikṛita	
4032	853	988	337	105 06	930 31	24 Vikṛita . .	25 Khara . .	
4033	854	989	338	106 07	931-32	25 Khara	26 Nandana	2 Vaiśākha .
4034	855	990	339	107-08	*932 33	26 Nandana	27 Vijaya	
4035	856	991	340	108 09	933 34	27 Vijaya . .	28 Jaya	6 Bhādrapada
4036	857	992	341	109-10	934-35	28 Jaya . .	29 Manmatha	
4037	858	993	342	110-11	935 36	29 Manmatha	30 Durmukha . .	
4038	859	994	343	111-12	*936-37	30 Durmukha . .	31 Hēmalamba . .	4 Āshāḍha .
4039	860	995	344	112-13	937-38	31 Hēmalamba . .	32 Vilamba . .	
4040	861	996	345	113-14	938 39	32 Vilamba . .	33 Vikārin . .	
4041	862	997	346	114-15	939-40	33 Vikārin . .	34 Śārvarin . .	3 Jyēṣṭhā .
4042	863	998	347	115-16	*940 41	34 Śārvarin	35 Plava . .	
4043	864	999	348	116 17	941-42	35 Plava . .	36 Śubhakṛit . .	7 Āsvinā .
4044	865	1000	349	117-18	942 43	36 Śubhakṛit . .	37 Śōbhana . .	
4045	866	1001	350	118-19	943 44	37 Śōbhana	38 Krōdhan . .	
4046	867	1002	351	119 20	*944 45	38 Krōdhan . .	39 Viśvāvasu . .	5 Śrāvāna .
4047	868	1003	352	120 21	945-46	39 Viśvāvasu	40 Parābhava . .	

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COMMENCEMENT OF THE								
SOLAR YEAR.			LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)					Kali
Day and month A D	Week-day	Time of true M̄śha-saṁkrānti	Day and month A D	Week-day	a	b	c	
13	14	17	19	20	23	24	25	1
		H M S						
21 Mar (80)	4 Wed	6 18 11	13 Mar (72)	3 Tues	165 5733	726 1427	254 9523	4023
21 Mar (80)	5 Thur	12 30 20	2 Mar (61)	0 Sat	41 2961	573 3868	224 1290	4024
21 Mar (80)	6 Fri	18 42 29	21 Mar (80)	6 Fri	75 9785	509 3802	275 4395	2025
21 Mar (81)	1 Sun	0 54 38	9 Mar (69)	3 Tues	9951 7014	356 6243	244 6163	4026
21 Mar (80)	2 Mon	7 6 47	26 Feb (57)	0 Sat	9827 4242	203 8683	213 7931	4027
21 Mar (80)	3 Tues	13 18 50	17 Mar (79)	6 Fri	9862 0966	139 8618	265 1034	4028
21 Mar (80)	4 Wed	19 31 5	7 Mar (66)	4 Wed	76 4614	23 3975	237 0181	4029
21 Mar (81)	6 Fri	1 43 14	24 Feb (55)	1 Sun	9952 1843	870 6416	206 1949	4030
21 Mar (80)	0 Sat	7 55 23	14 Mar (73)	0 Sat	9986 8666	806 6351	257 5053	4031
21 Mar (80)	1 Sun	14 7 32	4 Mar (63)	5 Thur	201 2215	690 1707	229 4198	4032
21 Mar (80)	2 Mon	20 19 41	21 Feb (52)	2 Mon	76 9443	537 4148	198 5966	4033
21 Mar (81)	4 Wed	2 31 50	11 Mar (71)	1 Sun	111 6267	473 4083	249 9071	4034
21 Mar (80)	5 Thur	8 43 59	28 Feb (59)	5 Thur	9987 3495	320 6523	219 0839	4035
21 Mar (80)	6 Fri	14 56 8	19 Mar (78)	4 Wed	22 0319	256 6458	270 3942	4036
21 Mar (80)	0 Sat	21 8 17	8 Mar (67)	1 Sun	9897 7548	103 8898	239 5711	4037
21 Mar (81)	2 Mon	3 20 26	26 Feb (57)	6 Fri	112 1097	987 4256	211 4857	4038
21 Mar (80)	3 Tues	9 32 35	16 Mar (75)	5 Thur	146 7920	923 4190	262 7961	4039
21 Mar (80)	4 Wed	15 44 44	5 Mar (64)	2 Mon	22 5148	770 6630	231 9729	4040
21 Mar (80)	5 Thur	21 56 53	23 Feb (54)	0 Sat	236 8697	654 1988	203 8874	4041
21 Mar (81)	0 Sat	4 9 2	12 Mar (72)	5 Thur	9932 9200	553 9006	252 4601	4042
21 Mar (80)	1 Sun	10 21 11	1 Mar (60)	2 Mon	9808 6429	401 1447	221 6368	4043
21 Mar (80)	2 Mon	16 33 20	20 Mar (79)	1 Sun	9843 3253	337 1381	272 0473	4044
21 Mar (80)	3 Tues	22 45 29	9 Mar (68)	5 Thur	9719 0482	184 3821	242 1240	4045
21 Mar (81)	5 Thur	4 57 38	27 Feb. (58)	3 Tues	9933 4029	67 9178	214 0386	4046
21 Mar (80)	6 Fri	11 9 47	17 Mar (76)	2 Mon	9968 0854	3 9113	265 3490	4047

TABLE

CONCURRENT YEAR								Intercalated (<i>adhika</i>) and suppressed (<i>kshaya</i>) true lunar months
Kalī	Śaka	Chaitrādi Vikrama	Mēshadi solar year in Bengal	Kollam	A D	JOVIAN SAMVATSARA		
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8
4048	869	1004	353	121-22	946-47	40 Parābhava	41 Plavanga	.
4049	870	1005	354	122-23	947-48	41 Plavanga	42 Kilaka	. 3 Jyēshtha .
4050	871	1006	355	123-24	*948-49	42 Kilaka .	43 Saumya	. ...
4051	872	1007	356	124-25	949-50	43 Saumya	44 Sādhārana	.
4052	873	1008	357	125-26	950-51	44 Sādhārana	45 Virōdhakṛit	. 1 Chaitra .
4053	874	1009	358	126-27	951-52	45 Virōdhakṛit	46 Paridhāvin	.
4054	875	1010	359	127-28	*952-53	46 Paridhāvin .	47 Pramādin	. 5 Śrāvana .
4055	876	1011	360	128-29	953-54	47 Pramādin .	48 Ānanda	.
4056	877	1012	361	129-30	954-55	48 Ānanda	49 Rākshasa	.
4057	878	1013	362	130-31	955-56	49 Rākshasa .	50 Anala .	. 4 Āshādha .
4058	879	1014	363	131-32	*956-57	50 Anala .	51 Pingala	.
4059	880	1015	364	132-33	957-58	51 Pingala	52 Kālayukta	.
4060	881	1016	365	133-34	958-59	52 Kālayukta	53 Siddhārthun	. 3 Jyēshtha .
4061	882	1017	366	134-35	959-60	53 Siddhārthun	54 Raudra	.
4062	883	1018	367	135-36	*960-61	54 Raudra	55 Durmati	. 7 Āsvina .
4063	884	1019	368	136-37	961-62	55 Durmati	56 Dundubhi	.
4064	885	1020	369	137-38	962-63	56 Dundubhi	57 Rudhirōdgārin	.
4065	886	1021	370	138-39	963-64	57 Rudhirōdgārin	58 Raktāksha	. 4 Āshādha† .
4066	887	1022	371	139-40	*964-65	58 Raktāksha	59 Krōdhana	. ...
4067	888	1023	372	140-41	965-66	59 Krōdhana	60 Kshaya	.
4068	889	1024	373	141-42	966-67	60 Kshaya	1 Prabhava	. 3 Jyēshtha .
4069	890	1025	374	142-43	967-68	1 Prabhava	2 Vibhava	.
4070	891	1026	375	143-44	*968-69	2 Vibhava	3 Śukla	. 12 Phālguna† .
4071	892	1027	376	144-45	969-70	3 Śukla .	4 Pramōda	.
4072	893	1028	377	145-46	970-71	4 Pramōda .	5 Prajāpati	.

† See "Remarks" above, on the page preceding the Table

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COMMENCEMENT OF THE								
SOLAR YEAR.			LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA SUKLA 1 FALLS).					Kali
Day and month A. D	Week-day	Time of true M̄csha saih krānti	Day and month, A. D	Week-day	a	b	c	
13	14	17	19	20	23	24	25	1
		H M S						
21 Mar (80)	0 Sat	17 21 56	7 Mar (66)	0 Sat	182 4402	887 4470	237 2637	4048
21 Mar (80)	1 Sun	23 34 5	24 Feb (55)	4 Wed	58 1630	734 6910	206 4404	4049
21 Mar (81)	3 Tues	5 46 13	14 Mar (74)	3 Tues	92 8454	670 6846	257 7508	4050
21 Mar (80)	4 Wed	11 58 22	3 Mar (62)	0 Sat	9968 5683	517 9286	226 9276	4051
21 Mar (80)	5 Thur	18 10 31	20 Feb (51)	4 Wed	9844 3112	365 1727	196 1044	4052
22 Mar (81)	0 Sat	0 22 40	11 Mar (70)	3 Tues	9878 9735	301 1662	247 4148	4053
21 Mar (81)	1 Sun	6 34 49	28 Feb (59)	0 Sat	9754 6963	148 4102	216 5916	4054
21 Mar (80)	2 Mon	12 46 58	18 Mar (77)	6 Fri	9789 3787	84 4037	267 9020	4055
21 Mar (80)	3 Tues	18 59 7	8 Mar (67)	4 Wed	3 7335	967 9394	239 8167	4056
22 Mar (81)	5 Thur	1 11 16	26 Feb (57)	2 Mon	218 0884	851 4750	211 7312	4057
21 Mar (81)	6 Fri	7 23 25	16 Mar (76)	1 Sun	252 7708	787 4685	263 0416	4058
21 Mar (80)	0 Sat	13 35 34	5 Mar (64)	5 Thur	128 4936	634 7125	232 2184	4059
21 Mar (80)	1 Sun	19 47 43	22 Feb (53)	2 Mon	4 2164	481 9566	201 3952	4060
22 Mar (81)	3 Tues	1 59 52	13 Mar (72)	1 Sun	38 8938	417 9502	252 7056	4061
21 Mar (81)	4 Wed	8 12 1	1 Mar (61)	5 Thur	9914 6217	265 1942	221 8823	4062
21 Mar (80)	5 Thur	14 24 10	20 Mar (79)	4 Wed	9949 3040	201 1877	273 1828	4063
21 Mar (80)	6 Fri	20 36 19	9 Mar (68)	1 Sun	9825 0269	48 5316	242 3696	4064
22 Mar (81)	1 Sun	2 48 28	27 Feb (56)	6 Fri	39 3817	931 9674	214 2842	4065
21 Mar (81)	2 Mon	9 0 37	17 Mar (77)	5 Thur	74 0642	867 9608	265 5946	4066
21 Mar (80)	3 Tues	15 12 46	7 Mar (66)	3 Tues	288 4189	751 4956	237 5093	4067
21 Mar (80)	4 Wed	21 24 55	24 Feb (55)	0 Sat	164 1418	598 7406	206 6860	4068
22 Mar (81)	6 Fri	3 37 4	15 Mar (74)	6 Fri	198 8042	534 7341	257 9964	4069
21 Mar (81)	0 Sat	9 49 13	3 Mar (63)	3 Tues	74 5470	381 9782	227 1731	4070
21 Mar (80)	1 Sun	16 1 22	21 Mar (80)	1 Sun	9770 5974	281 6799	275 7438	4071
21 Mar (80)	2 Mon	22 13 31	11 Mar (70)	6 Fri	9984 9522	616 2156	247 6604	4072

TABLE

CONCURRENT YEAR								Intercalated (adhika) and suppressed (kshaya) true lunar months.
Kali	Śaka	Chaitrādi Vikrama	Māshādi solar year in Bengal	Kollam	A D	JOVIAN SAMVATSARA		
						Southern system	Northern system.	
1	2	3	3a	4	5	6	7	8
4073	894	1029	378	146 47	971 72	5 Prajāpati .	6 Aṅgiras .	5 Śrāvana .
4074	895	1030	379	147-48	*972 73	6 Angiras .	7 Śrīmukha .	.
4075	896	1031	380	148 49	973 74	7 Śrīmukha .	8 Bhāva .	.
4076	897	1032	381	149 50	974-75	8 Bhāva .	9 Yuvan .	4 Āshāḍha .
4077	898	1033	382	150 51	975-76	9 Yuvan .	10 Dhātṛi .	.
4078	899	1034	383	151 52	*976 77	10 Dhātṛi .	11 Iśvara .	.
4079	900	1035	384	152 53	977-78	11 Iśvara .	12 Bahudhānya .	2 Vāśākha .
4080	901	1036	385	153 54	978 79	12 Bahudhānya .	13 Pramāthun .	.
4081	902	1037	386	154-55	979 80	13 Pramāthun .	14 Vikrama .	6 Bhādrapada .
4082	903	1038	387	155-56	*980 81	14 Vikrama .	15 Vṛisha .	.
4083	904	1039	388	156 57	981 82	15 Vṛisha .	16 Chitrabhānu .	.
4084	905	1040	389	157 58	982-83	16 Chitrabhānu .	17 Subhānu .	4 Āshāḍha†† .
4085	906	1041	390	158 59	983 84	17 Subhānu .	18 Tārana .	.
4086	907	1042	391	159 60	*984 85	18 Tārana .	19 Pārthiva .	.
4087	908	1043	392	160 61	985 86	19 Pārthiva .	20 Vyaya .	3 Jyēṣṭha .
4088	909	1044	393	161 62	986 87	20 Vyaya .	21 Sarvajit .	.
4089	910	1045	394	162 63	987-88	21 Sarvajit .	22 Sarvadhārin .	.
4090	911	1046	395	163 64	*988 89	22 Sarvadhārin .	23 Virōdhan .	1 Chaitra .
4091	912	1047	396	164 65	989-90	23 Virōdhan .	24 Vikṛita† .	.
4092	913	1048	397	165-66	990 91	24 Vikṛita .	26 Nandana .	5 Śrāvana .
4093	914	1049	398	166 67	991 92	25 Khara .	27 Vijaya .	.
4094	915	1050	399	167 68	*992 93	26 Nandana .	28 Jaya .	.
4095	916	1051	400	168 69	993 94	27 Vijaya .	29 Manmatha .	4 Āshāḍha .
4096	917	1052	401	169-70	994-95	28 Jaya .	30 Durmukha .	.
4097	918	1053	402	170 71	995 96	29 Manmatha .	31 Hēmalamba .	..

† 25 Khara was suppressed in the north
 †† See "Remarks" on page preceding the Table.

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COMMENCEMENT OF THE								
SOLAR YEAR			LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)					Kab.
Day and month A D	Week-day	Time of true Mēsha samh-krānti	Day and month A D.	Week-day	a	b	c	
13	14	17	19	20	23	24	25	1
		H M S						
22 Mar (81)	4 Wed	4 25 40	28 Feb. (59)	3 Tues	9860 6751	12 45 ⁰⁰	217 8372	4073
21 Mar. (81)	5 Thur	10 37 49	18 Mar (78)	2 Mon. .	9895 3574	948 4532	268 0475	4074
21 Mar (80)	6 Fri	16 49 58	8 Mar (67)	0 Sat .	109 7123	831 9889	240 0622	4075
21 Mar (80)	0 Sat	23 2 7	25 Feb (56)††	4 Wed.	9985 4352	079 2329	209 2390	4076
22 Mar (81)	2 Mon. .	5 14 16	16 Mar. (75)	3 Tues. .	20 1175	018 2264	200 5494	4077
21 Mar (81)	3 Tues	11 26 25	4 Mar (64)	0 Sat. .	9895 8404	462-4704	229 7261	4078
21 Mar (80)	4 Wed	17 38 34	21 Feb (52)	4 Wed .	9771 5332	309 7145	198 9029	4079
21 Mar (80)	5 Thur	23 50 43	12 Mar (71)	3 Tues .	9806 2456	245 7080	250 2134	4080
22 Mar (81)	0 Sat .	6 2 52	2 Mar (61)	1 Sun .	20 6004	129 2437	222 1279	4081
21 Mar (81)	1 Sun	12 15 1	20 Mar (80)	0 Sat	55 2828	05 2372	273 4383	4082
21 Mar (80)	2 Mon	18 27 10	9 Mar (68)	4 Wed .	9931 0057	912 4811	242 6151	4083
22 Mar (81)	4 Wed	0 39 19	27 Feb (58)	2 Mon .	145 3605	796 0169	214 5298	4084
22 Mar (81)	5 Thur	0 51 28	18 Mar (77)	1 Sun .	180 0429	732 0103	265 8401	4085
21 Mar (81)	6 Fri	13 3 37	6 Mar (66)	5 Thur. .	55 7857	579 2544	235 0169	4086
21 Mar (80)	0 Sat .	19 15 46	23 Feb (54)	2 Mon .	9931 4886	426 4986	204 1937	4087
22 Mar (81)	2 Mon	1 27 55	11 Mar (73)	1 Sun .	9966 1709	362 4019	255 5042	4088
22 Mar (81)	3 Tues	7 40 4	3 Mar (62)	5 Thur	9841 8938	209 7360	224 6809	4089
21 Mar. (81)	4 Wed	13 52 13	21 Feb (52)	3 Tues	56 2487	93 2717	196 5954	4090
21 Mar (80)	5 Thur	20 4 22	11 Mar (70)	2 Mon	90 8310	29 2651	247 9059	409
22 Mar (81)	0 Sat	2 16 31	28 Feb (59)	6 Fri	9966 0538	876 5093	217 0828	4092
22 Mar. (81)	1 Sun .	8 28 40	19 Mar (78)	5 Thur	1 3372	812 5027	268 3931	4093
21 Mar (81)	2 Mon.	14 40 49	8 Mar (68)	3 Tues	213 6911	096 0364	240 3077	4094
21 Mar (80)	3 Tues	20 52 58	25 Feb (56)	0 Sat	91 4130	543 2825	209 4845	4095
22 Mar (81)	5 Thur	3 5 6	16 Mar (75)	6 Fri	126 0953	479 2759	260 7950	4096
22 Mar (81)	6 Fri .	9 17 15	5 Mar (64)	3 Tues	1 8192	326 5199	229 9717	4097

†† See "Remarks" on page preceding the Table.

TABLE

CONCURRENT YEAR.								Intercalated (adhika) and suppressed (Lhaya) true lunar months
Kalī	Saka	Chaitrādi Vikrama	Mēshādi solar year in Bengal	Kollam	A. D.	JOVIAN SAMVATSARA		
						Southern system.	Northern system	
1	2	3	3a	4	5	6	7	8
4098	919	1054	403	171-72	*996 97	30 Durmukha .	32 Vilamba .	2 Varākhā .
4099	920	1055	404	172-73	997-98	31 H̄malamba	33 Vikārin .	—
4100	921	1056	405	173 74	998 99	32 Vilamba .	34 Śārvarin .	6 Bhādrapada
4101	922	1057	406	174 75	999 1000	33 Vikārin .	35 Plava .	.
4102	923	1058	407	175-76	*1000 01	34 Śārvarin .	36 Subhakarit .	.
4103	924	1059	408	176 77	1001-02	35 Plava .	37 Śobhana .	5 Śrāvana† .
4104	925	1060	409	177-78	1002 03	36 Subhakarit .	38 Krōdhin .	.
4105	926	1061	410	178-79	1003 04	37 Śobhana	39 Viśvāvasu .	.
4106	927	1062	411	179 80	*1004 05	38 Krōdhin	40 Parābhava .	3 Jyēshthā .
4107	928	1063	412	180-81	1005 06	39 Viśvāvasu .	41 Plavanga .	.
4108	929	1064	413	181 82	1006 07	40 Parābhava	42 Kīlaka .	{ 8 Kārttika } { 9 Māgas (Ash) }
4109	930	1065	414	182 83	1007 08	41 Plavanga .	43 Saumya	1 Chaitra
4110	931	1066	415	183 84	*1008 09	42 Kīlaka .	44 Sādhārana	.
4111	932	1067	416	184 85	1009-10	43 Saumya	45 Virōdhakarit .	5 Śrāvana .
4112	933	1068	417	185-86	1010 11	44 Sādhārana .	46 Paridhāvin	.
4113	934	1069	418	186 87	1011-12	45 Virōdhakarit	47 Pramādin	.
4114	935	1070	419	187 88	*1012-13	46 Paridhāvin	48 Ānanda	4 Āshādha .
4115	936	1071	420	188 89	1013 14	47 Pramādin	49 Rākshasa	.
4116	937	1072	421	189-90	1014-15	48 Ānanda	50 Anala .	.
4117	938	1073	422	190 91	1015-16	49 Rākshasa .	51 Pingala	2 Varākhā .
4118	939	1074	423	191-92	*1016-17	50 Anala .	52 Kālayukta	.
4119	940	1075	424	192 93	1017 18	51 Pingala .	53 Siddhārthm .	6 Bhādrapada
4120	941	1076	425	193 94	1018 19	52 Kālayukta .	54 Raudra .	.
4121	942	1077	426	194 95	1019 20	53 Siddhārthm	55 Durmatī .	.
4122	943	1078	427	195 96	*1020 21	54 Raudra	56 Dundubhī .	5 Śrāvana† .

† See "Remarks" on page preceding the Table

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COMMENCEMENT OF THE								
SOLAR YEAR.			LUNI-SOLAR YEAR (NEAR SUNRISE OF CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS)					Kali
Day and month A D	Week-day	Time of true Mēsha samh-krānti	Day and month A D	Week day	a	b	c	
13	14	17	19	20	23	24	25	
		H M S						1
21 Mar (81)	0 Sat .	15 20 24	22 Feb (53)	0 Sat	9877 5419	173 7640	199 1484	4098
21 Mar (80)	1 Sun .	21 41 33	12 Mar (71)	6 Fri	9912 2243	109 7575	251 4589	4099
22 Mar (81)	3 Tues	3 53 42	2 Mar (61)	4 Wed .	126 5792	993 2933	222 3735	4100
22 Mar (81)	4 Wed .	10 5 51	21 Mar (80)	3 Tues	161 2616	929 2867	273 6618	4101
21 Mar (81)	5 Thur	10 18 0	9 Mar (69)	0 Sat	36 9845	776 5307	242 8385	4102
21 Mar (80)	6 Fri	22 30 9	27 Feb (58)	5 Thur	251 3393	660 0064	214 7531	4103
22 Mar (81)	1 Sun .	4 42 18	17 Mar (76)	3 Tues	0947 3897	559 7683	263 3257	4104
22 Mar (81)	2 Mon	10 54 27	6 Mar (65)	0 Sat	9823 1125	407 0122	232 5025	4105
21 Mar (81)	3 Tues	17 6 36	24 Feb (55)	5 Thur	37 4674	290 5480	204 4171	4106
21 Mar (80)	4 Wed	23 18 45	13 Mar (72)	3 Tues	9733 5177	190 2498	253 9897	4107
22 Mar (81)	6 Fri .	5 30 54	3 Mar (62)	1 Sun .	9947 8726	73 7855	224 9042	4108
22 Mar (81)	0 Sat .	11 43 3	21 Feb (52)	6 Fri	162 2275	957 3273	196 8189	4109
21 Mar (81)	1 Sun	17 55 12	11 Mar (71)	5 Thur	196 9097	893 3146	248 1293	4110
22 Mar (81)	3 Tues	0 7 21	28 Feb (59)	2 Mon	72 6326	740 5588	217 3061	4111
22 Mar (81)	4 Wed	6 19 30	19 Mar (78)	1 Sun	107 1140	676 5322	268 6164	4112
22 Mar (81)	5 Thur	12 31 39	8 Mar (67)	5 Thur	9983 0379	523 7062	237 7933	4113
21 Mar (81)	6 Fri .	18 43 48	25 Feb (56)	2 Mon	9858 7607	371 0403	206 9701	4114
22 Mar (81)	1 Sun	0 55 57	15 Mar (74)	1 Sun .	9893 4431	307 0338	258 2805	4115
22 Mar (81)	2 Mon .	7 8 6	4 Mar (63)	5 Thur	9769 1660	154 2779	227 4572	4116
22 Mar (81)	3 Tues	13 20 15	22 Feb (53)	3 Tues	9983 5207	37 8125	199 3718	4117
21 Mar (81)	4 Wed	19 32 24	12 Mar (72)	2 Mon	18 2031	973 8070	250 6823	4118
22 Mar (81)	6 Fri .	1 44 33	2 Mar (61)	0 Sat	232 5580	857 3427	222 5968	4119
22 Mar (81)	0 Sat .	7 56 42	21 Mar (80)	6 Fri	267 2404	793 3302	273 9072	4120
22 Mar (81)	1 Sun	14 8 51	10 Mar (69)	3 Tues	142 9632	640 5802	243 0840	4121
21 Mar (81)	2 Mon	20 21 0	27 Feb (58)	0 Sat	18 6860	487-8243	212 2609	4122

TABLE

CONCURRENT YEAR								Intercalated (<i>adhika</i>) and suppressed (<i>kshaya</i>) true lunar months
Kali	Śaka	Chaitrādi Vikrama	Mēshādi solar year in Bengal	Kollam.	A D	JUVIAN SAMVATSARA		
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8
4123	944	1079	428	196-97	1021-22	55 Durmatī .	57 Rudhīrōdgārīn	...
4124	945	1080	429	197-98	1022-23	56 Dundubhī	58 Raktāksha .	.
4125	946	1081	430	198-99	1023-24	57 Rudhīrōdgārīn	59 Krōdhana .	3 Jyēshṭha .
4126	947	1082	431	199-200	*1024-25	58 Raktāksha .	60 Kshaya .	.
4127	948	1083	432	200-01	1025-26	59 Krōdhana	1 Prabhava	{ 7 Āsvina
4128	949	1084	433	201-02	1026-27	60 Kshaya	2 Vibhava	{ 10 Pauṣha (<i>Lsh</i>)
4129	950	1085	434	202-03	1027-28	1 Prabhava	3 Śukla .	1 Chaitra .
4130	951	1086	435	203-04	*1028-29	2 Vibhava .	4 Pramōda	5 Śrāvana
4131	952	1087	436	204-05	1029-30	3 Śukla .	5 Prajāpati .	.
4132	953	1088	437	205-06	1030-31	4 Pramōda	6 Angirās	.
4133	954	1089	438	206-07	1031-32	5 Prajāpati .	7 Śrīmukha	3 Jyēshṭha .
4134	955	1090	439	207-08	*1032-33	6 Angirās	8 Bhāva	.
4135	956	1091	440	208-09	1033-34	7 Śrīmukha .	9 Yuvan	.
4136	957	1092	441	209-10	1034-35	8 Bhāva	10 Dhātṛī .	2 Vaiśākha .
4137	958	1093	442	210-11	1035-36	9 Yuvan	11 Īsvara	.
4138	959	1094	443	211-12	*1036-37	10 Dhātṛī .	12 Bahudhānya	6 Bhādrapada
4139	960	1095	444	212-13	1037-38	11 Īsvara	13 Pramāthīn .	.
4140	961	1096	445	213-14	1038-39	12 Bahudhānya	14 Vikrama	..
4141	962	1097	446	214-15	1039-40	13 Pramāthīn	15 Vṛiṣha .	4 Āshāḍha .
4142	963	1098	447	215-16	*1040-41	14 Vikrama .	16 Chitrabhānu .	.
4143	964	1099	448	216-17	1041-42	15 Vṛiṣha .	17 Subhānu .	.
4144	965	1100	449	217-18	1042-43	16 Chitrabhānu	18 Tārana	3 Jyēshṭha .
4145	966	1101	450	218-19	1043-44	17 Subhānu	19 Pārthiva .	.
4146	967	1102	451	219-20	*1044-45	18 Tārana .	20 Vyaya .	7 Āsvina .
4147	968	1103	452	220-21	1045-46	19 Pārthiva	21 Sarvaṇt	.

LXXXII—Contd.

COMMENCEMENT OF THE								
SOLAR YEAR			LUNAR SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)					Kali
Day and month A. D.	Week-day	Time of true Mēshī samkrānti	Day and month A. D.	Week-day	a	b	c	
13	14	17	19	20	23	24	25	
		H M S						1
22 Mar (81)	4 Wed.	2 33 9	17 Mar (76)	6 Fri	53 3685	423 8178	263 3090	4123
22 Mar (81)	5 Thur	8 45 18	6 Mar (65)	3 Tues	9929-0902	271 0618	232 7480	4124
22 Mar (81)	6 Fri	14 57 27	23 Feb (54)	0 Sat	9804 8141	118 3068	201 9238	4125
21 Mar (81)	0 Sat	21 9 36	13 Mar (73)	6 Fri	9839 4965	54 2993	253 2353	4126
22 Mar (81)	2 Mon	3 21 45	3 Mar (62)	1 Wed	53 8514	937 8350	225 0498	4127
22 Mar (81)	3 Tues	9 33 54	21 Feb (52)	2 Mon	269 2062	821 3708	197 0643	4128
22 Mar (81)	4 Wed	15 46 3	12 Mar (71)	1 Sun	302 8985	757 3642	248 3748	4129
21 Mar (81)	5 Thur	21 58 12	29 Feb (60)	5 Thur	178 6114	604 6082	217 5517	4130
22 Mar (81)	0 Sat	4 10 21	19 Mar (78)	4 Wed	213 2937	540 6018	268 8620	4131
22 Mar (81)	1 Sun	10 22 30	8 Mar (67)	1 Sun	89 0166	387 8457	238 0388	4132
22 Mar (81)	2 Mon	16 34 39	25 Feb (56)	5 Thur	9964 7395	235 0898	207 2156	4133
21 Mar (81)	3 Tues	22 46 48	15 Mar (75)	4 Wed	9999 4219	171 0833	258 5271	4134
22 Mar (81)	5 Thur	4 58 57	4 Mar (63)	1 Sun	9875 1447	17 3274	227 7028	4135
22 Mar (81)	6 Fri	11 11 6	22 Feb (53)	6 Fri	89 4995	901 8631	199 6173	4136
22 Mar (81)	0 Sat	17 23 5	13 Mar (72)	5 Thur	124 1819	837 8565	250 4278	4137
21 Mar (81)	1 Sun	23 35 24	1 Mar (61)	2 Mon	9999 9048	685 1006	219 6046	4138
22 Mar (81)	3 Tues	5 47 33	20 Mar (79)	1 Sun	34 3871	021 0940	271 4150	4139
22 Mar (81)	4 Wed	11 59 42	9 Mar (68)	5 Thur	9910 3100	468 3381	239 5919	4140
22 Mar (81)	5 Thur	18 11 50	26 Feb (57)	2 Mon	9786 0329	315 5822	209 7686	4141
22 Mar (82)	0 Sat	0 23 59	16 Mar (76)	1 Sun	9820 7152	251 5756	261 0791	4142
22 Mar (81)	1 Sun	6 36 8	6 Mar (65)	6 Fri	35 0700	145 1113	232 9936	4143
22 Mar (81)	2 Mon	12 48 17	23 Feb (54)	3 Tues	9910 7929	982 3553	202 1704	4144
22 Mar (81)	3 Tues	19 0 26	14 Mar (73)	2 Mon	9945 4753	918 3478	253 4808	4145
22 Mar (82)	5 Thur	1 12 35	3 Mar (63)	0 Sat	159 6391	801 8845	225 3959	4146
22 Mar (81)	6 Fri	7 24 44	22 Mar (81)	6 Fri	194 5125	737 8780	276 7058	4147

TABLE

CONCURRENT YEAR								Intercalated (<i>adhika</i>) and suppressed (<i>ashaya</i>) true lunar months
Kal	Śaka	Chaitrādi Vikrama	Mēshādi solar year in Bengal	Kollam	A D	JOVIAN SAMVATSARA.		
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8
4148	969	1104	453	221 22	1046 47	20 Vyaya .	22 Sarvadhārin .	
4149	970	1105	454	222 23	1047-48	21 Sarvajit .	23 Virōdhin .	5 Śrāvana .
4150	971	1106	455	223 24	*1048 49	22 Sarvadhārin	24 Vikṛita .	
4151	972	1107	456	224 25	1049 50	23 Virōdhin	25 Khara .	
4152	973	1108	457	225 26	1050 51	24 Vikṛita . .	26 Nandana .	3 Jyēshtha .
4153	974	1109	458	226 27	1051-52	25 Khara .	27 Vijaya .	..
4154	975	1110	459	227-28	*1052 53	26 Nandana .	28 Jaya . .	..
4155	976	1111	460	228 29	1053-54	27 Vijaya . .	29 Manmatha .	2 Vaiśākha .
4156	977	1112	461	229 30	1054 55	28 Jaya . .	30 Durmukha .	..
4157	978	1113	462	230 31	1055-56	29 Manmatha .	31 Hēmalamba .	6 Bhādrapada
4158	979	1114	463	231-32	*1056 57	30 Durmukha .	32 Vilamba .	
4159	980	1115	464	232-33	1057-58	31 Hēmalamba .	33 Vikārin	..
4160	981	1116	465	233 34	1058 59	32 Vilamba .	34 Śārvarin .	4 Āshādha .
4161	982	1117	466	234-35	1059-60	33 Vikārin .	35 Plava . .	
4162	983	1118	467	235 36	*1060 61	34 Śārvarin	36 Śubhakṛit .	..
4163	984	1119	468	236 37	1061-62	35 Plava .	37 Śōbhana .	3 Jyēshtha .
4164	985	1120	469	237-38	1062 63	36 Śubhakṛit .	38 Krōdhin .	..
4165	986	1121	470	238 39	1063 64	37 Śōbhana	39 Viśvāvasu .	7 Āsvina
4166	987	1122	471	239 40	*1064 65	38 Krodhin .	40 Parābhava .	..
4167	988	1123	472	240 41	1065-66	39 Viśvāvasu .	41 Plavanga .	..
4168	989	1124	473	241 42	1066 67	40 Parābhava .	42 Kilaka .	5 Śrāvana
4169	990	1125	474	242 43	1067-68	41 Plavanga .	43 Saumya .	..
4170	991	1126	475	243 44	*1068 69	42 Kilaka . .	44 Sādhārana .	
4171	992	1127	476	244 45	1069 70	43 Saumya .	45 Virōdhakṛit .	3 Jyēshtha .
4172	993	1128	477	245 46	1070 71	44 Sādhārana .	46 Paridhāvam .	

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COMMENCEMENT OF THE								
SOLAR YEAR.			LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)					Kals
Day and month A. D	Week-day	Time of true M̄cshn sath-krānti	Day and month, A D	Week-day	a	b	c	
13	14	17	19	20	23	24	25	1
22 Mar (81)	0 Sat .	H M S 13 36 53	11 Mar (70)	3 Tues	70 2354	585 1221	245 8826	4148
22 Mar (81)	1 Sun .	19 49 2	28 Feb (59)	0 Sat	0945 9581	432 3601	215 0594	4149
22 Mar (82)	3 Tues	2 1 11	18 Mar (78)	6 Fri	9980 6406	368 3596	206 3697	4150
22 Mar (81)	4 Wed .	8 13 20	7 Mar (66)	3 Tues .	9856 3634	215 6036	235 5466	4151
22 Mar (81)	5 Thur	14 25 29	25 Feb (59)	1 Sun	70 7183	99 1393	207 7536	4152
22 Mar (81)	6 Fri .	20 37 38	16 Mar (75)	0 Sat	105 4006	35 1328	258 7716	4153
22 Mar (82)	1 Sun .	2 49 47	4 Mar (64)	4 Wed	9981 1235	882 3769	227 9483	4154
22 Mar (81)	2 Mon .	0 1 56	22 Feb (53)	2 Mon	195 4783	767 9126	199 8629	4155
22 Mar (81)	3 Tues .	15 14 5	13 Mar (72)	1 Sun .	230 1606	701 9061	251 1734	4156
22 Mar (81)	4 Wed .	21 26 14	2 Mar (81)	5 Thur	105 8335	549 1501	220 3501	4157
22 Mar (82)	6 Fri .	3 38 23	20 Mar (80)	4 Wed	140 5659	485 1435	271-6005	4158
22 Mar (81)	0 Sat .	9 50 32	9 Mar (68)	1 Sun .	16 2888	333 3876	240 8375	4159
22 Mar (81)	1 Sun	16 2 41	26 Feb (57)	5 Thur	9892 0116	179 6317	210 0142	4160
22 Mar (81)	2 Mon	22 14 50	17 Mar (70)	4 Wed	9926-6040	115 6452	261 3246	4161
22 Mar (82)	4 Wed	4 26 59	6 Mar (66)	2 Mon .	141 0488	999 1608	233 2391	4162
22 Mar (81)	5 Thur	10 39 8	23 Feb (54)	6 Fri.	16 7716	856 4049	202 4159	4163
22 Mar (81)	6 Fri .	16 51 17	14 Mar (73)	5 Thur	51 4540	782 3983	253 7264	4164
22 Mar (81)	0 Sat	23 3 26	4 Mar (63)	3 Tues	265 8089	665 9341	225 6409	4165
22 Mar (82)	2 Mon	5 15 35	21 Mar. (81)	1 Sun .	9961 8593	565 6363	274 2135	4166
22 Mar (81)	3 Tues	11 27 44	10 Mar (69)	5 Thur	9837 5821	412 8799	243 3903	4167
22 Mar (81)	4 Wed	17 39 53	28 Feb (59)	3 Tues.	51 9369	296 4157	215 3050	4168
22 Mar (81)	5 Thur	23 52 2	18 Mar (77)	1 Sun. .	9747 9874	196 1174	263 8775	4169
22 Mar. (82)	0 Sat .	6 4 11	7 Mar (67)	6 Fri. .	9962 3421	79 6532	235 7921	4170
22 Mar (81)	1 Sun .	12 16 20	25 Feb (56)	4 Wed. .	176 6970	963 1888	207 7067	4171
22 Mar (81)	2 Mon	18 28 29	16 Mar (75)	3 Tues .	211 3794	899 1823	259 0172	4172

TABLE

CONCURRENT YEAR								Intercalated (<i>adhika</i>) and suppressed (<i>leshaya</i>) true lunar months
Kali	Śaka	Chaitradī Vikrama	MC-shadi solar year in Bengal	Kollam	A D	JOVIAN SANVATSARA		
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8
4173	994	1129	478	246 47	1071 72	45 Virōdhakṛit .	47 Pramādin	{ 8 Kārttika . 9 Mārgaś (Leh) }
4174	995	1130	479	247-48	*1072 73	46 Paridhāvin .	48 Ānanda .	2 Vaiśākha .
4175	996	1131	480	248 49	1073 74	47 Pramādin .	49 Rākshasa	
4176	997	1132	481	249 50	1074 75	48 Ānanda .	50 Anala†	6 Bhādrapada
4177	998	1133	482	250 51	1075-76	49 Rākshasa .	52 Kālayukta	...
4178	999	1134	483	251 52	*1076-77	50 Anala .	53 Siddhārthm	.
4179	1000	1135	484	252 53	1077-78	51 Pingala .	54 Raudra .	4 Āshādha
4180	1001	1136	485	253 54	1078 79	52 Kālayukta	55 Durmatī	.
4181	1002	1137	486	254-55	1079 80	53 Siddhārthm .	56 Dundubhi	.
4182	1003	1138	487	255 56	*1080 81	54 Raudra .	57 Rudhirōdgārn	3 Jyēshtha .
4183	1004	1139	488	256 57	1081-82	55 Durmatī .	58 Raktāksha .	..
4184	1005	1140	489	257 58	1082 83	56 Dundubhi	59 Krōdhana .	7 Āśvina .
4185	1006	1141	490	258 59	1083 84	57 Rudhirōdgārn	60 Kshaya	.
4186	1007	1142	491	259 60	*1084 85	58 Raktāksha	1 Prabhava .	.
4187	1008	1143	492	260 61	1085 86	59 Krōdhana	2 Vṛbhava .	5 Śrāvana .
4188	1009	1144	493	261-62	1086 87	60 Kshaya	3 Śukla .	...
4189	1010	1145	494	262 63	1087 88	1 Prabhava .	4 Pramōda .	.
4190	1011	1146	495	263-64	*1088 89	2 Vṛbhava	5 Prajāpati .	3 Jyēshtha .
4191	1012	1147	496	264 65	1089-90	3 Śukla .	6 Angiras .	.
4192	1013	1148	497	265 66	1090 91	4 Pramōda .	7 Śrīmukha .	{ 8 Kārttika 10 Pausa (Leh) }
4193	1014	1149	498	266 67	1091 92	5 Prajāpati .	8 Bhāva .	1 Chaitra .
4194	1015	1150	499	267-68	*1092-93	6 Angiras .	9 Yuvan .	..
4195	1016	1151	500	268 69	1093 94	7 Śrīmukha .	10 Dhātṛi .	6 Bhādrapada
4196	1017	1152	501	269 70	1094-95	8 Bhāva .	11 Īsvara .	...
4197	1018	1153	502	270 71	1095 96	9 Yuvan .	12 Bahudhānya

† 51 Pingala was suppressed in the north.

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COMMENCEMENT OF THE								
SOLAR YEAR.			LURI-SOLAR YEAR (MFAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)					Kal
Day and month A. D.	Week-day.	Time of true Mēṣaṅgānāth-krānti.	Day and month A. D.	Week-day	a	b	c	
13	14	17	19	20	23	24	25	1
		H. M S						
23 Mar (82)	4 Wed.	0 40 38	5 Mar (64)	0 Sat .	87 1023	746 4264	228 1939	4173
22 Mar (82)	5 Thur	6 52 47	22 Feb (53)	4 Wed	9902 8251	593 6705	197 3706	4174
22 Mar (81)	6 Fri. .	12 4 56	12 Mar (71)	3 Tues	9907 5074	530 6639	248 6811	4175
22 Mar. (81)	0 Sat. .	10 17 5	1 Mar (60)	0 Sat. .	9873 2303	376 9079	217 8580	4176
23 Mar. (82)	2 Mon.	1 20 14	20 Mar (79)	6 Fri .	9907 9126	312 9015	269 1683	4177
22 Mar. (82)	3 Tues	7 41 23	8 Mar (68)	3 Tues	9783 6355	160 1454	238 3451	4178
22 Mar (81)	4 Wed	13 53 32	26 Feb (57)	1 Sun .	9997 9904	43 6812	210 2597	4179
22 Mar (81)	5 Thur	20 5 41	17 Mar (76)	0 Sat .	32 6728	979 6747	261 5702	4180
23 Mar. (82)	0 Sat	2 17 50	7 Mar (66)	5 Thur.	247 0275	863 2103	233 4847	4181
22 Mar (82)	1 Sun .	8 29 59	24 Feb (55)	2 Mon	122 7504	710 4544	202 6614	4182
22 Mar (81)	2 Mon	14 42 8	14 Mar. (73)	1 Sun .	157 4328	646 4478	253 9719	4183
22 Mar. (81)	3 Tues	20 54 17	3 Mar (62)	5 Thur	33 1557	493 6919	223 1487	4184
23 Mar. (82)	5 Thur	3 6 26	22 Mar (81)	4 Wed	67 8380	429 6854	274 4591	4185
22 Mar (82)	6 Fri	9 18 35	10 Mar (70)	1 Sun	9943 5609	276 9294	245 6358	4186
22 Mar (81)	0 Sat. .	15 30 43	27 Feb (58)	6 Thur	9819 2837	124 1735	212 8127	4187
22 Mar (81)	1 Sun	21 42 52	18 Mar (77)	4 Wed	9853 9661	60 1669	264 1231	4188
23 Mar (82)	3 Tues	3 55 1	8 Mar (67)	2 Mon	68 3209	943 8027	236 0377	4189
22 Mar (82)	4 Wed	10 7 10	26 Feb. (57)	0 Sat .	282 6758	827 2383	207-9522	4190
22 Mar (81)	5 Thur	16 19 19	16 Mar (75)	6 Fri .	317 3582	763 2318	259 2627	4191
22 Mar (81)	6 Fri .	22 31 28	5 Mar (64)	3 Tues	193 0310	610 4769	228 4395	4192
23 Mar. (82)	1 Sun .	4 43 37	22 Feb. (53)	0 Sat .	68 8039	457 7200	197 6162	4193
22 Mar (82)	2 Mon. .	10 55 46	12 Mar (72)	6 Fri. .	103 4862	393 7134	248 9266	4194
22 Mar. (81)	3 Tues	17 7 55	1 Mar (60)	3 Tues	9979 2090	240 9577	218 1035	4195
22 Mar (81)	4 Wed	22 40 4	20 Mar (70)	2 Mon .	12 8914	176-9509	269 4139	4196
23 Mar (82)	6 Fri .	5 32 13	9 Mar. (68)	6 Fri .	9889 6143	84 1949	236 5907	4197

TABLE

CONCURRENT YEAR.

Kalī	Śaka	Chaitrādī Vikrama	Mēshādi solar year in Bengal	Kollam.	A. D	JOVIAN SAMVATSARA		Intercalated (adīśa) and suppressed (śhaya) true lunar months
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8
4198	1019	1154	503	271-72	*1096 97	10 Dhātṛī . .	13 Pramāthin	4 Āshādha .
4199	1020	1155	504	272-73	1097-98	11 Iśvara . .	14 Vikrama	
4200	1021	1156	505	273 74	1098 99	12 Bahudhānya .	15 Vṛisha .	
4201	1022	1157	506	274-75	1099 1100	13 Pramāthin . .	16 Chitrabhānu .	3 Jyēshtha .
4202	1023	1158	507	275 76	*1100 01	14 Vikrama . .	17 Subhānu . .	
4203	1024	1159	508	276 77	1101-02	15 Vṛisha . .	18 Tārana . .	7 Āvina
4204	1025	1160	509	277-78	1102-03	16 Chitrabhānu .	19 Pārthiva . .	
4205	1026	1161	510	278-79	1103 04	17 Subhānu	20 Vyaya . .	
4206	1027	1162	511	279 80	*1104 05	18 Tārana . .	21 Sarvajit . .	4 Āshādha .
4207	1028	1163	512	280 81	1105 06	19 Pārthiva . .	22 Sarvadhārin	
4208	1029	1164	513	281 82	1106 07	20 Vyaya . .	23 Virōdhin . .	
4209	1030	1165	514	282-83	1107-08	21 Sarvajit . .	24 Vikṛita . .	3 Jyēshtha .
4210	1031	1166	515	283 84	*1108 09	22 Sarvadhārin	25 Khara . .	
4211	1032	1167	516	284 85	1109-10	23 Virōdhin . .	26 Nandana	8 Kārttika 10 Pausā (Kṣh) 12 Phālguna
4212	1033	1168	517	285 86	1110-11	24 Vikṛita . .	27 Vijaya	
4213	1034	1169	518	286 87	1111-12	25 Khara . .	28 Jaya . .	
4214	1035	1170	519	287 88	*1112-13	26 Nandana	29 Manmatha .	5 Śrāvana .
4215	1036	1171	520	288-89	1113-14	27 Vijaya . .	30 Durmukha .	
4216	1037	1172	521	289 90	1114 15	28 Jaya . .	31 Hēmalamba	
4217	1038	1173	522	290 91	1115-16	29 Manmatha	32 Vilamba . .	4 Āshādha .
4218	1039	1174	523	291-92	*1116 17	30 Durmukha .	33 Vikārin . .	
4219	1040	1175	524	292-93	1117-18	31 Hēmalamba .	34 Śārvarin . .	
4220	1041	1176	525	293 94	1118 19	32 Vilamba . .	35 Plava . .	2 Vaiśākha .
4221	1042	1177	526	294 95	1119-20	33 Vikārin . .	36 Śubhakṛit . .	
4222	1043	1178	527	295 96	*1120 21	34 Śārvarin . .	37 Śōbhana . .	6 Bhādrapada

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COMMENCEMENT OF THE								
SOLAR YEAR			LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS)					Kali
Day and month A D	Week-day	Time of true Mēsha in krinti	Day and month A D	Week-day	a	b	c	
13	14	17	19	20	23	24	25	1
22 Mar (82)	0 Sat	11 41 22	27 Feb (58)	4 Wed	103 9691	907 7307	210 5052	4198
22 Mar (81)	1 Sun	17 56 31	17 Mar (76)	3 Tues	138 6515	843 7242	261 8157	4199
23 Mar (82)	3 Tues	0 8 40	6 Mar (65)	0 Sat	14 3744	690 9683	230 9925	4200
23 Mar (82)	4 Wed	6 20 49	24 Feb (55)	5 Thur	228 7291	574 5038	202 8848	4201
22 Mar (82)	5 Thur	12 32 58	13 Mar (73)	3 Tues	9924 7795	474 2057	251 4575	4202
22 Mar (81)	6 Fri	18 45 7	2 Mar (61)	0 Sat	9900 5024	321 4497	20 6342	4203
23 Mar (82)	1 Sun	0 57 16	21 Mar (80)	6 Fri	9835 1847	257 4432	271 9446	4204
23 Mar (82)	2 Mon	7 9 25	11 Mar (70)	4 Wed	47 5396	140 9788	243 8592	4205
22 Mar (82)	3 Tues	13 21 34	28 Feb (59)	1 Sun	9925 2624	988 2229	213 0361	4206
22 Mar (81)	4 Wed	19 33 43	18 Mar (77)	0 Sat	9959 9448	924 2154	264 3464	4207
23 Mar (82)	6 Fri	1 45 52	8 Mar (67)	5 Thur	174 2996	807 7521	236 2010	4208
23 Mar (82)	0 Sat	7 58 1	25 Feb (56)	2 Mon	50 0225	654 9902	205 4387	4209
22 Mar (82)	1 Sun	14 10 10	15 Mar (75)	1 Sun	84 7018	590 9896	256 7493	4210
22 Mar (81)	2 Mon	20 22 19	4 Mar (63)	5 Thur	9960 4277	438 2337	225 9250	4211
23 Mar (82)	4 Wed	2 34 28	23 Mar (82)	4 Wed	9995 1101	371 2271	277 2354	4212
23 Mar (82)	5 Thur	8 46 37	12 Mar (71)	1 Sun	9670 8330	221 4712	246 4122	4213
22 Mar (82)	6 Fri	14 58 16	1 Mar (61)	6 Fri	85 1877	105 0069	218 3269	4214
22 Mar (81)	0 Sat	21 10 55	20 Mar (79)	5 Thur	119 8701	41 0004	269 6373	4215
23 Mar (82)	2 Mon	3 23 4	0 Mar (68)	2 Mon	9995 5930	888 3444	238 8140	4216
23 Mar (82)	3 Tues	9 35 13	27 Feb (58)	0 Sat	209 9478	771 7891	210 7286	4217
22 Mar (82)	4 Wed	15 47 22	17 Mar (77)	6 Fri	244 6302	707 7736	262 0391	4218
22 Mar (81)	5 Thur	21 59 31	6 Mar (65)	3 Tues	120 3530	555 0176	231 2158	4219
23 Mar (82)	0 Sat	4 11 40	23 Feb (54)	0 Sat	9996 0759	402 2617	200 3925	4220
23 Mar (82)	1 Sun	10 23 49	14 Mar (73)	6 Fri	30 7582	338 2552	251 7036	4221
22 Mar (82)	2 Mon	16 35 58	2 Mar (62)	3 Tues	9906 4811	185 4993	220 8798	4222

TABLE

CONCURRENT YEAR								Intercalated (adhika) and suppressed (kshaya) true lunar months.
Kali	Saka	Chaitrādi Vakrama	Mūshadi solar year in Bengal	Kollam.	A D	JULIAN SAMVATARA.		
						Southern system.	Northern system	
1	2	3	3a	4	5	6	7	8
4223	1044	1179	528	296-97	1121-22	35 Plava . .	36 Krōdhin . .	.
4224	1045	1180	529	297-98	1122-23	36 Śubhakarī . .	39 Viśvāvasu . .	..
4225	1046	1181	530	298-99	1123 24	37 Śōbhana . .	40 Parābhava . .	4 Āshāḍha . .
4226	1047	1182	531	299-300	*1124-25	38 Krōdhin . .	41 Plavaṅga . .	.
4227	1048	1183	532	300 01	1125 26	39 Viśvāvasu . .	42 Kīlaka . .	.
4228	1049	1184	533	301-02	11 6-27	40 Parābhava . .	43 Saumya . .	3 Jyēṣṭha . .
4229	1050	1185	534	302-03	1127 28	41 Plavaṅga . .	44 Sādharāṇa . .	.
4230	1051	1186	535	303 04	*1128 29	42 Kīlaka . .	45 Virōdhakarī . .	12 Phālgunā† . .
4231	1052	1187	536	304-05	1129 30	43 Saumya . .	46 Paridhāvin . .	.
4232	1053	1188	537	305 06	1130 31	44 Sādharāṇa . .	47 Pramādin . .	.
4233	1054	1189	538	306 07	1131-32	45 Virōdhakarī . .	48 Ānanda . .	5 Śrāvana . .
4234	1055	1190	539	307-08	*1132 33	46 Paridhāvin . .	49 Rāksasa . .	..
4235	1056	1191	540	308 09	1133 34	47 Pramādin . .	50 Anala . .	.
4236	1057	1192	541	309 10	1134-35	48 Ānanda . .	51 Pīngala . .	4 Āshāḍha . .
4237	1058	1193	542	310 11	1135 36	49 Rāksasa . .	52 Kālayukta . .	.
4238	1059	1194	543	311-12	*1136-37	50 Anala . .	53 Siddhārthun . .	.
4239	1060	1195	544	312-13	1137-38	51 Pīngala . .	54 Raudra . .	2 Vaiśākha . .
4240	1061	1196	545	313 14	1138-39	52 Kālayukta . .	55 Durmatī . .	.
4241	1062	1197	546	314-15	1139 40	53 Siddhārthīn . .	56 Dundubhī . .	6 Bhādrapada . .
4242	1063	1198	547	315 16	*1140 41	54 Raudra . .	57 Rudhīrōdgārn . .	.
4243	1064	1199	548	316-17	1141 42	55 Durmatī . .	58 Raktāksha . .	.
4244	1065	1200	549	317-18	1142 43	56 Dundubhī . .	59 Krōdhana . .	4 Āshāḍha . .
4245	1066	1201	550	318 19	1143 44	57 Rudhīrōdgārn . .	60 Kshaya . .	.
4246	1067	1202	551	319 20	*1144 45	58 Raktāksha . .	1 Prabhava . .	.
4247	1068	1203	552	320-21	1145 46	59 Krōdhana . .	2 Vibhava . .	3 Jyēṣṭha . .

† See "Remarks" on page preceding the Table

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COMMENCEMENT OF THE								
SOLAR YEAR			LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)					Kali.
Day and month A D.	Week-day	Time of true Mēsha-samkranti.	Day and month A D	Week-day	a	b	c	
13	14	17	19	20	23	24	25	1
		H M S.						
22 Mar (81)	3 Tues	22 48 7	21 Mar (80)	2 Mon	9941 1635	121 4928	272 1902	4223
23 Mar (82)	5 Thur	5 0 16	11 Mar (70)	0 Sat	155 5183	5 0284	244 1047	4224
23 Mar (82)	6 Fri	11 12 25	28 Feb (59)	4 Wed	31 2411	852 2724	213-2826	4225
22 Mar (82)	0 Sat	17 24 34	18 Mar (78)	3 Tues	65 9236	788 2659	264 5920	4226
22 Mar (81)	1 Sun	23 36 43	3 Mar (67)	1 Sun	280 2784	671 8016	236 5066	4227
23 Mar (82)	3 Tues	5 48 52	25 Feb (56)	5 Thur	156 0012	519 0457	205 6833	4228
23 Mar (82)	4 Wed	12 1 1	15 Mar. (74)	3 Tues	9852 0516	418-7475	254-2560	4229
22 Mar (82)	5 Thur	18 13 10	3 Mar (63)	0 Sat	9727 7745	265 9915	223 4328	4230
23 Mar (82)	0 Sat	0 25 19	22 Mar (81)	6 Fri	9762 4568	201 9851	274 7432	4231
23 Mar (82)	1 Sun	6 37 27	12 Mar (71)	4 Wed	9976 8117	85 5207	246 6577	4232
23 Mar (82)	2 Mon	12 49 36	2 Mar (61)	2 Mon	191 1665	969 0564	218 5724	4233
22 Mar (82)	3 Tues	19 1 45	20 Mar (80)	1 Sun	225 8489	905 0499	269 8828	4234
23 Mar (82)	5 Thur	1 13 54	9 Mar (68)	5 Thur	101 5717	752 2939	239 0596	4235
23 Mar (82)	6 Fri	7 26 3	26 Feb (57)	2 Mon.	9977 2946	599 5380	208 2363	4236
23 Mar (82)	0 Sat	13 38 12	17 Mar (76)	1 Sun.	11 9770	585 5314	259 5468	4237
22 Mar (82)	1 Sun	19 50 21	5 Mar (65)	5 Thur	9887 6999	382 7755	228 7236	4238
23 Mar (82)	2 Tues	2 2 30	22 Feb (53)	2 Mon.	9763 4226	230 1095	197 9004	4239
23 Mar (82)	4 Wed	8 14 39	13 Mar (72)	1 Sun.	9798 1050	166 0130	249 2108	4240
23 Mar (82)	5 Thur.	14 26 48	3 Mar. (62)	6 Fri	12 4599	49 5488	221 1253	4241
22 Mar (82)	6 Fri	20 38 57	21 Mar (81)	5 Thur	47 1422	985 5422	272 4358	4242
23 Mar (82)	1 Sun	2 51 6	11 Mar (70)	3 Tues	261 4971	869 0779	244-3503	4243
23 Mar (82)	2 Mon	9 3 15	28 Feb (59)	0 Sat	137-2199	716 3219	214 5272	4244
23 Mar (82)	3 Tues	15 15 24	19 Mar (78)	6 Fri	171-9024	662 3154	264 8375	5245
22 Mar (82)	4 Wed	21 27 33	7 Mar (67)	3 Tues	47 6251	499 5595	234 0143	4246
23 Mar (82)	6 Fri	3 39 42	24 Feb (55)	0 Sat	9923 3480	346 9035	203 1911	4247

TABLE

CONCURRENT YEAR								Intercalated (<i>adhika</i>) and suppressed (<i>ishaya</i>) true lunar months.
Kalī	Śaka	Chaitradī Vikrama,	Mśhādī solar year in Bengal	Kollam	A. D.	JOVIAN SAMVATSARA		
						Southern system.	Northern system	
1	2	3	3a	4	5	6	7	8
4248	1069	1204	553	321-22	1146-47	60 Kshaya .	3 Śukla .	} 8 Kārttika 9 Mārgaś (ksh) 12 Phālguna
4249	1070	1205	554	322-23	1147-48	1 Prabhava .	4 Pramōda .	
4250	1071	1206	555	323-24	*1148-49	2 Vībhava .	5 Prajāpati .	
4251	1072	1207	556	324-25	1149-50	3 Śukla .	6 Aṅgras .	.
4252	1073	1208	557	325-26	1150-51	4 Pramōda .	7 Śrīmukha .	5 Śrāvapa .
4253	1074	1209	558	326-27	1151-52	5 Prajāpati .	8 Bhāva .	.
4254	1075	1210	559	327-28	*1152-53	6 Aṅgras .	9 Yuvan .	.
4255	1076	1211	560	328-29	1153-54	7 Śrīmukha .	10 Dhātṛi .	4 Āshādha .
4256	1077	1212	561	329-30	1154-55	8 Bhāva .	11 Īvara .	---
4257	1078	1213	562	330-31	1155-56	9 Yuvan .	12 Bahudhānya .	.
4258	1079	1214	563	331-32	*1156-57	10 Dhātṛi .	13 Pramāthm .	2 Vaiśākha .
4259	1080	1215	564	332-33	1157-58	11 Īvara .	14 Vikrama .	.
4260	1081	1216	565	333-34	1158-59	12 Bahudhānya .	15 Vṛisha .	6 Bhādrapada .
4261	1082	1217	566	334-35	1159-60	13 Pramāthm .	16 Chitrabhānu†	.
4262	1083	1218	567	335-36	*1160-61	14 Vikrama .	18 Tārana .	.
4263	1084	1219	568	336-37	1161-62	15 Vṛisha .	19 Pārthiva .	4 Āshādha .
4264	1085	1220	569	337-38	1162-63	16 Chitrabhānu .	20 Vyaya .	.
4265	1086	1221	570	338-39	1163-64	17 Subhānu .	21 Sarvajit .	.
4266	1087	1222	571	339-40	*1164-65	18 Tārana .	22 Sarvadhārin .	3 Jyēshtha .
4267	1088	1223	572	340-41	1165-66	19 Pārthi .	23 Virōdhun .	.
4268	1089	1224	573	341-42	1166-67	20 Vyaya .	24 Vikṛita .	} 7 Āsvina 10 Pauska (ksh) 12 Phālguna
4269	1090	1225	574	342-43	1167-68	21 Sarvajit .	25 Khara .	
4270	1091	1226	575	343-44	*1168-69	22 Sarvadhārin .	26 Nandana .	
4271	1092	1227	576	344-45	1169-70	23 Virōdhun .	27 Vijaya .	5 Śrāvapa .
4272	1093	1228	577	345-46	1170-71	24 Vikṛita .	28 Jaya

† 17 Subhānu was suppressed in the north.

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COMMENCEMENT OF THE									
SOLAR YEAR			LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).					Kal	
Day and month A D	Week-day	Time of true M̄c̄ha saṁkrānti	Day and month A D	Week-day.	a	b	c		
13	14	17	19	20	23	24	25		1
		H M S							
23 Mar (82)	0 Sat	9 51 51	15 Mar (74)	6 Fri	9958 0304	282 7970	254 5016	4248	
23 Mar (82)	1 Sun	16 4 0	4 Mar (63)	3 Tues	9833 7532	129 0410	223 6783	4249	
22 Mar (82)	2 Mon	22 16 9	22 Mar (82)	2 Mon	9868 4356	66 0346	274 9887	4250	
23 Mar (82)	4 Wed	4 28 18	12 Mar (71)	0 Sat	82 7905	949 5702	246 9033	4251	
23 Mar (82)	5 Thur	10 40 27	2 Mar (61)	5 Thur	297 1453	833 1050	218 6180	4252	
23 Mar (82)	6 Fri	16 52 36	21 Mar (80)	4 Wed	331 8276	769 0994	270 1283	4253	
22 Mar (82)	0 Sat	23 4 45	9 Mar (69)	1 Sun	207 5505	616 3435	239 3051	4254	
23 Mar (82)	2 Mon	5 16 54	26 Feb (57)	5 Thur	63 2734	463 5875	208 4819	4255	
23 Mar (82)	3 Tues	11 29 3	16 Mar (75)	3 Tues	9779 3237	363 2894	257 0546	4256	
23 Mar (82)	4 Wed	17 41 12	6 Mar (65)	1 Sun	9993 6786	246 8250	228 9601	4257	
22 Mar (82)	5 Thur	23 53 21	23 Feb (51)	5 Thur	9869 4024	94 0691	198 1458	4258	
23 Mar (82)	0 Sat	6 5 30	13 Mar (72)	4 Wed	9904 0938	30 0625	249 4563	4259	
23 Mar (82)	1 Sun	12 17 39	3 Mar (62)	2 Mon	118 4366	913 5983	221 3709	4260	
23 Mar (82)	2 Mon	18 29 48	22 Mar (81)	1 Sun	153 1210	849 5918	272 6813	4261	
23 Mar (83)	4 Wed	0 41 57	10 Mar (70)	5 Thur	28 8439	696 8358	241 8581	4262	
23 Mar (82)	5 Thur	6 54 6	27 Feb (58)	2 Mon	9904 5667	544 0799	211 0349	4263	
23 Mar (82)	6 Fri	13 6 15	18 Mar (77)	1 Sun	9939 2491	480 0733	262 3454	4264	
23 Mar (82)	0 Sat	19 18 24	7 Mar (66)	5 Thur	9814 9719	327 3173	231 5221	4265	
23 Mar (83)	2 Mon	1 30 33	25 Feb (56)	3 Tues	29 3268	210 8530	203 4366	4266	
23 Mar (82)	3 Tues	7 42 42	15 Mar (74)	2 Mon	64 0091	146 8465	255 7471	4267	
23 Mar (82)	4 Wed	13 54 51	4 Mar (63)	6 Fri	9939 7320	994 0906	223 6239	4268	
23 Mar (82)	5 Thur	20 7 0	23 Mar (82)	5 Thur	9974 4144	930 0840	275 2343	4269	
23 Mar (83)	0 Sat	2 19 9	12 Mar (72)	3 Tues	188 7692	813 6198	247 1488	4270	
23 Mar (82)	1 Sun	8 31 18	1 Mar (60)	0 Sat	64 4920	660 8638	216 3257	4271	
23 Mar (82)	2 Mon	14 43 27	20 Mar (79)	6 Fri	99 1744	596 8573	267 6361	4272	

TABLE

CONCURRENT YEAR								Intercalated (<i>adhika</i>) and suppressed (<i>ishaya</i>) true lunar months
Kali	Saka	Chaitrādi Vikrama	Māhādī solar year in Bengal	Kollam	A D	JOVIAN SAMVATSARA		
						Southern system.	Northern system	
1	2	3	3a	4	5	6	7	8
4273	1094	1229	578	346 47	1171 72	25 Khara	29 Manmatha .	.
4274	1095	1230	579	347 48	*1172-73	26 Nandana	30 Durmukha .	4 Āshādha .
4275	1096	1231	580	348 49	1173 71	27 Vijaya	31 Hīmalamba .	.
4276	1097	1232	581	349 50	1174 75	28 Jaya	32 Vilamba .	.
4277	1098	1233	582	350 51	1175 76	29 Manmatha .	33 Vikārin .	2 Vaisākha .
4278	1099	1234	583	351 52	*1176-77	30 Durmukha	34 Śārvarin .	.
4279	1100	1235	584	352 53	1177-78	31 Hīmalamba	35 Plava .	6 Bhādrapada
4280	1101	1236	585	353 54	1178 79	32 Vilamba .	36 Śubhakṛit .	.
4281	1102	1237	586	354 55	1179 80	33 Vikārin .	37 Śōbhana .	..
4282	1103	1238	587	355 56	*1180 81	34 Śārvarin	38 Krōdhin .	4 Āshādha .
4283	1104	1239	588	356 57	1181 82	35 Plava	39 Visvāvasu .	.
4284	1105	1240	589	357-58	1182 83	36 Śubhakṛit .	40 Parābhava .	.
4285	1106	1241	590	358-59	1183 84	37 Śōbhana .	41 Plavaṅga .	2 Vaisākha .
4286	1107	1242	591	359 60	*1184-85	38 Krōdhin	42 Kilaka .	.
4287	1108	1243	592	360 61	1185 86	39 Visvāvasu .	43 Saumya .	6 Bhādrapada
4288	1109	1244	593	361 62	1186 87	40 Parābhava	44 Sādhārana .	.
4289	1110	1245	594	362 63	1187 88	41 Plavaṅga	45 Virōdhakṛit .	.
4290	1111	1246	595	363 64	*1188 89	42 Kilaka .	46 Paridhāvin .	5 Śrāvana .
4291	1112	1247	596	364 65	1189 90	33 Saumya .	47 Pramādin .	.
4292	1113	1248	597	365 66	1190 91	44 Sādhārana .	48 Ānanda .	.
4293	1114	1249	598	366 67	1191-92	45 Virōdhakṛit	49 Rākshasa .	3 Jyēshṭha .
4294	1115	1250	599	367 68	*1192 93	46 Paridhāvin .	50 Anala .	.
4295	1116	1251	600	368-69	1193 94	47 Pramādin .	51 Pīṅgala .	.
4296	1117	1252	601	369 70	1194 95	48 Ānanda	52 Kālayukta .	2 Vaisākha .
4297	1118	1253	602	370 71	1195 96	49 Rākshasa .	53 Siddhārthin .	..

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COMMENCEMENT OF THE								
SOLAR YEAR			LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS)					Kali
Day and month A D	Week-day	Time of true Mēsha sam-krānti	Day and month A D	Week-day	a	b	c	
13	14	17	19	20	23	24	25	1
		H M S						
23 Mar (82)	3 Tues	20 55 36	9 Mar (68)	3 Tues	9974 8973	444 1013	236 8129	4273
23 Mar (83)	5 Thur	3 7 45	26 Feb (57)	0 Sat	9850 6201	291 3454	205 9896	4274
23 Mar (82)	6 Fri	9 19 54	16 Mar (75)	6 Fri	9885 3025	227 3389	257 3001	4275
23 Mar (82)	0 Sat	15 32 3	6 Mar (65)	4 Wed	99 6574	110 8745	229 2147	4276
23 Mar (82)	1 Sun	21 44 11	23 Feb (54)	1 Sun	9975 3801	958 1187	198 1914	4277
23 Mar. (83)	3 Tues	3 56 20	13 Mar (73)	0 Sat	10 0625	894 1120	249 7018	4278
23 Mar (82)	4 Wed	10 8 29	3 Mar (62)	5 Thur	224 4174	777 6478	221 6164	4279
23 Mar (82)	5 Thur	16 20 38	22 Mar (81)	4 Wed	259 0998	713 6413	272 9269	4280
23 Mar (82)	6 Fri	22 32 47	11 Mar (70)	1 Sun	134 8226	560 9853	242 1036	4281
23 Mar (83)	1 Sun	4 44 56	23 Feb (59)	5 Thur	10 5455	408 1294	211 2304	4282
23 Mar (82)	2 Mon	10 57 5	18 Mar (77)	4 Wed	45 2279	344 1228	262 5909	4283
23 Mar (82)	3 Tues	17 9 14	7 Mar (66)	1 Sun	9920 9507	191 3668	231 7677	4284
23 Mar (82)	4 Wed	23 21 23	24 Feb (55)	5 Thur	9796 0735	38 6109	200 9444	4285
23 Mar (83)	6 Fri	5 33 32	15 Mar (75)	5 Thur	169 9879	10 8960	254 9926	4286
23 Mar (82)	0 Sat	11 45 41	4 Mar (63)	2 Mon	45 7108	858 1401	224 1694	4287
23 Mar (82)	1 Sun	17 57 50	23 Mar (82)	1 Sun	80 3931	794 1335	275 4799	4288
24 Mar (83)	3 Tues	0 9 59	13 Mar (72)	6 Fri	294 7480	677 6693	247 3944	4289
23 Mar (83)	4 Wed	6 22 8	1 Mar (61)	3 Tues	170 4708	524 9133	216 5712	4290
23 Mar (82)	5 Thur	12 34 17	19 Mar (78)	1 Sun	9866 5213	424 6151	265 1438	4291
23 Mar (82)	6 Fri	18 46 26	8 Mar (67)	5 Thur	9742 2440	271 8592	234 3207	4292
24 Mar. (83)	1 Sun	0 58 35	26 Feb (57)	3 Tues	9956 5989	155 3949	206 2752	4293
23 Mar (83)	2 Mon	7 10 44	16 Mar (76)	2 Mon	9991 2813	91 3884	257 5456	4294
23 Mar (82)	3 Tues	13 22 53	6 Mar (66)	0 Sat	205 6364	974 9241	229 4602	4295
23 Mar (82)	4 Wed.	19 35 2	23 Feb (54)	4 Wed	81 3589	822 1741	198 6370	4296
24 Mar (83)	6 Fri	1 47 11	14 Mar (73)	3 Tues	116 0413	758 1608	249 9474	4297

TABLE

CONCURRENT YEAR.								Intercalated (<i>adhika</i>) and suppressed (<i>leshaya</i>) true lunar months.
Kal.	Saka	Chaitrādi Vikrama	Mīshādi solar year in Bengal	Kollam.	A. D.	JOVIAN SAMVATSARA.		
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8
4298	1119	1254	603	371-72	*1196-97	50 Anala . .	54 Raudra . .	6 Bhādrapada
4299	1120	1255	604	372-73	1197-98	51 Pūṅgala . .	55 Durmati . .	..
4300	1121	1256	605	373-74	1198-99	52 Kālayukta . .	56 Dandubhi . .	...
4301	1122	1257	606	374-75	1199-1200	53 Siddhārthun . .	57 Radhurōdgāra . .	4 Āshādha . .
4302	1123	1258	607	375-76	*1200-01	54 Raudra . .	58 Raktāksha . .	...

LXXXII—Concl'd

COMMENCEMENT OF THE								
SOLAR YEAR			LUNI SOLAR YEAR (YEAR SUBJECT OF CIVIL DAY ON WHICH CHAITRA SURYA I ENDS)					Kal.
Day and month A D	Week-day	Time of true Mēṣha sam-krānti.	Day and month A D	Week-day	a	b	c	
13	14	17	19	20	23	24	25	1
		H M S						
23 Mar (83)	0 Sat	7 59 20	2 Mar (62)	0 Sat	9991 7641	605 4056	219 1242	4298
23 Mar (82)	1 Sun .	14 11 29	21 Mar (80)	6 Fri .	26 4465	541 3991	270 4346	4299
23 Mar (82)	2 Mon	20 23 38	10 Mar (69)	3 Tues	9902 1694	388 6432	239 6115	4300
24 Mar (83)	4 Wed	2 35 47	27 Feb (58)	0 Sat .	9777 8923	235 8872	208 7000	4301
23 Mar (83)	5 Thur	8 47 59	17 Mar (77)	6 Fri. .	9812 5747	171 8807	260 0765	4302

TABLE LXXXIII A

DURATION AND COLLECTIVE DURATION OF TRUE SOLAR MONTHS, WITH INCREASE OF a, b, c AT EACH TRUE SAMKRĀNTI

By the Brahma-Siddhānta

Calculated for the year K Y 4500, (expired), A D 899—900

a in 10,000ths of circle, b and c in 1,000ths, "sam" = solar samkrānti

Luni solar month (ending at the second of the two solar samkrāntis connected with it)	At true solar samkrānti		Collective duration in days, hours, etc., and collective increase of a, b, c from true Visha samkrānti to each true samkrānti				At true solar samkrānti				Length of solar month preceding each true samkrānti, and increase of a, b, c between each such samkrānti					
	Day	Week	H	M	S	a	b	c	Day	Week	H	M	S	a	b	c
1	2		3	4	5	6	7	8	9		10	11	12	13	14	15
1 Chaitra	{	0	0	0	0	0	0	0	Māgha-sam	0	0	0	0	0	0	0
2 Vaiśākha	{	30	(2)	22	21	9	474 3381	122 5490	84 6833	30	(2)	22	21	9	474 3381	122 5490
3 Jyēshṭha	{	62	(6)	8	15	57	1111 7956	262 5752	170 6856	31	(3)	0	54	48	637 4575	140 0262
4 Āshāḍha	{	93	(2)	23	12	15	1820 1580	410 2049	257 2610	31	(3)	11	56	18	708 3624	147 6297
5 Śrāvapa	{	125	(6)	10	42	48	2480 1360	552 0492	343 4452	31	(3)	11	30	33	659 9780	142 4443
6 Bhādrapada	{	156	(2)	11	41	2	2991 4178	679 1575	428 4273	31	(3)	0	59	15	541 2818	126 5083
7 Āvina	{	186	(4)	22	35	20	3304 2747	784 1003	511 8051	30	(2)	10	54	27	312 8569	103 2128
8 Kārtika	{	216	(6)	20	28	50	3433 4472	869 9574	593 6970	29	(1)	21	53	21	129 1725	83 5571
9 Mārgaśira	{	246	(1)	8	0	47	3416 4900	939 8537	674 4092	29	(1)	11	31	57	9983 0434	69 8063
10 Pausa	{	275	(2)	16	6	58	3351 2241	4 5723	754 7299	29	(1)	8	0	11	9934 7335	64 7188
11 Māgha	{	305	(4)	2	49	9	3322 3644	73 2145	835 3466	29	(1)	10	42	11	9971 3403	68 6420
12 Phālguna	{	334	(5)	22	4	25	3411 5580	154 7871	916 0337	29	(1)	19	15	16	91 9936	81 1726
1 Chitra (of following year)	{	365	(1)	6	12	9	3088 2056	255 8315	1000 0	30	(2)	8	7	11	273 6476	101 0107

TABLE LXXXIII B

VALUE OF *c* AND OF " EQUATION *c* " AT THE SEVERAL TRUE SAMKRĀNTIS

Correct for K Y 4000, A. D 899-900

c in 1,000ths of circle, " equation *c* " in 10,000ths

Samkrānti	<i>c</i>	" Equation <i>c</i> "
Mēsha-sam .	277 6064	0 9037
Vṛishabha sam .	362 2899	14 4355
Mithuna-sam	448 2921	41 1356
Karka-sam .	534 8076	73 5542
Siraha sam	621 0519	102 0578
Kanyā sam .	706 0241	118 5381
Tulā sam .	789 4020	118 9561
Vṛishchikā sam .	871 2948	104 1144
Dhanus sam .	952 0062	78 3666
Makara sam	32 3264	48 2336
Kumbha-sam .	112 9432	21 0624
Mina-sam .	194 5355	3 6494

TABLE LXXXIII C.

EXACT VALUE OF *c* AND OF " EQUATION *c* " AT THE MOMENT OF TRUE MĒSHA-SAMKRĀNTI AT BEGINNING OF EACH CENTURY K. Y

c in 1,000ths of circle " Equation *c* " in 10,000ths.

K Y	A D	<i>c</i>	" Eqn <i>c</i> "
3700	599 600	277 6399	0 9347
3800	699 700	277 6287	0 9340
3900	799 800	277 6175	0 9333
4000	899 900	277 6064	0 9326
4100	999-1000	277 5952	0 9319
4200	1099 1100	277 5840	0 9312
4300	1199-1200	277 5728	0 9305

TABLES LXXXIV, LXXXV.

“ EQUATION *b* ” AND “ EQUATION *c* ” IN WHOLE NUMBERS BY THE BRAHMA-SIDDHĀNTA AND
SIDDHĀNTA-SĪRĪMANI

Corresponding to Tables VI, VII, “ Indian Calendar.”

For close detail Tables LV, LVI, (Vol XV above) are to be used.

“ Arg ” = moon’s (*b*) or sun’s (*c*) mean anom in 1000ths of circle

TABLE LXXXIV

LUNAR “ EQUATION *b* ”

Arg	Eqn	Arg
0	140	500
10	149	490
20	158	480
30	166	470
40	174	460
50	183	450
60	191	440
70	199	430
80	207	420
90	214	410
100	222	400
110	229	390
120	235	380
130	241	370
140	247	360
150	253	350
160	258	340
170	262	330
180	266	320
190	270	310
200	273	300
210	275	290
220	277	280
230	279	270
240	279	260
250	280	250

Arg	Eqn	Arg
500	140	1000
510	131	990
520	122	980
530	114	970
540	105	960
550	97	950
560	88	940
570	80	930
580	73	920
590	65	910
600	58	900
610	51	890
620	44	880
630	38	870
640	32	860
650	27	850
660	22	840
670	17	830
680	13	820
690	10	810
700	7	800
710	4	790
720	2	780
730	1	770
740	0	760
750	0	750

TABLE LXXXV

SOLAR “ EQUATION *c* ”

Arg	Eqn	Arg
0	60	500
10	56	490
20	53	480
30	49	470
40	46	460
50	42	450
60	38	440
70	34	430
80	31	420
90	28	410
100	25	400
110	22	390
120	19	380
130	16	370
140	14	360
150	12	350
160	9	340
170	7	330
180	6	320
190	4	310
200	3	300
210	2	290
220	1	280
230	0	270
240	0	260
250	0	250

Arg	Eqn	Arg
500	60	1000
510	64	990
520	68	980
530	72	970
540	75	960
550	79	950
560	82	940
570	86	930
580	89	920
590	93	910
600	96	900
610	99	890
620	102	880
630	104	870
640	107	860
650	109	850
660	111	840
670	113	830
680	115	820
690	117	810
700	118	800
710	119	790
720	120	780
730	120	770
740	121	760
750	121	750

AUXILIARY TABLE

Difference in Equa- tion	Last figure of argument								
	9	8	7	6	5	4	3	2	1
	Add or subtract								
9	8	7	6	5	4 or 5	4	3	2	1
8	7	6	6	5	4	3	2	2	1
7	6	6	5	4	3 or 4	3	2	1	1
6	5	5	4	4	3	2	2	1	1
5	4 or 5	4	3 or 4	3	2 or 3	2	1 or 2	1	0 or 1
4	4	3	3	2	2	2	1	1	0
3	3	2	2	2	1 or 2	1	1	1	0
2	2	2	1	1	1	1	1	0	0
1	1	1	1	1	0 or 1	0	0	0	0

TABLE LXXXVI.

VALUE OF *a*, *b*, *c* AT BEGINNING OF CENTURIES OF THE KALIYUGA, BY THE BRAHMA-SIDDHANTA.

K Y Century.	Begin-ning in A D.	Week-day.	<i>a</i>	<i>b</i>	<i>c</i>
37	599	0	6028 1929	719 2529	282 9906
38	699	6	4900 0921	308 0530	283 3962
39	799	6	3433 3593	860 5614	281 0640
40	899	6	2305 2584	449 3615	281 4695
41	999	6	1177 1576	38 1616	281 8751
42	1099	6	49 0567	626 9616	282 2807
43	1199	0	8920 9559	215 7617	282 6863

TABLE LXXXVII.

INCREASE OF *a*, *b*, *c* FOR YEARS OF KALIYUGA CENTURY.

* = year of 366 days.

Year.	Week-day	<i>a</i>	<i>b</i>	<i>c</i>	Year	Week-day	<i>a</i>	<i>b</i>	<i>c</i>
0	0	0	0	0	30	3	729 2961	683 8984	0 6759
1	1	3600 6747	246 4522	999 2925	31	4	4329 9708	930 3505	999 9683
*2	2	7201 3494	492 9043	998 5849	32	5	7930 6455	176 8027	999 2608
3	4.	1140 0560	775 6482	0 6151	*33	6	1631 3202	423 2549	998 5533
4	5	4741 3307	22 1003	999 9076	34	1	5470 0268	705 9987	0 5835
5	6	8342 0054	268 5525	999 2001	35	2	9071 3015	952 4509	999 8759
*6	0	1942 6800	515 0047	998 4925	36	3	2671 9762	198 9030	999 1684
7	2	5881 9867	797 7485	0 5227	*37	4	6272 6509	445 3552	998 4609
8	3	9482 6614	44 2007	999 8152	38	6	211 9575	728 0990	0 4911
9	4	3083 3360	290 6528	999 1077	39	0	3812 6322	974 5512	999 7836
*10	5	6684 0107	537 1050	998 4001	40	1	7413 3069	221 0034	999 0760
11	0	623 3174	819 8488	0 4303	*41	2	1013 9815	467 4555	998 3685
12	1	4223 9921	66 3010	999 7228	42	4	4953 2882	750 1994	0 3987
*13	2	7824 6667	312 7532	999 0153	43	5	8553 9629	996 6515	999 6912
14	4	1763 9734	595 4970	1 0455	*44	6	2154 6376	243 1037	998 9836
15	5	5364 6481	841 9492	0 3379	45	1	6093 9442	525 8475	1 0138
16	6	8965 3227	88 4013	999 0304	46	2	9694 6189	772 2997	0 3063
*17	0	2565 9974	334 8535	998 9229	47	3	3295 2936	18 7519	999 5988
18	2	6505 3041	617 5973	0 9531	*48	4	6895 9682	265 2040	998 8912
19	3	105 9788	864 0495	0 2455	49	6	835 2749	547 9479	0 9214
20	4	3706 6534	110 5017	999 5380	50	0	4435 9496	794 4000	0 2139
*21	5	7307 3281	356 9539	998 8305	51	1	8036 6243	40 8522	999 5064
22	0	1246 6348	639 6977	0 8607	*52	2	1637 2989	287 3044	998 7988
23	1	4847 3094	886 1499	0 1531	53	4	5576 6056	570 0482	0 8290
24	2	8447 9841	132 6020	999 4456	54	5	9177 2803	816 5004	0 1215
*25	3	2048 6588	379 0542	998 7381	55	6	2777 9549	62 9526	999 4140
26	5	5987 9655	661 7980	0 7683	*56	0	6378 6296	309 4047	998 7064
27	6	9588 6401	908 2502	0 0607	57	2	317 9363	592 1485	0 7366
28	0	3189 3148	154 7024	999 3532	58	3	3918 6110	838 6007	0 0291
*29	1	6789 9895	401 1545	998 6457	59	4	7519 2856	85 0529	999 3216

TABLE LXXXVIII.

TABLE LXXXVII—Contd

VALUES OF *a*, *b*, *c* PER DAY FROM MINA 1 TO
MESHA 2, THE DAY OF MEAN MESHA-SAMKRĀNTI.

Year	Week-day	<i>a</i>	<i>b</i>	<i>c</i>	No of days interval from 0 Mēsha	Month and day	Week-day	<i>a</i>	<i>b</i>	<i>c</i>
					1	2	3	4	5	6
*60	5	1119 9603	331 5051	998 6140						
61	0	5059 2670	614 2489	0 6442						
62	1	8659 9416	860 7011	999 9367						
63	2	2260 6163	107 1532	999 2292						
*64	3	5861 2910	353 6054	998 5216						
65	5	9800 5977	636 3492	0 5518	29	Mina 1	4	9502 4085	874 9589	915 1286
66	6	3401 2723	882 8014	999 8443	28	" 2	5	9841 0404	911 2506	917 8664
67	0	7001 9470	129 2536	999 1368	27	" 3	6	179 6724	947 5422	920 6042
*68	1	602 6217	375 7057	998 4292	26	" 4	0	518 3044	983 8339	923 3419
69	3	4541 9283	658 4496	0 4594	25	" 5	1	856 9364	20 1255	926 0797
70	4	8142 6030	904 9017	999 7519						
*71	5	1743 2777	151 3539	999 0444	24	" 6	2	1195 5684	56 4172	928 8175
72	0	5682 5844	434 0977	1 0746	23	" 7	3	1534 2004	92 7088	931 5553
73	1	9283 2590	680 5499	0 3670	22	" 8	4	1872 8324	129 0005	934 2931
74	2	2883 9337	927 0021	999 6595	21	" 9	5	2211 4643	165 2921	937 0309
					20	" 10	6	2550 6963	201 5838	939 7687
*75	3	6484 6084	173 4542	998 9520						
76	5	423 9150	456 1981	0 9822						
77	6	4024 5897	702 6502	0 2746	19	" 11	0	2888 7283	237 8754	942 5065
78	0	7625 2644	949 1024	999 5671	18	" 12	1	3227 3603	274 1671	945 2442
*79	1	1225 9391	195 5546	998 8596	17	" 13	2	3565 9923	310 4587	947 9820
					16	" 14	3	3904 6243	346 7504	950 7198
					15	" 15	4	4243 2563	383 0420	953 4576
80	3	5165 2457	478 2984	0 8898						
81	4	8765 9204	724 7506	0 1822						
82	5	2366 5951	971 2027	999 4747						
*83	6	5967 2698	217 6549	998 7672	14	" 16	5	4581 8882	419 3336	956 1954
84	1	9906 5764	500 3987	0 7974	13	" 17	6	4920 5202	455 6253	958 9332
					12	" 18	0	5259 1522	491 9169	961 6710
					11	" 19	1	5597 7842	528 2086	964 4088
					10	" 20	2	5936 4162	564 5002	967 1465
85	2	3507 2511	746 8509	0 0898						
86	3	7107 9258	993 3031	999 3823						
*87	4	708 6004	239 7552	998 6748						
88	6	4647 9071	522 4991	0 7050						
89	0	8248 5818	768 9512	999 9974	9	" 21	3	6275 0482	600 7919	969 8843
					8	" 22	4	6613 6801	637-0835	972 6221
					7	" 23	5	6952 3121	673 3752	975 3599
					6	" 24	6	7290 9441	709 6668	978 0977
90	1	1849 2565	15 4034	999 2899	5	" 25	0	7629 5761	745 9585	980 8355
*91	2	5449 9311	261 8556	998 5824						
92	4	9389 2378	544 5994	0 6126						
93	5	2989 9125	791 0516	999 9050						
94	6	6590-5871	37 5038	999 1975						
*95	0	191 2618	283 9559	998 4900	4	" 26	1	7968 2081	782 2501	983 5733
96	2	4130 5685	566 6997	0 5202	3	" 27	2	8306 8401	818 5418	986 3111
97	3	7731 2431	813 1519	999 8126	2	" 28	3	8645 4721	854 8334	989 0488
98	4	1331 9178	59 6041	999 1051	1	" 29	4	8984 1040	891 1251	991 7866
*99	5	4932 5925	306-0563	998 3976						
						Mēsha 0	5	9322 7360	927 4167	994 5244
						" 1	6	9661 3680	963 7084	997 2622
100	0	8871 8092	588 8001	0 4278		" 2	0	0	0	0

TABLE LXXXIX

SUN'S EQUATION OF THE CENTRE AND SINE-VALUES ACCORDING TO THE BRAHMA-SIDDHANTA.

Serial No of sine.	SUN'S MEAN ANOM				SINE OF ANOM ANGLE		EQUATION		SUN'S MEAN ANOM				Serial No of sine.		
					Value in minutes	Diff	Equation	Difference per minute of anom							
1	2				3	4	5	6	7				1		
	o	'	o	'	'	'	o	'	"	"	o	'	o	'	
0	0	0	180	0	0		0	0	0		180	0	360	0	0
1	3	45	176	15	214	214	0	8	32 50	2 27	183	45	356	15	1
2	7	30	172	30	427	213	0	17	2 61	2 2760	187	30	352	30	2
3	11	15	168	45	638	211	0	25	27 92	2 2458	191	15	348	45	3
4	15	0	165	0	840	208	0	33	46 05	2 2128	195	0	345	0	4
5	18	45	161	15	1051	205	0	41	57 02	2 1822	198	45	341	15	5
6	22	30	157	30	1251	200	0	49	55 97	2 1287	202	30	337	30	6
7	26	15	153	45	1446	195	0	57	42 97	2 0755	206	15	333	45	7
8	30	0	150	0	1635	189	1	5	15 60	2 0117	210	0	330	0	8
9	33	45	146	15	1817	182	1	12	31 46	1 9372	213	45	326	15	9
10	37	30	142	30	1991	174	1	19	28 17	1 8520	217	30	322	30	10
11	41	15	138	45	2156	165	1	26	3 32	1 7502	221	15	318	45	11
12	45	0	135	0	2312	156	1	32	16 92	1 6604	225	0	315	0	12
13	48	45	131	15	2459	147	1	38	8 96	1 5646	228	45	311	15	13
14	52	30	127	30	2594	135	1	43	32 27	1 4369	232	30	307	30	14
15	56	15	123	45	2719	125	1	48	31 62	1 3305	236	15	303	45	15
16	60	0	120	0	2832	113	1	53	2 24	1 2028	240	0	300	0	16
17	63	45	116	15	2933	101	1	57	4 12	1 0750	243	45	296	15	17
18	67	30	112	30	3021	88	2	0	34 87	0 9367	247	30	292	30	18
19	71	15	108	45	3096	75	2	3	34 49	0 7982	251	15	288	45	19
20	75	0	105	0	3159	63	2	6	5 36	0 6706	255	0	285	0	20
21	78	45	101	15	3207	48	2	8	1 99	0 5184	258	45	281	15	21
22	82	30	97	30	3242	35	2	9	24 14	0 3651	262	30	277	30	22
23	86	15	93	45	3263	21	2	10	14 43	0 2235	266	15	273	45	23
24	90	0	90	0	3270	7	2	10	31 19	0 0745	270	0	270	0	24

No 12—THE KEDARPUR PLATE OF ŚRĪ CHANDRA DĒVA

By NAINI KANTA BHATTACHARYA, M.A., Collector, Dacca Museum

In the October number of the *Dacca Review* for 1912, Mr. J. T. Roydon I.C.S. published a note given him by the late lamented scholar Bhubaneswar Chakraverty, Esq. M.A., of a copper-plate inscription of Śrī-Chandra-Dēva found at Idilpur in the District of Bengal. This note for the first time established the fact that a Buddhist line of Kings, with the name "Chandra" at the end of their names had ruled in East Bengal with Vikrāpura as their capital about the 10th or 11th century of the Christian Era and that the Chandras who ruled in Bengal have been busy thenceforth, discussing the position of the Chandras of Vikrāpura in the chronology of their country. The discovery of a copper-plate of Śrī-Chandra-Dēva at Rāmpāl in the Munshiganj subdivision of the Dacca District in April 1917 by Prof. Rādha-Gōvinda Basāk, M.A. gave a further impetus to the discussion. Prof. Basāk published this plate first in the *Śrāvāna* and *Bull.* number of the *Dacca Review* for the year 1917-18, *Sāhitya* for 1920 B.S. and finally in the *Jyotirghaṭa* (Dacca) for Vol. XII, p. 140.

The present plate is the third of Śrī-Chandra-Dēva. It was found in April, 1919, in excavating earth from a ditch at Kedarpur in the Mādāripur subdivision of the Faridpur District of Bengal. It was preserved in the custody of the schoolmaster of the Kedarpur Middle English School. I came to know of the find from a friend and he brought it to me for the Dacca Museum by the Hon'ble Mr. T. Emerson, C.I.F., I.C.S. through the kind offices of Mr. J. N. Roy, I.C.S., Magistrate of Landpur, and Mr. N. S. S. Subdivisional Officer of Mādāripur.

The plate measures $8\frac{1}{2}' \times 7\frac{1}{4}'$, and is therefore slightly smaller than the plate published by Mr. Basāk, which measures $9\frac{1}{2}' \times 8'$. The Royal Seal of the Chandras is attached to the middle of the top of the plate. It displays the *Wheel of the Law* with two conch-shells on the two sides, symbolical of the first "Turning of the Wheel of the Law" at the Deer Park, —the present Sārnāth near Benares. It is noteworthy that the Pālas of Bengal who preceded the Chandras, and who were Buddhists as well, had similar devices on their seals. The name of Śrī Śrī-Chandra-Dēva[h] is written in relief below the Wheel in the present seal.

The plate is incomplete and appears to be no grant at all, but only a plate kept ready, with the stereotyped portion of the grant inscribed in the office of issue, to be filled in with the necessary remaining portions as occasion arose. The plate is full of engraver's mistakes of a serious nature. It may be noted that Kēdārpur, where this plate was found, contains the ruins of a royal settlement surrounded by a broad ditch as well as a big silted up tank, commonly associated with the memory of Kēdār Rāy, one of the famous twelve chieftains who ruled Bengal before the country was completely dominated by the Mughals. Kēdār Rāy had his capital at Śrīpur, which, from the description of Ralph Fitch, appears to have been a flourishing town in 1585, and the reasonableness of having a second capital, only a few miles off, is not very apparent. Of course a thousand and one contingencies might have taken the present plate to Kēdārpur, where it has now been found, but the find of this unfinished plate also makes it possible that the ruins at Kēdārpur may be those of the Chandras who preceded Kēdār Rāy by no less than five hundred years.

The plate is inscribed on one side only and there is a vacant space of about two inches at the bottom. The inscription contains 18 lines of writing. The letters are 24 to 30 inch in height and are in most places well inscribed. Mistakes of engraver or scribe are, however,

numerous and they have rendered the preparation of a correct text an undertaking of exceptional difficulty.¹

The inscription refers to the reign of Śrī-Chandra-Dēva of the Chandra family of Kings who held sovereignty in East Bengal for some decades before the rise of the Varmans and the Sēnas in that part of the country, towards the end of the Pāla rule in North Bengal. It is written in what may be called the Bengali Script of the 10th-11th century A.D. The language of the inscription is correct Sanskrit verse, except in the portions spoiled by engraver's mistakes. The last three lines are in prose.

There is nothing very special as regards orthography. The use of *va* for *ba* is almost the rule in the later East Indian epigraphs, there being no discrimination between them, as in the modern Bengali language. The *avagraha* is once used and once omitted. The spelling of the word *nistrinśa* with *ṅi* is remarkable. Superimposed *r* has doubled almost all consonants.

From a comparison of the abstract of the Idilpur plate of Śrī-Chandra published in the *Dacca Review*, referred to above, with the contents of the present plate, it is evident that the two plates are copies of the same draft. The Idilpur plate seems to have an extra *Śloka* towards the end, borrowed from Śrī-Chandra's Rāmpāl plate, which is otherwise the copy of a draft different from that of the Idilpur and the Kōdārpur plates. It should be noted, however, that the opening invocatory *Śloka* is identical in all the three plates.

Śrī-Chandra seems to have been the only king of the Chandra family who was powerful enough to issue copper-plate grants, as the three plates hitherto discovered are all in his name. In order, therefore, to bring together all the epigraphical material available for his history, I quote below the necessary portions from Bābu Gangāmōhan Laskar's abstract of the Idilpur plate, as published in the *Dacca Review*. The plate is reported to exist still, but it is in the custody of people who are unwilling to show it to anybody again.

² "The inscription gives the names of three kings — (1) Suvarṇna-Chandra. (2) His son Trailōkya-Chandra. (3) Trailōkya-Chandra's son (Śrī)-Chandra-Dēva. The last of these kings issues a command from his victorious camp at Vikrampur making a gift of certain lands at the village called Leliyā in the Kumāratalakā sub-division (*mandala*) of the Satata-Padmāvātī district (*ishaya*). The name Satata-Padmāvātī literally means 'with-bank-Padmā-house' and was most probably the name of a district on the banks of the Padmā river. The names of some of the donees are still legible and the measures of the area of the granted lands are called *drōnas* and *pālakas*, as in the Āsrafpur plates. Paramount titles such as *Paramēśvara*, *Paramabhāttāraka* and *Mahārājādhrāja* are attached to the names of (Śrī)-Chandra-Dēva. The title *Parama-Saugata* (the devout worshipper of Sugata, i.e. Buddha) is prefixed to the name of the donor. The characters used are probably of the 12th century type of the Bengali alphabet. The seal attached to the top of the plate resembles the seals found on the plates of the Pāla kings of Bengal. The inscription under notice is very important, as it, like the Āsrafpur plates of Dēvakhadga, shows the existence of Buddhist kingdoms in East Bengal in the period not much anterior to the conquest of Bengal by the Mussalmans.

" . . . The plate is inscribed on one side fully and on another side partly. The writing on the second side has become almost defaced. This defaced portion contains the names of the donee and the particulars of the lands granted. There are altogether 36 lines of writing. An analysis is given below —

Lines 1-4 Contain a verse in honour of Buddha, probably.

¹ I should gratefully acknowledge here the help that I have received in this respect from Prof. Abhayā Charan Chakravarti, M.A., of the Jagannāth College, Dacca, without whose help I could hardly have made any headway, especially with the passages that are marred by the engraver's mistakes. I also owe some improvements in the reading of the text to the suggestions of my friend Prof. Basū, in whose company I had the opportunity of revising my first transcription.

² [In this extract, the diacritical marks, according to the latest emendation, have been adopted — H. K. S.]

Lines 4-5 State that there was a king named Suvarṇa-Chandra who was neither purified in fire nor measured on the scales (like gold) but was by nature endowed with greatness (heaviness) and whose deeds were good.

Lines 5-6. State in a verse why the king was called Suvarṇa-Chandra.

Lines 6-9 The above king got a son named Trailōkya-Chandra, whose look was sacred, who was afraid of the next world, by whom the living world was consoled, whose meritorious deeds were well known throughout the three worlds.

Lines 9-10. Some further epithets of the same king who satisfied his desire of conquering the whole world and who extinguished the fire of his enemies.

Lines 11-13. More eulogistic epithets (of Trailōkya-Chandra-Dēva).

Lines 14-15. The above king had a son named (Śrī)-Chandra who was like Indra and whose prowess was like Indra and who was born at the auspicious moment and the signs at whose birth were indicative of royal fortune.

Lines 15-18. Some eulogistic epithets of (Śrī)-Chandra-Dēva.

Lines 18-19 From the victorious camp pitched at Vikramapura,

Line 20, the devout worshipper of Sugata (Buddha), the meditator of the feet of (*i.e.* the son of) Mahārājādhrāja Trailōkya-Chandra-Dēva, the Paramēśvara, the Paramabhaṣṭāraka,

Line 21, the Mahārājādhrāja, the Śrīmān, Śrī-Chandra-Dēva, being in good health and having done honour to all the following royal officers and villagers assembled at the village of Leliyā,

Line 22, in the Kumāratālākā-maṇḍala of Satata-Padmāvā(tī) district,

Line 28, thus commands the above officers

Lines 29-30 Contain the names of the donees."

The following is an abstract of the present Kēdārpur plate —

The inscription opens with a salutation to the Buddha, the Dharmma, and the Sangha,—the three jewels of the Buddhist faith. It then goes on to say that there was one Pūrṇa-Chandra by name who was the possessor of large forces. He was neither of royal birth nor of pure caste, but he obtained a son Suvarṇa-Chandra by name, resplendent as gold (v. 3). Suvarṇa-Chandra was a famous man of religious character, and his son was Trailōkya-Chandra (v. 4). Trailōkya's conquests extended far and wide and he was a terror to his foes (v. 5). Trailōkya's son was Śrī-Chandra who was extremely virtuous (v. 6). He was a great conqueror whose fame at arms had reached the heavens (v. 7). With this last king Śrī-Chandra-Dēva who was to have issued this plate from his victorious capital at Śrī-Vikramapura the inscription stops.

I edit the inscription from the original plate, now in the Dacca Museum.

Seal.

श्री श्रीचन्द्रदेव[ः]

TEXT

- 1 सिद्धिरस्तु¹ स्वस्ति । वन्द्यो जिनः स भगवान् करुणैकपात्रं
- 2 धर्मो²प्यसौ³ विजयते जगदेकदीपः [1*] यत्सेवया

¹ Expressed by a symbol [This symbol is generally taken for om, but the writer has put forward arguments in his article "Some Image Inscriptions from East Bengal" published below in favour of this symbol being read 'Siddharastu'—Ed.]

² Read धर्मो.

³ Read सौ.

- 3 सकल एव महानुभावः संसारपारमुपगच्छति भिक्षुसङ्घः¹ ॥[१*] पूर्य-
 4 चन्द्र इति श्रीमानासौदासीरजं रजः । यस्योषष²योष³त्त्व[त]मातपत्रमपत्र
 5 पाः⁴ ॥ [२*] नाग्नी विशुद्धो न तुलाधिरुदः किन्तु प्रकृत्यैव युतो
 ऋरिम्णा । तथापि क-
 6 ल्याणसुवर्णकल्पः सुवर्णचन्द्रस्युक्तती ततोभूत्⁵ ॥[३*] पुण्यावलोकः परलो-
 7 कभीरोर्लोक्यः समाश्वासितजोवलोकः [१*] त्रैलोक्यसंकीर्तितपुण्यकीर्तः त्रै-
 8 लोक्यचन्द्रोऽस्य व(व)भूय पुत्रः⁶ ॥[४*] चतुःपयोरशिसमाप्तपृथ्वीजयाभिलाषो वि-
 9 पयेष्वनुष्वः [१*] युद्धेषु निस्त्रिशलताजलेन यो वैरिवह्निं स⁷मयाश्च
 कार⁸ ॥[५*]
 10 श्रीमान् श्रीचन्द्रदेवः समजनि तनयस्तस्य सदृत्मैव(व)न्धोः क्रूराग्ने स⁹यालुः
 11 परगुणसुखरो दीपवादकैकमूकः [१*] प्रेक्ष्यः पीनो गुणाना निधिरिति
 12 विषयासक्तिपक्षाद्विपक्षे यस्मिना(न्ना)धत्त वेधा¹⁰ श्रियमतिरभसादर्थतो ना-
 13 मतश्च¹¹ ॥[६*] स्पृष्ट. पार्थिवपांसुदीहरसञ्जघाघनेदिग्गजै¹²नेताणामनिमे-
 14 पतः परिहृतो दूरेण हृन्दारकैः [१*] केशीघ्नप्सरसामपूर्वपलितभ्रान्तं
 15 समारोपयन् सन्तानो रजसां रणेसु¹³षु जयिनो यस्य द्युमार्गं
 गतः¹⁴ ॥ [७*]
 16 स खलु श्रीविक्रमपुरसमावासितश्रीमज्जयस्कन्धावारात् परमसीगतो
 17 महाराजाधिराजः श्रीत्रैलोक्यचन्द्रदेवपादानुध्यातः परमेश्वरः प-
 18 रमभट्टारको महाराजाधिराजः श्रीमान् श्रीचन्द्रदेव. कुशली ।

TRANSLATION

(Line 1.) May success attend ! May welfare accrue !

(Verse 1) Adorable is the Lord Jina, the only receptacle of mercy. Victorious also is the Law, the only light of the world By worshipping them, all the high-minded Congregation of Bhikshus cross to the other side of the world.

¹ Metre Vasantatilakā.

² Read व

³ Read वि. [This corrupt *pāda* has not been properly interpreted. The letter व after य (?) is not seen on the impression. A plausible emendation which I would offer, with much hesitation though, is यस्मा[द्वि]ष[*]सि [ये*]षु[स्व] and translate the passage thus 'afraid of which (i.e. dust) the enemy (kings) sought refuge under his parasol giving up (all) shame'—H K S]

⁴ Read वं Metre Anushtubh

⁵ Metre Upajāti

⁶ Metre Indravajrā

⁷ Read न

⁸ Metre Upajāti

⁹ Read द

¹⁰ Read वेधा.

¹¹ Metre Sragdhara

¹² This line is proposed to be thus restored —स्पृष्टः पार्थिवपांसुदीहरसञ्जघाघनेदिग्गजै.

¹³ Metre Sārdūlavākāḍita.

¹⁴ Delete सु

(Verse 2.) There was one Pūrṇa-Chandra by name, favoured of the Goddess of fortune, the bold canopy of dust raised by whose vanguard (in battle) was welcomed by the wives of the Sun-God.¹

(Verse 3) By nature endowed with majesty, he was neither purified in fire (like gold or kings²) nor weighed in balance (like gold or like kings), yet from him came forth the meritorious Suvarṇa-Chandra resplendent as gold

(Verse 4.) Of him, who was afraid of sinning against the other world and whose sacred fame was sung throughout the three worlds, was born the son Trailōkya-Chandra, the (mere) sight of whom was meritorious,—who was beautiful to look at, and who was a solace to mankind.

(Verse 5) Not fond of (the possession of) *viśhayas* (districts) [or, devoid of covetousness], but bent on conquering the (whole) earth limited by the four oceans, he put out in battles the fire, *viz* his foes, by water, *viz* his creeper-like sword.

(Verse 6) To him, who was a friend of the right path, was born a son, the prosperous Śrī-Chandra-Dēva who was kind (even) towards mischievous endeavours, full of praise for others' good qualities, (but) absolutely dumb to the exposition of (others') faults, a well-built figure, pleasant to the sight and a repository of all virtues. Him, who was averse to all worldly attractions (*viśhay-āśakti*), the Disposer forcibly endowed with Śrī (fortune) both in name and in reality.

(Verse 7) The multitude of dust particles raised by the victorious (king) in battles, met by the Elephants, the lord of the (ten) quarters completely engrossed by the proud desire of coming in contact with the (aforesaid) kingly dust,³ and avoided from a distance by the gods whose eyes could not close (against it), proceeded towards heaven, causing on the hair of the heavenly nymphs the unprecedented illusion of whiteness of old age.

(Lines 16 to 18) From his prosperous and victorious capital established at Śrī-Vikramapura, he, the devout worshipper of Sugata, the Paramēśvara (great lord) Paramabhāttāraka, (the great protector) Mahārājādhirāja (the paramount sovereign), the illustrious Śrī-Chandra-Dēva, who meditates on the feet of the Mahārājādhirāja Śrī-Trailōkya-Chandra-Dēva, in good health—.

¹ [See above, page 191, note 3 —Ed]

² [पुण्ड्रकण्ठ is the dust of the Earth. It is a well known fact that elephants are fond of playing with dust.—Ed]

³ [The so called Agnikula Kshatriyas —Ed]

No 13—A NOTE ON THE DATES OF THE GUPTA COPPER PLATES
FROM DAMODARPUR.

By K N DIKSHIT, M.A.

The discovery of the Damodarpur plates has thrown new light on the fortunes of the Gupta dynasty in Eastern India. The plates have been edited by Mr. Radha Govinda Basak above Vol. XV., pages 113-115. I wish here to point out certain inaccuracies in the readings of the dates as read by Mr. Basak, which I first noticed when I read his paper and subsequently verified by reference to the original plates, now preserved in the Varendra Research Society's Museum at Rajshahi.

The date of the second plate which has been read by Mr. Basak as 129 is to be read as 128. The next figure which is a vertical line with a slight bend, and a seriph or small horizontal line at the top end, must be taken as the symbol for 8, while the symbol for 9 has a loop at the top.

The fifth plate has lost the name of the reigning Gupta sovereign, but the date has been fairly well preserved. It has been read as 214, but I see no trace of a 'ten' in the second figure, but a clear 'tha' denoting 20, the date thus being 224. That some Gupta sovereign held sway over North Bengal as late as 221 G.E. or 513 A.D., that is eleven years after the date of the Mandasor pillar inscription of Yaśodharman (532 A.D.) is an important result. It is no longer possible to assume with Mr. Basak that the Gupta Emperor who made the grant was Bhānugupta¹ as the difference between the date of the plate and the only known date for Bhānugupta (c. 191 Gupta Era) is now 33 years. The fourth and fifth plates seem to be separated by a wider margin than that existing between any other two plates of the Damodarpur find. The intervening period of sixty years, roughly 164—224 Gupta Era (=483—543 A.D.) witnessed the gradual diminution of the Gupta dominion and the slow shifting of the centre of their power to the east. It also witnessed the rise and fall in succession of the Hūna chieftains Tōramāna and Mihirabala, and the transitory success of the Mālava chief Vishnugarbhana Yaśodharman. Other dynasties like the 'Vardhana' kings of Thanesar and the Maukhari rulers of Kāsala were coming into power on the western outskirts of the Gupta Empire, the latter dynasty in particular having carried on an incessant warfare in Oudh and adjacent regions with the Guptas. It was probably the ascendancy of the Maukhari rulers in Ayōdhyā that drove the 'noble born' Amritadēva (the donor of the fifth Damodarpur plate) from his native place Ayōdhyā to the distant Paundravardhana province, which may seem to have been one of the last retreats of the Imperial Guptas. The Jaunpur inscription of the time of the Maukhari Īśvaravarman, though not dated, must belong to the same period as the fifth Damodarpur plate, as we know from the Haraha inscription that Īśvaravarman's son Īśnavarman had fully established himself in Oudh by 555 A.D.

No 14.—SOMALAPURAM GRANT OF VIRUPAKSHA SAKA 1389

By K. V. SUBRAHMANYA AYYAR, B.A., M.R.A.S., OOTACAMUND.

This set of three copper-plates, marked No 2 in Appendix A of Rao Bahadur H. Krishna Sastri's Annual Report on Epigraphy for 1913-14,² is edited below for the first time with the help of one set of impressions kindly placed at my disposal by him.

The plates are reported to belong to a Kuruba ryot of Sōmalāpura in the Bellary talūka of the Bellary District. They were unearthed years ago while digging foundations for a house; but were secured in 1913, for the examination of the Assistant Archaeological Superintendent,

¹ [The reading at the end of l 1 in Plate V of the Damodarpur Plates is probably Kumāra.—Ed.]

² See also p 95, paragraph 25, of the same report.

Southern Circle, through the kind offices of the Tahsildar of the taluka, by the then Kanarese Epigraphical Student, Mr. K Rama Sastri. Regarding the description of the plates Mr Krishna Sastri has made the following note on the cover of the ink-impressions he sent to me.—

"Three plates with rounded tops of which the first and last are written on the inner sides only. They are held together by a ring which passes through a round hole bored at the top of each plate. On the ring, which is nearly $2\frac{1}{4}$ " in diameter and $\frac{1}{2}$ " in thickness, slides a circular seal shaped like a signet ring. The seal measures $1\frac{1}{4}$ " in diameter and bears in relief on its surface at the top the sun and the crescent and a standing boar facing the proper left. Below it is what looks like a floral device. The plates measure $9\frac{1}{4}$ " by $6\frac{1}{8}$ ". The circular top measures $1\frac{1}{2}$ " from the base to the middle of the arc."

The plates are written in the Nandi-Nagari characters throughout excepting the syllables "Śrī-Vīrūpākṣa" at the end which are in Kannada. The inscription is in a good state of preservation the only places where the letters appear slightly damaged are at the commencement of lines 20 and 68.

The language of the inscription is Sanskrit verse from beginning to end. The description of the boundaries in *dēśabhāṣā*, promised by verse 46 (ll. 71, 72), is left blank for reasons which cannot be guessed at this distance of time.

As is usual in the copper-plate grants of Vijayanagara kings, this record contains evident mistakes of spelling such as the frequent substitution of *sa* for *śa* (ll. 1, 4) and *vice versa* (ll. 1, 3), *tha* for *ta* (ll. 5, 16), *dha* for *tha* (l. 43), omission of *visarga* (ll. 5, 8, 13) and its retention in places where it has been changed into *च* (l. 42); unnecessary insertion of *anusvāra* (ll. 37 and 38); etc. Conjunct consonants are sometimes written side by side as in *दद्यात्* (l. 2), *पादयत्* (l. 37) and *खड्गयत्* (l. 33). In *चतुषष्टि* (l. 45) and *भूय* (l. 12) the rules of *sandhi* have not been properly observed. *च* has been unnecessarily doubled in *चिन्त्रि* and *visarga* has been changed into double *र* in *गुणैर्नेत्रै* (l. 27). Other instances of mistakes are *सौव* for *सर्व* (l. 45), *सर्व* for *सर्व* (l. 13) and *देनेव* for *देनेव* (l. 17). As all the mistakes occurring in the record have been corrected in the text or in the foot notes, they have not been given here in more detail.

The first three verses are invocations addressed to Śiva, Ganapati and the boar incarnation of Vishnu. The fourth introduces the Moon, and the fifth refers to Yadu and Vāsudēva. The historical portion commences with Śiṅgama (v. 6). His son was Bukka. When he became king, the prosperity of the Karnāṭa kingdom was permanently established (vv. 7 and 8). Harihara (II) was born to him, he filled the quarters with the wealth of his charity (v. 9). He had a son named Pratāpa-Dēvarāya (I) by whom the Turushkas and hostile kings were overcome (vv. 12 and 13). His queen was Dēmāmbikā and their son was Vijayabhūpati, renowned for his wisdom (v. 14). Vijayabhūpati's son by Nārāyaṇīdēvi was Pratāpa, also called Praudhapratāpa (v. 15), who obtained from his elder brother the kingdom of Ghanādri (v. 16). His son by queen Siddaladēvi was Virūpākṣa. The titles *Rājādhirāja* (v. 18), *Rājaparamēśvara* (l. 42), *Mūruvāyaganāḍa*, *Pararāya-bhayaśhara* and *Hindurāya-Suratrāna* and *Ohhurikābhālanātra* (v. 20) are given him. It is said that he obtained the kingdom by his own prowess and ascended the ancestral throne on the bank of the Tungabhadra, in the presence of god Virūpākṣa (vv. 21 and 22).

In speaking of the ancestors of Virūpākṣa, our record refers to the valour of Bukka I, the munificence of Harihara II, the prowess of Dēvarāya I and the wisdom of Vijayabhūpati. The same is pathily expressed in a single couplet elsewhere¹ thus:—

शक्तौ बुद्धमहोपालो दाने हरिहरेश्वरः ।
शौर्ये श्रीदेवराजेशो ज्ञाने विजयभूपतिः ॥

¹ *South-Ind Inter.*, Vol I, p 163, verso 16.

The statement that when Bukka I, one of the two earliest sovereigns of the Vijayanagara dynasty, ascended the throne, the prosperity of the Karnāṭa kingdom was well established, is of particular interest to the student of history, as it seems to hint the probable fact that the Vijayanagara dominion was founded on the ruins of the Hoysala (i.e. the Karnāṭa) dominion, which was wrecked by the Muhammadan invasions of South India; and shows also that the inveterate feud between the Vijayanagara kings and the Muhammadan monarchs should have risen even from the very inception of the new Hindu kingdom. There is not much doubt that the country over which Bukka ruled was a portion of the Karnāṭa empire and that the Vijayanagara kings were the political successors of the Hoysalas.

Of greater importance are the statements of our plates that Pratāpa, also called Prauḍhapratāpa, was the younger son of Vijayabhūpati, that he obtained from his elder brother,—showing clearly that he held a subordinate position under him,¹—the government of Ghanādri, and that Virūpāksha II was his son.

The Satyamangalam plates of Dēvarāya (II)² state that Vijayabhūpati had two sons of whom the older was called Dēvarāya and the younger Pratāpa-Dēvarāya. From this it is clear that both the sons had in common the name Dēvarāya. The existence of these two sons of Vijayabhūpati, though not with their names specified, is recognised in the three copper-plate grants of Virūpāksha known to us so far, viz. the Sajjalūr plates,³ the Śrīsaṅgam plates⁴ and the present Somalapuram grant. These, being directly concerned in tracing the main line of Virūpāksha, naturally enough, omit to mention the name of the elder. While the Śrīsaṅgam plates call the younger Pratāpa-Rāja, the other two give the additional information that he was renowned by his title *Prauḍhapratāpa*. Thus, from all these sources it can be gathered that while the first son of Vijayabhūpati was known by the mere name Dēvarāya—with or without the common addition of Virapratāpa which is generally assumed by Vijayanagara kings—the younger was always called Prauḍhapratāpa or Pratāpa-Dēvarāya which is sometimes supplemented in stone records by the epithet *gajavēṅṅai-kaṇḍaruṭiya*. Among the stone records of Vijayanagara kings, the following are clearly attributable to the second son of Vijayabhūpati:—

No. 92 of the Madras Epigraphical collection for 1918.	Dated in Śaka 1351 in the reign of Pratāpa-Dēvarāya, son of Vira-Vijayarāya.
No. 91 of 1918	Dated in Śaka 1352 in the reign of Prauḍha-Dēvarāya-Mahārāya, son of Vira-Vijayarāya-Mahārāya.
No. 68 of 1918 :	Dated in Śaka 1367 in the reign of Pratāpa-Dēvarāya-Mahārāya, son of Vira-Vijayarāya-Mahārāya.

Thus it is beyond doubt that the second son of Vijayarāya or Vijayabhūpati was not only called Pratāparāya and Prauḍhapratāpa, but had the additional name Dēvarāya suffixed to these names. Further, the Madras Museum plates of Dēvarāya II⁵ refer to a younger brother of his named Śrīgiri who was governing Maratakanagara in A.D. 1424-5 and the Satyamangalam plates of Dēvarāya II, dated in the same year, imply that his younger brother Pratāpa-Dēvarāya was

¹ If Mr. Rice has correctly read *nyāgi-gajāprāptam-anādi-rājyam* (p 136 of *Ep. Carn*, Vol. III), it is evidently a mistake of the engraver for *nijāgrajit-prāpta-Ghanādri-rājyah* given in our plates. His remarks (*ibid*, introduction, p 23) that Pratāpa or Prauḍha-pratāpa obtained the immemorial kingdom from his elder sister requires modification.

² *Ep. Ind.*, Vol III, p. 87 f.

³ *Ep. Ind.*, Vol XV, pp 8 ff.

⁴ This is a shortened form of Prauḍhapratāpa.

⁵ *Ep. Carn*, Vol III, pp 185 ff, MI 191.

⁶ *Ep. Ind.*, Vol VIII, pp. 306 ff.

ruling over the same district There is thus no doubt that Pratāpa-Dēvarāya is identical with Śrīgiri and this fact has been pointed out by Mr Venkayya in his *Annual Report on Epigraphy for 1906* (p 82) It may be added that the name Praudhapratāpa-Dēvarāya was already assumed by Dēvarāya I¹ A stone inscription of this second son under the name Śrīgirinātha-Udayār, dated in Śaka 1348, has also been discovered²

In the face of the inscriptional evidence furnished in a number of genuine copper-plate grants and stone records referred to above, we do not attach any value to conclusions differing from recorded facts as have been arrived at by the late Mr T. A. Gopinatha Rao in editing the Śrīśaalam plates, where he has vainly attempted to show that there was but one son of Vijayabhūpati, by name Dēvarāya He has advanced no valid grounds for disproving the identity of Śrīgiri with Praudhapratāpa-Dēvarāya, the second son of Vijayabhūpati.

The first two sons of Vijayabhūpati being known by the name Dēvarāya, it is but natural to mistake the sons of one of the Dēvarāyas for those of the other. But the fact mentioned in our inscription, viz that Virūpāksha was the son of the second son of Vijayabhūpati, whom we have pointed out above to have borne the full name *gajavēttai-kaṇḍarūḷiya* Praudhapratāpa Pratāpa Dēvarāya, is of importance as it conclusively controverts the commonly accepted view, viz that Mallikārjuna and Virūpāksha were the sons of Dēvarāya II, the first son of Vijayabhūpati. In this connection, we may point out that two unpublished stone inscriptions furnish definite information. They come from Kundāni³ in the Salem District and Conjeeveram⁴ in the Chingleput District and state that Mallikārjuna and Virūpāksha were the sons of *Gajavēttai-kaṇḍarūḷiya Praudha-pratāpa-Dēvarāya-Mahārāya* Here the mention of the epithet Praudhapratāpa makes it certain that the king referred to is the younger son of Vijayabhūpati. Another stone inscription of Virūpāksha,⁵ dated in the cyclic year Śarvarī, calls him the son of Gajavēttai-Pratāpa-Dēvarāya It may be noted that while the mother of Virūpāksha was Śiddhaladēvi, the mother of Mallikārjuna was Ponnaladēvi, who must have been two different queens of *Praudhapratāpa-Dēvarāya*, the second son of Vijayabhūpati

Our record is dated in Śaka 1389, expressed by the word *nav-āṣṭa-guṇa-bhū*, Sarvajit, Kārttika month, bright fortnight, Utthāna-dvādaśī According to Dewan Bahadur L. D. Swamikkannu Pillar's 'Ephemera,' this date corresponds to Monday, 9th November, A D 1467. It may be noted that the stone inscriptions of this king range in date from Śaka 1387,⁶ Vyaya to Śaka 1407⁷ from which it would appear that he ruled for at least ten years But the latter date is very doubtful as the record is damaged

The generals and officers of this king made known to us from inscriptions are Viṭṭharasa, Odeya,⁸ Sāluva-Tirumalarāya,⁹ Sāluva-Narasimha,¹⁰ and Singappa-(or Śingana-) Dandanāyaka¹¹ Of these, Viṭṭharasa-Odeya was in charge of Bārakūru and Mangalore which he was governing from Śaka 1387 to 1398 Tirumalarāya was in charge of Trichunopoly and Sāluva-Narasimha developed into a usurper in later years Two stone records of Virūpāksha in particular are

¹ No 138 of the Madras Epigraphical Collection for 1889,

² No 63 of the same collection for 1903

³ No 203 ditto 1911.

⁴ No. 39 ditto 1890

⁵ No. 661 ditto 1904.

⁶ Nos. 130 and 153 of 1901.

⁷ No 398 of 1909

⁸ Nos 30 and 153 of the Madras Epigraphical Collection for 1901

⁹ *Kōyiloḷuḷu* makes mention of this chief—see *Ind Ant*, Vol XI, p. 141.

¹⁰ See n to 6, below

¹¹ Nos. 29 and 153 of the Madras Epigraphical Collection for 1901.

worth mentioning in this connection, of which the one, dated in Śaka 1390, registers a gift by an agent of Śaluva-Narasimha, and the other, dated in Śaka 1394, records a gift for the merit of the same chief.¹

The subjoined inscription registers (i) a gift of land situated to the west of the Hagari river within the boundary of the village of Yammegōnūru in Mūda-nādu, a sub-division of Hastināvati-valita, to a Brāhmana resident of Nittura, the son of Sāra gīrya, learned in the Vēdas, Sāṅkhya and Mīmāṃsā and reputed as the author of a work called *Bhīshya-Bhūshā*, (ii) gift of lands under the tanks called Kṛishna-tāṭika, Kariyakere and in the village of Chitukanāhālu to another Brahman named Viṇṇipikshīrya, a physician and the son of Rasēśvara, and (iii) gift of the village of Sōmalapuram, with its name changed into Viṇṇipikshapuram, to a certain Viranārya, who, in turn, appears to have distributed it among Brahmins, dividing it into 60 *vrittis*. The distribution of the full 60 *vrittis* among Brahmins is not given. But it is said that four Brahmins and three others connected with the issue of the copper-plate grant received 8½ shares. The account for the rest is omitted, but it is evident from the blank space preceding verse 46 that possibly one or more plates containing the names of the rest of the *vritti* holders, which were intended to be inserted, have not been so done. The description of the boundary marks too, which must have followed this verse, is omitted, as already remarked.

Of the geographical names found in this inscription, Nittura, Chitukanāhālu, and Sōmalapura are villages situated in the Bellary taluka, Hastināvati is another name for Ānegondi near Hampi, Yammegōnūru is in the Bellary taluka at the place where it borders on Hospet, and the river Hagari bears the same name even now. It is noteworthy that the old name Sōmalapura is retained at present while its later name Viṇṇipikshapuram given in Śaka 1389 has not survived. *Khāri*, according to the dictionaries, is equal to 3 bushels and perhaps indicates the extent of land by its sowing capacity. The two tanks, Kṛishna-tāṭika and Kariyakere, must be looked for also in the Bellary taluka.

The composer of the grant was Duiga-Bhaṭṭa, son of Mādhavārādhyā, who figures also in MI 121, and the engraver was the goldsmith Viranārya, son of Muddanārya.² This engraver is perhaps identical with Viranārya, the father of Mallana, who incised the inscription MI 121.

[The following metres are employed vv 1-3, 5, 7, 11, 14, 15, 17, 20-53, *Anushtubh*, vv 4, 10, *Śārdūlavikrīḍita*, vv 8, 12, 13, 16, 19, *Upajūth*, vv 6 and 18, *Upēndravajrā*, v 9, *Mālinī*, and v 54, *Sālinī*.]

TEXT

From Plate.

- 1 श्रीगणाधिपतये नमः । नमस्तु (स्तु) गति (शि) रश्चुं विचद्रचामरचारवे । त्रै-
- 2 लीक्ष्यनगरारंभमूलस्तंभाय शभवे ॥ [१*] रक्षायै जगतां भूयाद्दयाकुर्वि-
- 3 रदाननः [1*] पाथक्रोडाविधौ यस्य पत्न्यन्ति पयोधयः । [२*]
^३नमःस्त (स्त) श्मै (स्मै) वरा-
- 4 हाय यद्द्वानाक्रमूर्धनि । सप्तहोपवतो पृथ्वी लीलाब्जश्चोरदृश्य (श्य) तः^४ । [३*]

¹ No 79 of the Madras Epigraphical Collection for the year 1919 and No 188 of the same collection for the year 1902

² The Śrisaalam plates were also incised by the same person (see above, Vol XV, p 19) where the name of the person occurs as Viranūchārya, son of Muddanūchārya

³ Cancel the *visarga*

⁴ Omit the *visarga*, लीलाब्जश्चोरदृश्यते is the reading in MI 121

- 5 ¹अस्थि(स्त्रि) ओकमलालयानुजतया दीव्यन्नभोमंडले नचन्नाधिपति[:*] प्र-
 6 भाभिरनिसं(शं) दि[इं]डलोक्तासक्त[त्] [1*] चोराव्यप्रसय कलानिधिरि-
 7 ति ख्यातसु(सु)धांसु(शु)[:*] अ(स्त्र)यं ² मोक्की यग्ग(श) विभूयणत्वमगम-
 च्छभोर्भवा-
 8 नीपते[:*] ॥ [४*] वंसे(शे) तस्येव संजातो यदुर्नाम सहोपतिः [1*]
 यद्वंस(श)जेन भू-
 9 [रि]षा वासुदेवेन पालिता । [५*] यस्मिन्संगरजिच्च³(त्य)भंगुरभर⁴ प्रत्यर्थिपृष्ठी-
 10 भृतां ⁵साथौ(थै)र्भगमुपागतैरपि गता दिङ्गडलो संभ्रमा[त्*] । तत्कोर्त्तिर्वि-
 11 वरोषु⁶ गच्छति पुरो दिङ्गाश्रवृदेव्हो सहत्त. शशिमोक्किमंडन-
 12 मणि[:*] शो(सो)भूट्ट(नृ)पः सगमः ॥ [६*] ततोभूहुक्कभूपान्नः सर्वभूप-
 कुलाग्रणी[: 1*]
 13 यत्प्रतापानले सर्व(वि) पतंगत्यरिभूट्टतः ॥ [७*] कर्नाटलक्ष्मी[:*] सविज्ञास[मा]-
 14 स यस्मिन्नहीपे महनोयकोत्तो(त्ती) [1*] भूमिस्तथैवाप⁷ वसुंधरात्वं स्थिरिति नाम
 15 प्रथमं गुणोधे⁸ ॥ [८*] उदयमुद[य*]शैलादुद्यदुद्दामतेजा[:*] शस(श)धर
 इव बू(बु)क्कत्त्मा-
 16 ⁹भृतःस्तंगमौलि । हरिहरनरपालः प्रापदास[रि](शा)[:*] समस्या(स्ताः) करघृत-
 वसुपूरै[:*]
 17 पूरयन् पूर्णधामा ॥ [९*] येनाकारि कलो(लिः) कृताधिकतरो येने(नै)ष
 [घं]द्वापत(थ) क-
 18 मंत्र(त्र)ह्यपथोजनो(नि)¹⁰ प्रस(श)मिताशेषोपसर्गः परा(रं) [1*] येनांभोनिधि-
 मेखला वसु-
 19 म[ती ध]र्मेण संरक्ष(क्ष्य)ते तस्यानिकदिगीस(श)पालि[त]¹¹यशोर्विबस्य केनो-¹²
 20 पम(मा) ॥ [१०*] [मे]कादेवीति विख्याता ओपार्वत्योस्तु मेकना[त्*]।
 सासीजाया¹³ सहोभर्त्तु[:*]

¹ M1 121 has स्त्रि.

² Delete the punctuation

³ जिच्च is also the reading in the Kannada text of M1 121 (see p 203 of *Ep Carn*, Vol III); but it is read as जित्य in the romanised text given on p 135 Read यस्मिन् सगर^o

⁴ Read भरे

⁵ सधे^o is the variant given in M1 121

⁶ Read वरेपु

⁷ शैला^o is the reading in M1 121.

⁸ गु is a correction from पु, read गुणोधे.

⁹ Read भृतस्तुङ्गमौलि

¹⁰ M1 reads पथोजनी

¹¹ त् is a correction from दृ

¹² The Kannada text of M1 121 has सेनीपमा (p 203 of *Ep Carn*, III) and the romanised text has *nasōpama* *ibid*, p 135)

¹³ Another variant of this is सासीहार्वा which is found in M1 121

- 21 स[र्व्वर्था]¹ पुण्यलक्षणा ॥ [१२*] इंद्र. खदीर्षं, परिहृत्तुं कामो भूमावयोस्वा(स्य) अ-
 22 तिपन्न[रूपः] [1] प्रतापपूर्व[:*] किल देवराय. प्रतापतो भूमिमपल्लय-
 23 [त्सः 1] [१*] प्रावापदन्ही² परिजृम्भमाणे शुष्कास्तुरुष्का अपि यस्य
 राज्ञः [1*] रि-

Second Plate, First Side

- 24 पुच्छितीश[1*]श्च निरस्तधैर्याः ³कातारवस्मीककतात्मरचाः ॥ [१३*] तस्य देमांवि-
 25 काभर्तुः पुत्रः शत्रुप्रमर्दनः [1*] विद्यानिधिर्विशेषज्ञो वीरो विजयभूपतिः [॥ १४*]
 26 तस्य नारायणीदेव्या⁴ प्रादुरासीद्यशोधनः । प्रौढप्रतापविभवः प्रता-
 27 पाख्यो महीपतिः । [१५*] गुणैर(र)नेकै वनौतकेस्त्रिन्⁵न्विराजमानसु-
 28 क्कतासकीर्त्ति[: *1] निजाग्रजात्⁶ प्राप्तघनाद्विराज्यः सार्थीकृतार्थिवृ-
 29 जपारिजातः ॥ [१६*] तस्य ⁷शिङ्गलदेवीति भार्या सर्वगुणाश्रया ॥
 30 लक्ष्मीना(र्नी)र[1*]यणसे(स्ये)व स(श)[ची]व⁸ नमुचिद्विषः ॥ [१७*] तस्यां
 सि(शि)वः प्रादुरभू-
 31 हुणाव्यो नाम्ना विरूपाक्ष इति प्रसिद्धः [1*] राजाधिराजः क्षितिपा-
 32 लमौक्ति[र्व्व]दान्यभूत्ति(र्त्ति): कर्णैकसिंधुः ॥ [१८*] निजप्रतापा[द]धि[ग]-
 33 त्य राज्ञ्यं समस्तभाण्यै[:*] परिसेव्यमानः [1*] खड्गा(ङ्गा)भ्रतः⁹ सर्वरिपून्वि-
 34 जित्य स मोदते वीरविलासभूमिः ॥ [१९*] चु(छु)रिक्काभालनेत्रो(त्रे)ति वि-
 35 ख्यातः प्रतिपं(प)न्नधीः । मूरुरायरगंडाकः पररायभं(भ)यंकरः [1*]
 36 हिंदुरायसुरवाण इत्यादि विरु[दो]न्नतः ॥ [२०*] तुगधद्रानदीती-
 37 रे ।¹⁰ विरूपाक्षस्य संनिधौ [1*] पित्र्य¹¹ सिंहासनं प्राप्य पालयन्न(न्न)-
 वनोत्सिमां [॥ २१*] पु(पु)-
 38 ख्यश्लोकाग्रगं(ग)ण्योसौ विरूपाक्षक्षितीस्त्र(श्व)रः । धर्मस्थानगतै[:]
 39 सद्भिः संयुतो¹² धरणीसुरैः¹³ ॥ [२२*] शालिवाह्यनिर्णीतशकव-
 40 र्धक्रमागते । न[वाष्ट]गुणभूयुक्ते सर्वजिहत्सरे शुक्रे [॥ २३*] मासे कार्तिक-

¹ Perhaps the correct reading is सर्व्वथा or सर्व्वार्था, M1 121 has वनधर्था

² M1 121 has वध्रे, read प्रतापवध्रे

³ Read कातार⁰

⁴ Read देव्या⁰

⁵ Cancel न्.

⁶ See note 3, p 4, above

⁷ M1. 121 has सिङ्गलदेवी.

⁸ सची नमुचिविद्विप. is the reading in M1. 121

⁹ The variant found in M1 121 is सयामसः.

¹⁰ Cancel the *dauda*

¹¹ दिव्य is the reading that occurs in M1 121

¹² संयुक्ती is another variant found in M1 121.

¹³ The Kannada text of M1. 121 has धरणीसुरैः, but the romanised-text reads correctly सुरैः.

- 41 विख्याते सिते पक्ष[क्षे] विशिपतः । उत्याना(न)द्वादसी(श्री)पुणा(स्य)कान्ने
चापि नृपो-
- 42 त्तमः [1] [२४*] राजाधिराजः¹स्तेजस्वी यो राजपरमेश्वरः [1] [वि]रूपाक्ष-
क्षितीशो-
- 43 ध(थ) धर्मबुद्ध्या युत सुधीः । [२५*] आत्रेयाय ²रुगध्येत्रे निद्रुरस्यसुवाप्ति-
44 ने । सां(सा)रंगार्यसुतायाथ सर्वशास्त्रविदे तथा । [२६*] भाष्यभूपाक[रा]-
45 याथ सांख्यामोमांसवेदिने । ³सौवशास्त्रप्रवाणोय चतुप(प्प)ष्टिकका(ला)-
46 नि(वि)दे । [२७*] षडगसहितं वेदं वेदार्थं वेत्ति भूमुर. [1*] तच्चै
द्विजाय भू-
- 47 [पालो] हस्तिनावतिवक्रितगं(गा) । [२८*] मूडनाडस्थित(तां) चैव हगरे[:*]
प[श्चि]-

Second Plate, Second Side

- 48 मे स्थितं(तां) । यमंगेनूरु सोऽन्येव ।⁴ खारो भूमिं महोपति[: *] [२९*]
प्रादात्तथा च स(म)हि-
- 49 तं क्षेत्रं सस्यफलप्रदं ॥ [२९.५*] भारद्वाजाय विदुषे ।⁴ रसेश्वरसु-
50 ताय च । विरूपाक्षार्यभिषजे ⁵रुक्मशाखा(खा)ध्या[यि]-
51 ने तथा ॥ [३०*] खारिसप्तप्रमाणं च [त]टाक्ते कृष्णसंज्ञिते[1*]
करियकैरे⁶र्ये-
- 52 ति विख्याते खारित्रयमितां भुवं । [३१*] चिट्टकनाहाकु नाम्न्येव
खारित्रयमिता
- 53 भू(भु)वं । मिळित्वा खारिसंख्यां(ख्या)त्र त्रयोदश सुविश्रुता ॥ [३२*] त्र(त)त्रस्यं
ग्राममेकं तु सो-
- 54 मलापुरनामकं [1*] अस्माकं भो विरूपाक्षमहीनाथ ददस्व नः⁷ । [३३*] इ[ति]
55 विज्ञाप्य भूमर्तुविरूपा[क्ष]महोपते[: *] वि(वो)रणार्य[:*] स्वयं लब्धा(वघ्ना)
ग्रामं⁸ चा[त्र]
- 56 महीश्व(श्व)रात् ॥ [३४*] शृ(श्रु)त्वा विज्ञापनं तस्य विरूपाक्षमहीपति[:*] ।
[३५*] निधिनिक्षे-

¹ Delete the *risarga*

² Read ऋ^०

³ Read च्

⁴ Read सर्वशास्त्रप्रवीणाय.

⁴ Cancel the *danda*

⁵ The *ē* of *रे* seems to have been erased in the original

⁷ Either the word *अस्माकं* or *न* should be cancelled, otherwise there would be redundancy

⁸ We should have expected *वीरधार्येण संज्ञितो ग्रामस्यात्* For the pleonastic use of the words *महीपतेः* and

महीश्वरात् see above, note 1

- 57 पसयुक्तं जलपाषाणमिश्रितं । अचिख्यागामिसंयुक्तं ¹ सिद्धसाङ्गस-
 58 मन्वितं । [३६*] अष्टभोगैश्च संयुक्तं कुल्याराममन्वितं [1*] समस्तवक्सिंस्यु-
 59 क्तं सर्वमान्यं फलप्रदं । [३७*] तुंगभद्रानदीतीरे विरूपाक्षस्य सं(स)न्निधौ[1*]
 60 सहिरं(र)खोदक(क) दानधारापूर्वं यथाविधि [॥३८*] विरूपाक्षपुरं चेति-
 61 प्रतिनाम विधाय च ॥ भोक्तुं दातुं द्विजेभ्यश्च प्रादादा[चंद्र]तारक । [३९*]
 62 सोपि द्विजश्च संतुष्ट[.] संयुतः परया सुंदा [1*] अकरं(रो)दाशिषं रात्रे
 चिरं-
 63 जीवी भवत्विति ॥[४०*] गोत्रं शाखा पितुर्नाम द्विजानां च यथास्थितं [1*]
 लिख्यं-
 64 ते वृत्तिसंख्यात्र षष्टिसंख्या यथाक्रमात् [॥ ४१*] श्रीवत्सो ^३रुगधोतश्च [हेम]५
 65 णार्यसुतः सू(सु)धौः [1*] मल्लिभट्टेति विख्यातो वृत्तिमेकामिहाश्रुते ॥
 [४२*] वासि-
 66 ष्टो(ष्ठो) रुगधोतश्च ^४वल्लभट्टसु[तः] सुधी[ः*] । [दु]र्गाभट्टेति ^५ विख्यातो
 वृत्तिमे[का]मिहाश्रु-
 67 ते ॥[४३*] हारीतो ^६रुगधोतश्च हणार्य[सु]तः सुधी[.] [1*] [सारंगार्य]श्च
 वि[ख्यात] [1*] सार्ध[मेक]-
 68 . [स]ः [॥ ४४*] आत्रेयोश्च रुगधेत भायणा[र्य]स्य [नदन]ः [1*] भायिभट्टो
 द्विजयेष्टो(ष्ठो) वृत्ति-
 69 [द्वयमि]हाश्रुते ॥[४५*]

Third Plate. ^८

- 70 ^९तैस्त्रै[स](स्त्र)मन्वितश्चिन्है^{१०}दि-
 71 च्छु प्रास्या(चा)दिषु क्रमात् [1*] सोमानोश्वा(स्या)ग्रहारस्य लिख्यंते
 देष(श)भाषया [॥४६*]
 72 वासिष्टो(ष्ठो) वं(व)न्ह(हृ)चो विद्वान्
 73 ऐतयार्यसुतः सुधीः [1*] वल्लभो रायसखा(स्वा)मि(मौ) वृत्ति^{११}मेकामिहाश्रुते ॥
 [४७*]

¹ Cancel the *danda*.^२ च is a correction from सु.^{३-४} Read रुगधोतश्च^५ Read ०मट्ट इति^६ Read रुगधोतश्च^७ Read षट्गच्छेता^८ At the top of this plate, a little below the right side of the ring-hole, is the letter *ri* which I am not able to explain.^९ The line begins about the middle of the plate^{१०} Like वन्हौ in line 23 हौ is written with *n* preceding *ha* The grammatically correct form would be *rice* *varad*.^{११} The two syllables मेका are written over an erasure

- 74 लवष्टा श्रीसुहृषाचार्यसूतः शासनले[ख]कः [1*] वीरगः सुगुणो धोमान्
 75 हृत्तिमेकामिहाश्रुते ॥[४८*] आश्रेयो याजुषो धोमान्माधा(ध)वाराध्यनंद-
 76 षः [1*] 'शासनः¹ श्रंथकृद्दिहान् दुग्गा(र्गा)भट्टोच हृत्तिभाक् ॥[४९*]
 दानपाल[नयो]-
 77 मध्ये दानाच्छे(च्छे)योनुपालनं [1*] दानास्व(स्व)र्गमवाप्नोति पालनादच्युतं
 78 पद ॥[५०*] स्वदत्तादि(दि)गुण पुं(पु)ण्य परदत्तानुपालनं [1*] परदत्ताप[हरि]-
 79 ण स्वदत्तं निष्कलं भवेत् ॥[५१*] स्वदत्ता(त्ता) ²परदत्तां वा यो हर(रि)त
 वसुं-
 80 धरां । षष्टिर्व[रुस]³हसाणि विष्टायां जायते क्लि(क्ल)मि[:*] ॥ [५२*]
 एकैव भयि-
 81 नी लोके सर्वेषामेव भूभुजां [1*] न भोव्या न ख(क)रयाहा(ह्या)
 विप्रदत्ता [वसुं]-
 82 धरा ॥ [५३*] सामान्येयं धर्मसेतुं⁴चृपाणां काले काले पाल[नीयो]
 भवन्ति[:] [1*]
 83 स्वर्वा[ता]न् भाविनः पार्थिवेद्रान् भूयो भूयो याचते राम[चद्रः] ॥[५४*] श्री[॥*]
 84 Śīi-Vuṇpāksha⁵

TRANSLATION

(Lane 1) Obeisance to Ganādhipati

(V. 1) Invocation to Śiva [by the common verse *namas-tunga*, etc.].

(V 2) May the merciful elephant-faced (god), in the course of whose water-sport the oceans become (mere) ponds, protect the worlds

(V 3) Salutation to that boar, at the tip of whose stalk-like snout, the earth, comprising the seven islands, seemed (to possess the beauty of) a lovely lotus

(V. 4) There is the Lord of stars (i e Moon), the younger brother of her who resides in the lotus (i e Lakṣmī), who shines in the region of the firmament with his (lustrous) ray and constantly illuminates the quarters, who is born of the milk-ocean and is renowned as the depository of *kalas* (digits), himself being made of nectar rays and who has obtained the position of a jewel in the head of Śambhu, the consort of Bhavāni (i e Pārvatī)

(V. 5) In his family was born the king named Yadu, and this world was protected by Vāsudēva who was born in that family

(V 6) There was king Sangama of good conduct, wearing Śāśmauli (Śiva) as an ornamental jewel, on whose victory in battles, the crowds of enemy kings heavily burdened (with numbers) though vanquished reach the cardinal points in great haste, (but) whose (i e, the King's) fame moves further on (passing) through intervening spaces amidst lords of the (eight) directions

¹Cancel the *varga* after *g*

² The rest of this line and the next line up to *वृद्धि* are written on an erasure

³ Read *वर्षस*

⁴ Read *सेतुं*

⁵ In Kaunada characters

(Vv 7 and 8) Then came king Bukka, the foremost of the kingly race, in the fire of whose valour the hostile rulers were consumed as moths. In this king of great fame, the goddess of prosperity of the Kānūta (kingdom) rested with pleasure. And the goddess of the earth also for the first time revealed the (significance of her) names *Vasundharā* and *Sthirā* on account of her qualities of bearing wealth and remaining permanent.

(V 9.) Like the moon of bright lustre rising from the Udaya-Śaila of lofty peak, king Harihara of rising full glory took his birth from king Bukka who wore a splendid crown and filled all the quarters with abundant wealth acquired by taxation as the moon with the exuberent lustre of his rays.

(V. 10) What could stand comparison with him the reflection of whose fame is protected by the deities of the quarters, by whom the (stern) Kali age has been turned into one better than the (golden) Kṛita age, by whom was caused the highway of the school of philosophy which considers Duty (*Karma*) as god (*Brahmā*) free of all obstacles, and by whom the earth, having for (its) girdle the oceans, was ruled with justice.

(V 11.) She, who was called *Mēlādēvi* because she was a combination of Śrī (*i e* Lakshmi) and Pārvati and was in every way possessed of auspicious marks, was the consort of this king.

(Vv 12 and 13) Indra, desirous of removing his stains, obtained on earth the form of this (king) and in the name of *Dēvavāya*, with *Pitūpa* prefixed to it, ruled the world with his prowess. In the glowing fire of this king's valour, the Turushkas were scorched up and (other) hostile monarchs, with (their) bravery lost, sought self-protection in forests and ant-hills.

(V. 14) The son of this husband of *Dēvāmāyikā* was *Vijayabhūpati*, the destroyer of his enemies, the store-house of learning, of supreme knowledge and a hero.

(Vv 15 and 16) To him, through *Nāyāyāntēvi*, was born the king called *Pitāpa*, renowned as *Prāndhapitāpa*, who had fame for wealth. He shone on this earth with many virtues, obtained fame by meritorious deeds, got the (kingdom) of *Ghanādū-rājya* from his (uterine) elder brother and was a *Pāyūta* in granting their desired objects to crowds of mendicants.

(V 17) His wife was *Śiddhalādēvi*, the resort of all good qualities, like Lakshmi to *Nārāyaṇa* and *Sachi* to the enemy of *Namuchi* (*i e* India).

(V 18) Śiva (himself) was born of her under the well-known name of *Vīrūpāksha*, full of good qualities, a *rājādhirāja*, the head-ornament of kings, a munificent person and the one ocean of mercy.

(V. 19) Acquiring the kingdom through his own prowess, attended with all kinds of prosperity, and conquering all his enemies with the point of his sword, he, as the play-ground of heroism, rejoices.

(V 20) He who is renowned as *Chhuralā-Bhālanētra* (*i e* Śiva in wielding the sword) and ripe of wisdom holds the high (sounding) titles, such as *Mūrirāyāgandha*, *Pararāya-bhayankara* and *Hindurāyasatṛāna*.

(Vv 21 to 29) On the bank of the *Tungabhadriā* river (and) in the presence of (the god) *Vīrūpāksha*, having obtained his ancestral throne, this king *Vīrūpāksha*, the foremost (among those) possessing noble virtues, rules the earth, surrounded by pious *Brahmanas* assembled in his court. In the course of the Śaka years determined by the *Śālivāhara*-[Era], in the excellent year *Sarvajit* (corresponding to the year) expressed by *nine, eight, gunas* (three) and *bhū* (one) (*i e* 1389), on the auspicious occasion of *Uttānadvādaśī*, in the bright half of the month of *Kārttika*, he, the best of kings, the wise *Vīrūpāksha*, a *rājādhirāja* (and) *rājaparamēśvara*, of great valour, with the intention of making charity, made a grant to a *Brahmaṇa* resident of *Nittura* who was the son of *Sārangārya*, who belonged to the *Ātrōya*-[gōtra], and was a student of the *Rik*-[*Śākhā*], who was well versed in all the *Śāstras*, who knew the sixty-four arts

as well as the Sāṅkhya and the Mīmāṃsā (systems of philosophy), who was learned in the Vēdas and the six *anjas* (branches) with their meaning, and who was the author of the *Bhāshya-Bhūshā*, of (one) *khāri* of land situated to the west of the Hagarī (river), within the boundary of (the village of) Yammegēnūru in Mūda-nāda and in (the sub-division of) Hastanāvati-valita

(Vv 30 to 32) Again he gave to the scholar and physician Virūpākshārya, son of Rasēśvaya of the Bhāradvāja-[*gōtra*] and a student of the Rik-*Sākhā*, 7 *khāri* of valuable land yielding grain and fruit under the tank called Krishna, 3 *khāri* of land under (the tank) known as Kariyakēre and of 3 *khāri* of land in (the village) called Chitukanāhālu—thus in all, the number of 13 *khāris*

(Vv 33 to 39) Having petitioned thus to king Virūpāksha "Oh! King Virūpāksha! grant me the village situated there named Sōmalāpura", Viranārya obtained from the king the (said) village. On hearing the request, king Virūpāksha made, in the presence of the god Virūpāksha on the bank of the river Tungabhadiā, a *sarvamānya* gift with gold and water, accompanied by libation of water as laid down by rule, of the fertile village (Sōmalāpuram) with all its royal revenue¹, together with canals and gardens, with its name changed into Virūpākshapuram,—for being enjoyed as long as the Moon and the Sun endure, or for being given away to Brahmanas,—together with the eight kinds of enjoyment, i.e. (the right to own) the *udhi*, *nikshōpa*, *jala*, *pūshāna*, *akshinī*, *āgāmi*, *siddha*, and *sādhyā*

(V 40) The Brahman too, pleased and overpowered with joy, blessed the king with long life

(V 41) (Here) will be written, in order, the *gōtra*, *sākhā* and the father's name and the names of the Brahmanas. The number of *vrittis* (who received shares in the village) is sixty

(Vv 42 to 45 contain the names of four of these donees)

Verse	Name of the donee	Father's name	Gōtra	Sākhā	Number of <i>vrittis</i> owned
42	Malli-Bhatta	Hīmanārya . .	Śrīvatsa	Rik	1
43	Durgā-Bhatta	Vallam Bhatta	Vāsishtha	Do	1
44	Sāringārya	Haimpanārya	Hārīta	Do	1½
45	Bhāyi-Bhatta	Bhāyanārya . .	Ātrīya	Do	2

(V 46) The boundaries of this Brahman village (*agrahāra*) with their respective marks are written (below) in the language of the country, in the four directions commencing with the east, in order

(V 47) The wise and learned Vallabha, son of Atayārya, and the chief of the Secretaries (*Rāyasa*) belonging to the Vāsishtha-[*gōtra*] and the Bahvricha-[*Sākhā*], holds one *vritti* (in this village)

(V 48) The intelligent smith Virana of virtuous qualities, (who was) the engraver of this document and the son of the prosperous Muddanāchārya, holds one *vritti* (in this village)

(V 49) The learned and intelligent Durgā-Bhatta of the Ātrīya-[*gōtra*] and the Yajus-[*Sākhā*], the composer of this document and the son of Mādhavarādhyā, owns one *vritti* (in this village)

(Vv 50 to 52) [Five of the usual imprecatory verses]

(Line 51) Śrī-Virūpāksha

¹The word *वसि* has perhaps to be corrected into *वसि*

No. 15.—THE BRAHMA-SIDDHĀNTA OF BRAHMAGUPTA, A D. 628

MEAN SYSTEM.

By ROBERT SEWELL (I C S., RETIRED).

(Continued from Vol XVII, p. 187.)

321 The Tables published in my last article (*above*, Vol. XVII) enabled the dates of ancient Indian inscriptions and records to be verified according to the requirements of the *Brahma-Siddhānta* with, as basis of calculation, the "true" or apparent motions of sun and moon. This mode of reckoning appears to have been introduced in the 11th century A D. But the *Brahma-Siddhānta* was composed in A D 628 and for at least four centuries after its appearance details for the Calendar were almost certainly based on mean planetary motions, while it is believed that this mean system continued to guide the preparation of *pañchāngas* (almanacs) till a much later date—perhaps for several centuries in some parts of the country.

For the correct verification, therefore, of early dates it is necessary for historians to be provided with a set of Tables based on mean planetary motions and the postulates of the *Brahma-Siddhānta* in addition to those based on mean motions and the postulates of the *Ārya-Siddhānta*. The latter were provided in a previous article in this volume. The former are presented herewith. They cover a period of 800 years, from K Y 3700 to 4500, or from A D 599 to 1400.

The system of work is the same as in all my previous Tables, that is to say, it is the system of Largeteau as adopted by Professor H. Jacobi in the *Indian Antiquary*, Vol. VIII, and in the *Epigraphia Indica*, Vol. XI. Full examples shewing the method of work, which is very simple, are given in my former articles, others, specially concerning the system of mean reckoning on *Brahma-Siddhānta* principles, are given below.

In case of doubt as to which of the Tables already published should be used in the present case attention is directed to the accompanying § 329.

322 In examining the dates of records in earlier years it is necessary to remember that the modes of reckoning adopted were not always the same as those used in more recent years. As to eras, reference to articles 6-12 of my former work, *Indian Chronography*, is recommended. For other matters the late Dr J. F. Fleet's remarks in the *Journal of the Royal Asiatic Society* for 1912, pp 704-5, will be found very valuable.

Especially let it be borne in mind that the lunar month reckoning in early years was probably carried out on the *pūrṇimānta* system. According to the late Professor Kielhorn the earliest known date certainly in *amānta* reckoning belonged to the year A D 794. It is contained in the Paṭhān plates of the Rāshṭrakūṭa king Gōvinda III (*Epig Ind.*, III, 105, *Ind Ant.*, XVII, p 142, No 9). As regards these two systems, the *amānta* and *pūrṇimānta* names of lunar months, see *Indian Calendar*, §§ 13, 45 (with Table on p. 26), 47, 51 and the late Sankara Balkrishna Dikshit's footnote on p 31, also *Indian Chronography*, §§ 75, 76, p. 31.

Elements of the Brahma-Siddhānta mean reckoning.

323. The principal elements are fully stated in my former article on this authority (*above*, Vol. XVII, § 313). For calculation on the mean system the following notes are necessary.

(1) The length of the mean sidereal solar year is $365^d 6^h 12^m 9^s$, a fixture afterwards adopted by Bhāskarāchārya in his *Siddhānta-Sūtram*, A D 1150.

(ii) The advance of *a* (distance of mean moon from mean sun)—which finally fixes the index of the *tithi* ($\frac{1}{30}$ th of a mean lunation) in measurement by 10,000ths of circle—in every civil day of 24 hours and in hours, minutes and seconds, has already been given for the *Siddhānta-Śrōmanī* in Tables LIV, A and B (*above*, Vol XV) These Tables are applicable to the *Brahma-Siddhānta*

(iii) For the sun's mean motion per day, hour, minute, etc., see Tables XLIII and XLIV (*above* Vol XIV)

(iv) The advance of *a* in one mean solar month is, in 10,000ths of circle, 307 249156595

(v) Each solar month consists of 30^d 10^h 31^m 0^s 75 Table XCI below shows the interval of days, hours, etc., between the moment of mean *Mēsha-samkrānti*, when the mean sun is at celestial long 0° (*Table XC, cols 13-17*), and the moment of each subsequent *samkrānti* when the mean sun enters each of the twelve signs, and so enables the day and time when each mean solar month begins to be ascertained. The same Table gives the advance of *a* from its value at the moment of mean *Mēsha-samkrānti* to the same at each subsequent *samkrānti*

(vi) The interval between the moments of true and mean *Mēsha-samkrānti*, i.e. between the moments of the astronomical beginning respectively of the true and mean solar year, which interval we call the *śōdhya*, varies slightly year by year in consequence of the postulated shift of the sun's apsis (§ 313, VII, *above*) The exact intervals, century by century from K Y 3700 to 4300, were given above in § 315 The Table is here repeated and extended so as to embrace the whole period of the general Table XC below The quantities were computed by Dr Robert Schram

TABLE B

(*above*, p 126)

VALUE OF *śōdhya* BY THE *Brahma-Siddhānta*

Kallyuga	A D.	ŚŌDHYA AT BEGINNING OF CENTURIES.				
		D	H	M	S	Days and decimals
3700	599-600	2	4	8	59 8128	2 1729145
3800	699-700	2	4	9	2 0160	2 1729400
3900	799-800	2	4	9	4 2192	2 1729655
4000	899-900	2	4	9	6 4224	2 1729910
4100	999-1000	2	4	9	8 6256	2 1730165
4200	1099-1100	2	4	9	10 8288	2 1730420
4300	1199-1200	2	4	9	13 0320	2 1730675
4400	1299-1300	2	4	9	15 2352	2 1730930
4500	1399-1400	2	4	9	17 4384	2 1731185

The moment of mean Mēsha-samkrānti, or the beginning of the mean solar year

324 The general Table which follows (Table XC, cols 13-17) states the moment of beginning of each mean solar year according to the *Brahma-Siddhānta*. The first entry is for the expired year 3700 of the Kaliyuga (A D 599-600), in which year the astronomical beginning is fixed as at 5^h 15^m after mean sunrise on Saturday, 21 March, A D 599. It is incumbent on me to prove the correctness of this fixture. Subsequent entries are based on it by the addition to it year by year of 365^d 6^h 12^m 9^s. Proof may be offered in three ways — (A) by comparison with the date and time already found for the beginning of the true solar year K Y 3700, utilizing Dr Schram's determination of the interval between the two occurrences, (B) by comparison with the date and time fixed for the beginning of the same mean solar year according to the *First Ārya-Siddhānta*, allowing for the time difference between the two authorities caused by their different estimate as to the length of the mean solar year, viz 21^s, (C) by direct computation from the moment in K Y 0 of mean Mēsha-samkrānti, 3,700 years earlier, which, according to the *Brahma-Siddhānta* (§ 313, v, above), was exactly at mean sunrise, or 0^h 0^m 0^s Lankā time, on Friday, 18 Febr (B C. 3102)

A		h	m	s.	
Moment of true Mēsha-samkrānti in K.	}	(5) Thur,	19 Mar	1 6 0	1872
Y 3700 (A D 599) (Table LXXXII, Vol XVII, above)					
Śōdhya as above (§ 323, Table) .	+ (2)	2	4 8 59	8128	
Moment of mean Mēsha-samkrānti .	(0) Sat,	21 Mar	5 15 0		

B

[See *Indian Calendar*, Table I, cols 13-17, for A D 599-600]

		h	m	s.
True Mēsha-samkrānti by <i>Ārya-Siddhānta</i>	(5) Thur,	19 Mar	23 17 30	
<i>Ārya-Siddhānta śōdhya</i>	+ (2)	2	3 32 30	
Mean Mēsha-samkrānti by <i>Ārya-Siddhānta</i>	(1) Sun,	22 Mar.	2 50 0	
Less Time-difference in 3,700 years ¹ .			-21 35 0	
Mean Mēsha-samkrānti by <i>Brahma-Siddhānta</i>	(0) Sat,	21 Mar	5 15 0	

C

The epoch of the Kaliyuga was 0^h 0^m 0^s Lankā time, or exactly at mean sunrise on Friday. The length of the mean solar year being 365^d 6^h 12^m 9^s, the beginning of the next mean solar year took place 6^h 12^m 9^s after mean sunrise, and after the expiration of a century from the epoch the mean solar year began at 20^h 15^m 0^s after mean sunrise, so that after 37 centuries had passed the mean solar year K Y 3700 began at 5^h 15^m 0^s after mean sunrise.

When this latter calculation is carried out century by century, the figures shew that centuries 6, 12, 19, 25 and 32, five in all, were defective centuries consisting each of 36,525 days, the remainder being common centuries of 36,526 days. Since 36,526 divided by 7 leaves no

¹ See Table, § 273, in Article on the *Siddhānta-Śirōmanī* (Vol XV above), which is equally applicable to the *Brahma-Siddhānta*, or refer to *Indian Chronography*, p 61. The time-difference in 3 000 years is 17^h 30^m, in 700 years 4^h 5^m, total 21^h 35^m.

remainder and 36,525 divided by 7 leaves remainder 6, the results shew that whereas century 0 began on a Friday, century 37 began on a Saturday

Table XC therefore, as regards the moment of mean *Mēsha-samkrānti* in K Y 3700 expired, A D 599-600, is proved to be correct

The beginning of the mean luni-solar year, i.e. the civil day on which the tithi Chaitra sukla 1 expired, and the value of a (mean tithi-index) at mean sunrise of that day. Amānta system

325 In § 317 of my article on the *Brahma-Siddhānta* as calculated by the true motions of the sun and moon (*above*, Vol. XVII) it will be seen that the value of *a* at mean sunrise of Sunday, 22 March, A D 599 (K Y 3700) was proved to be, in measurement by 10,000ths of a circle, 6567 108945284. The mean solar century, however, began on the previous day, Saturday, 21 March. Deducting one day's value of *a*, viz 338 631985412, from the above, we find that at mean sunrise of that Saturday the value of *a*, or the mean moon's distance from mean sun, was 6228 476959872. This was its value at the beginning of the 37th century K Y. Hence the first entry in Table XCII below which gives the values at mean sunrise on the day on which each century began. The remaining figures in that Table were obtained by the addition to this value of the increase of *a* in a century [See § 316 of the same article. The increase of *a* in a century of 36,525 days is 997 678896964, and in a common century of 36,526 days is 0 416684507.] Centuries 38 and 44 were defective centuries, the rest were common ones. For the beginnings of the odd years of centuries Table LXXXVII was used, the value of *a* there given being added to that for the century.

Thus was determined the value of *a* at mean sunrise of the day on which each mean solar year begins (*see Example 1 below*). From this is found the value of *a* at mean sunrise of the day on which the luni-solar year begins.

326 The first day of the luni-solar year is, according to the general rule, the civil day on which expired the first *tithi* of the bright half (*sukla*) of the *amānta* lunar month Chaitra, i.e. the *tithi* which begins at the moment of the first new moon after the *Mina-samkrānti*, or at the moment of the new moon when that *amānta* lunar month begins within the limits of which the *Mēsha-samkrānti* occurs. Having already established the value of *a* on the day in any year on which mean *Mēsha-samkrānti* occurred, we have to subtract from that value the increase of *a* in whole days between the two dates, the day on which the luni-solar year began being the earlier. The first 30 days' entries in Table LIVA (*above*, Vol. XV) enable this to be done. We select in that Table the *a* in col 3 the value of which is next lower than the *a* of mean *Mēsha-samkrānti*, and the Table then shews in col 1 the number of intervening days, and therefrom the European day and month, and, by subtraction, also (col 2), the week-day. Deducting the selected *a* from the *a* of mean *Mēsha-samkrānti*, we have the *a* of mean sunrise of the day, Chaitra *sukla* 1, on which the mean luni-solar year begins.

Thus,—mean *Mēsha-samkrānti* of the year K Y 3700, A D 599-600, was shewn in § 325 to have occurred on (0) Saturday, 21 March A.D. 599, at mean sunrise on which day the mean moon's *tithi*-index *a* was 6228 4770. In Table LIVA, amongst the values of *a* in the first 30 days, it is seen that the next lower value is 6095 3757. $6228\ 4770 - 6095\ 3757 = 133\ 1013^1$. Col 1 shews that the interval of days was 18, and col 2 shews the week-day 4. Mean *Mēsha-samkrānti* occurred on (0) Saturday 0 (or 7) - 4 = 3 Tuesday. It is therefore found that the day Chaitra *sukla* 1, the first civil day of the mean luni-solar year, was (3) Tuesday, 3 March A D 599, and that the value of *a* at mean sunrise on that day was 133 1013, shewing the currency of the *tithi sukla* 1. This is the entry in Table XC below.

It comes to the same thing if the *a* of Table XCIII below is added to the *a* of mean *Mēsha-samkrānti*, the Table being prepared for that purpose. The *a* of mean *Mēsha-*

All values of *a* below 333 3 prove the *tithi* to have been the first of the *amānta* lunar month, i.e. the first *tithi* of the first (*sukla*) fortnight.

samkrānti was 6228 4770. We select such a value of a in col 3 of that Table as, added to the former, makes a value between 0 and 333 $\dot{3}$, the limits of the *tithi śukla* 1, and note the interval of days, and the week-day resulting by addition of the given week-day (col 2) to the week-day of mean *Māsha-samkrānti*. Here the selected value of a is 3904 6243, since $6228\ 4770 + 3904\ 6243 = 133\ 1013$. The interval of days is 18 (col 1). The week-day corresponding to the day *Chaitra śukla* 1 is $(0+3=) 3$. The result is the same as obtained by the former process.

All the entries in the general Table XC, cols 19-23, can be proved in this way.

To find the exact phase of the mean moon, i.e. the mean *tithi*-index a , on any day of any year, or at any particular moment of any day, it is only necessary to add to the value of a given in col. 23 of Table XC for the first day of the luni-solar year the amount of increase of a during the intervening whole days, hours, etc., given in Tables LIVA and B (*above*, Vol XV)

The pūrṇimānta system of lunar months

327 The *amānta* lunar month begins at the moment of new moon, the *pūrṇimānta* month at the moment of full moon a fortnight earlier, so that the fortnight (*śukla*) between new moon and full moon bears the same month-name by both systems, while the fortnight (*krishna*) between full moon and new moon bears, in the *pūrṇimānta* system, the name of the lunar month next after that which it bears in the *amānta* system. The *śukla* fortnight of the first lunar month, for instance, belongs to *Chaitra* by both systems. The following *krishna* fortnight, however, belongs to *Chaitra* by the *amānta* system, but to *Vaiśākha* by the *pūrṇimānta* system.

This should always be borne in mind when examining dates of inscriptions, especially in earlier years. For references to already published explanations see § 322 *above*, and for a Table of corresponding fortnights and lunar months see *Indian Calendar*, Table II, Part I.

The mean moon's nakshatra

328 The note on this subject already given (§ 308) in dealing with calculation by the *First Ārya-Siddhānta mean system* (*above*, Vol. XVI) applies equally to the *Brahma-Siddhānta mean system*. It is unnecessary to repeat it.

Tables LXXX and LXXXI, fixing the sun's mean longitude for every day of the mean solar year according to the *First Ārya-Siddhānta*, may safely be used for general calculation by the *Brahma-Siddhānta*, since the difference between the two authorities in their estimates of the length of the year only amounts to 21 seconds¹. But in any exceptionally close case the exact value, at mean sunrise of any day in the year, of s , or the sun's mean longitude, can be found by multiplying the sun's mean motion in one day (Table XLIII, Vol XIV *above*), by the number of days' interval between the day on which mean *Māsha-samkrānti* occurred and the given day. The sun's mean motion in one day by the *Brahma-Siddhānta* is $59^m\ 8^s\ 172655$, or in 10,000ths of circle 27 377875426.

The *Rule for work* is as follows: (i) Find, as *above*, value of " a " at mean sunrise of given day. (ii) Note number of whole days intervening between the day of mean *Māsha-samkrānti* (Table XC *below*, col 13, figure in brackets) and the given day. Turn to Table LXXX and note the increase of sun's mean long, " s ", during that interval. Deduct from this, by Table LXXXI, the increase of long during the hours and minutes stated in col 17 of Table XC. The result is the sun's mean long, s , at mean sunrise of given day. (iii) Add s to a . This = n , the required index of the mean *nakshatra*, or the mean moon's place in the heavens at that moment. Table LXVIII *above*, or Table VIII, *Indian Calendar*, will shew in which *nakshatra* the mean moon stood at the time.

¹ In measurement by 10,000ths of circle the total difference in 365 days is 0.00665, by which amount the *Brahma-Siddhānta* is the greater.

The 19-year intercalation cycle

329 [See *Indian Calendar*, § 50, p 29, and notes in previous articles above on the working of the cycle by different systems] The sequence in the present case works perfectly regularly except in four instances In every case except these, after four successive intercalations of the same lunar month at intervals of 19 years each, the intercalated month gives way to the month next preceding it The exceptions are—a run of five mean intercalary Bhādrapadas between A D 746 and 822, five Āśvins between 952 and 1009, five Kārttikas between 1120 and 1196, and five Paushas between 1231 and 1307

Working Tables

330 For general guidance the following Tables, as given for work by the *Ārya-Siddhānta* (*above*, Vol XVI), should be used, or the similar Tables published in the *Indian Calendar*

Table LXII, or *Ind Cal*, Table II, Parts I and II, for names of months and *nakshatras*

Table LXIII, or *Ind Cal*, Table III, Part I, for collective duration of mean lunar months

Table LXVIII, or *Ind Cal*, Table VIII, for indices of *tithis*, *karanas*, *nakshatras* and *yōgas*.

Table LXIX, or *Ind Cal*, Table IX, for the serial number of days of the year and their names and numbers in European reckoning

Table LXX, or *Ind Cal*, Table X, for conversion of the indices of *tithis*, *nakshatras* and *yōgas* into time

Table LXXI, the European Calendar for 23 centuries [Table XIII, *Indian Calendar*, may also be used, but the former is easier]

Table XCI below gives the collective duration of mean solar months, measured from the moment of mean Mēsha-*samkrānti*, the astronomical beginning of the mean solar year, also the increase of a , the mean *tithi*-index, during the interval

Table XCII shews the value of a at the beginning of each mean solar century of the Kaliyuga, that is to say, its value at mean sunrise of the day on which each such solar century began

For odd years of such centuries Table LXXXVII (*above*, Vol XVII) is to be used in conjunction with Table XCII, addition of the two given values of a yielding the value of a at mean sunrise of the day on which each mean year of the Kaliyuga solar century began

For increase of a in subsequent days, hours, etc, in any K Y year, or any moment of any day Tables LIVA and B (*above*, Vol XV) are to be used

The use of Table XCIII is explained in § 326 above

Table XCIV-A to F enables the units and decimals of units of results obtained from our system of reckoning in measurement by 10,000ths of a circle, to be converted readily into time, if required The same can be converted into space-measurement in degrees, etc, by Table XLVB (*above*, Vol XIV)

EXAMPLES

[A B—Work may always be done in whole numbers, resorting to decimals only in close cases]

Example 1 To find the mean *tithi*-index, or phase of moon, at mean sunrise of the day on which mean Mēsha-*samkrānti* occurred in any year

This is a necessary operation for finding the *tithi*-index a at the moment of mean Mēsha-*samkrānti*, which is obtained by addition of the a of subsequent hours, minutes, etc, to the a

of mean sunrise [The intercalation of lunar months is decided by the value of a at the moment of mean Mēsha-samkrānti] Two cases are considered, A and B

A Take the year Kalyuga 3851 expired This was the Śaka year 672 expired It began (Table XC, cols 13-17) astronomically at 5^h 49^m 39^s after mean sunrise on Sunday, 22 March A D 750 We want to know the moon's phase, as shewn by the *tithi*-index a , at mean sunrise of that day [“ $w-d$ ”=week-day]

	w	d	a
(Table XCII) At beginning of K Y Century 38, mean sunrise	(0)		5100 3761
(Table LXXXVII) At beginning of K Y year 51, do	(1)		8036 6243

At mean sunrise on the Sunday in question . . . (1) 3137 0004

B The year K Y 3849, Śaka 670 both expired This began (Table XC) at 17^h 25^m 21^s after mean sunrise on Thursday, 21 March A D 748 The first result shews the a for mean sunrise on Friday, 22 March, and the a for one day has to be deducted This is due to the fact that Table LXXXVII has to serve for all K Y centuries, common or defective The correction required is never more than that for one day

(Table XCII) At beginning of K Y Century 38, mean sunrise	(0)	5100 3761
(Table LXXXVII) At beginning of K Y year 49, do	(6)	835 2749

At mean sunrise on Friday, 22 Mar	(6)	5935 6510
Deduct one day's value of a	-(1)	-338 6320

At mean sunrise on Thursday, 21 Mar (5) 5597 0190

Example 2 To find the civil day corresponding to Chaitra sukla 1, or the first civil day of the lun-solar year, and the value of a (place of mean moon) at mean sunrise thereon

The civil day corresponding to mean Chaitra sukla 1 is that on which the mean *tithi* “*sukla 1*” expired The *tithi*-index ($a=$) 333 3 marks the last instant of the first *sukla tithi*, so that we have to find a day on which at mean sunrise the *tithi*-index a was between 0 and 333 3 The *amānta* lunar month called “Chaitra” begins with the first new moon after the Mīna-samkrānti, and the civil day called “Chaitra sukla 1” is necessarily earlier than the day on which mean Mēsha-samkrānti occurred We have to find the number of days' interval between these two days There are two ways of ascertaining these points, one by using Table XCIII and adding its figures, one by using Table LIV A and subtracting its figures

(1) Take the year in Example 1, A, above The value of a at mean sunrise of Sunday, 22 March A D 750, was found to be 3137 0004 We turn to Table XCIII and select in col 3 such a value of a as, added to 3137 0004, will result in a total value of a between 0 and 333 3 This is found to be 6952 3121, the sum of the two (always disregarding quantities over 10,000) being 89 3125 The interval of whole days from mean Mēsha-samkrānti day was 9 (col 1) Adding the number of the week-day (col 2), viz 5, to the week-day of mean Mēsha-samkrānti, viz 1 Sunday, we have the week-day 6 Friday Mean Mēsha-samkrānti occurred on Sunday, 22 March, and, therefore, it has been determined that the day Chaitra sukla 1, the first day of the lun-solar year, was Friday, 13 March A D 750, on which day, a being 89 3125, Chaitra sukla 1 was the current *tithi* at mean sunrise

Similarly in Example 1, B At mean sunrise of (5) Thursday, 21 March A D 748, a was 5597 0190 Add (Table XCIII, col 3) 4681 8882 Result 178 9072. The interval of days was

(col 1) 16 The week-day number was 5 The week-day of 21 March was 5 (Thursday) Hence the week-day 16 days earlier was $5+5=3$ Tuesday So the beginning of the mean luni-solar year was on Tuesday, 5 March A D 748, on which date at mean sunrise the mean *tithi* " *śukla 1* " was current, the value of *a* at that moment being 178 9072.

The entries in Table XC against these years correspond to these results

(1) The same results are obtained by using Table LIV A (*above*, Vol XV) and deducting the figures for the interval of whole days between the two occurrences We note that value of *a* in the first 30 days of that Table which is next lower than the value of *a* already found for the day of mean *Mēsha-samkrānti*, and deduct the former from the latter The number of intervening days (col 1) and the number of week-days (col 2) stand against the selected entry This week-day number is deducted, of course, from the week-day of mean *Mēsha-samkrānti* Thus—

A For K Y 3851, A D 750	<i>w-d</i>	<i>a.</i>
(<i>Example 1, A</i>) For mean sunrise on Sunday, 22 March A D 750.	(1)	3137 0004
(<i>Table LIV A</i>) Next lower value of <i>a</i> , and week-day	—(2)	—3047 6879
At mean sunrise of the day Chaitra <i>śukla 1</i>	(6)	89 3125

The interval of days (col 1) was nine $6=$ Friday Hence the day corresponding to Chaitra *śukla 1* was Friday, 13 March, and at mean sunrise the mean *tithi* Chaitra *śukla 1* was current, the value of *a* being 89 3125

B For K Y 3849, A D 748		
(<i>Example 1, B</i>) At mean sunrise on Thursday, 21 March, A D 748	(5)	5597 0190
(<i>Table LIV A</i>) Next lower value of <i>a</i> , and week-day	.—(2)	—5418 1118
At mean sunrise of the day Chaitra <i>śukla 1</i>	(3)	178 9072

The interval of days was 16 $3=$ Tuesday Hence the day corresponding to Chaitra *śukla 1* was Tuesday, 5 March A D 748, and at mean sunrise the value of *a* was 178 9072

These results are the same as those found by the former process The examples enable any worker to prove the correctness of all my entries in cols 19-23 of the general Table XC below

Example 3 To find if a lunar month was or was not intercalated in the given year

It will be enough, for this problem, to refer to Example 3 (*above*, Vol XVI) of my article on the *Ārya-Siddhānta—mean system* The work here is precisely similar, but for the values of *a* for hours and minutes Table LIV B (*Vol XV above*) should be used, and Table XCI for the advance of *a* during the mean solar months, etc

Example 4 To find the mean tithi-index a, shewing phase of moon, at mean sunrise of any day in the year, or at any moment of any day.

Table XC (cols 19-23) gives the civil day corresponding to mean Chaitra *śukla 1* (the initial day of the mean luni-solar year), its serial number (in brackets) from January 1st of the equivalent A D year, and the mean *tithi*-index *a* at mean sunrise Calculate by Table III, *Indian Calendar*, or by Table LXIII A (*above*, Vol XVI) the interval of whole days from that day to the given day, and, if necessary, the excess of hours, minutes, etc, to the given moment on that day. Add the increment of *a* for the interval of whole days from Table LIV A and for fractions of days from Table LIV B to the *a*, as above, of the initial day, as also the number of days' interval and the corresponding week-day.

Eg Required the *tithi*-index at mean sunrise of the day called "Āshāḍha *sukla* 4" in Saka 547 expired, or A D 625-26, and the corresponding A D day and week-day

In this year there was no intercalated month The interval from the day "Chaitra *sukla* 1" to the day "Āshāḍha *sukla* 4" is approximately (Table LXIII-A above, p 335) 93 days. We try this—

	<i>d</i>	<i>w-d</i>	<i>a</i>
Table XC Chaitra <i>sukla</i> 1, mean sunrise	(74)	(6)	184·6506
Table LIVA for 93 days	+(93)	(2)	1492·7746
	<hr/>		
	(167)	(1)	1677 4252
This value of " <i>a</i> " (Table LXVIII) shews			
that the 6th <i>sukla tithi</i> was current at mean			
sunrise ∴ Deduct for 2 days			
	-(2)	-(2)	-677 2640
	<hr/>		

At mean sunrise on Āshāḍha *sukla* 4 (165) (6) 1000·1612

Table LXVIII or VIII *Indian Calendar*, shews the currency of the 4th *sukla tithi*, at that mean sunrise, since its first point is when *a*=1,000 Day 165 was (Table IX, *Indian Calendar*, or LXIX, above) 14th June A D 625 6=Friday We learn, however, that the 4th mean *tithi* had begun only about ¼ of a minute before the moment of mean sunrise, so that if the basis of calculation had been the moment of true sunrise (a little earlier than mean sunrise) the corresponding day might have been Thursday, 13 June

Example 5 To find the *nakshatra*, or place in the heavens of the mean moon, at mean sunrise of any day or of any later moment in the day

Take the case in the last example It is required to find the value of "*n*", the *nakshatra*-index, at mean sunrise of the day called, in the mean system, "Āshāḍha *sukla* 4" in the given year, A D 625

The mean *tithi*-index, "*a*", at that mean sunrise was found to be '1000 1612 Since *s+a=n* (§ 327 above), we have to ascertain the value of "*s*", the sun's mean longitude at that moment

The day, 14 June, was the 165th day after Jan. 1 in that year. Mean Mēsha-*saṁkrānti* had taken place on (Table XC, cols. 13-17) the 79th day at 22^h 30^m 54^s after mean sunrise. The day 14 June was (165-79) 86 days later. We proceed as follows —

			<i>s</i>
Table LXXX, p 444 Interval of 86 days			2354 4957
Less (Table LXXXI) for 22 ^h			25·0964
30 ^m			0 5704
54 ^s			0 0171
		<hr/>	
		25 6839	-25 6839
		<hr/>	

At mean sunrise on the day Āshāḍha *sukla* 4 sun's mean long., "*s*" = 2328 8118

Add "*a*" as already found for that moment 1000 1612

At mean sunrise on that day "*n*" = 3328 9730

This last is the required *nakshatra*-index Reference to Table VIII, *Indian Calendar*, or Table LXVIII (above Vol. XVI) shews that the moon was then in the *nakshatra* Aślēṣhā by the

equal-space system of division of the ecliptic, which ended when " n " = 3333 3, but that by the system of Garga or the *Brahma-Siddhānta* (our present authority) she was in Maghā, of which the ending points are respectively 3518 5 and 3477 1. Converted into degrees (Table VIII-B, *Indian Calendar*, or Table XLV-B, *above*) the moon at that mean sunrise stood at about 119°51'

For the value of " n " at any later hour of the given day the index-value for the time since mean sunrise must be added (Table LXXXI) to the " n " of mean sunrise. At about 3 hours 50 min. after mean sunrise, for instance, the mean moon entered Maghā by the equal-space system, for the beginning point of that *nakshatra* is 3333 3. The increase of " n " in 3 hours 50 min. is 4 3728, and $3328\ 9730 + 4\ 3728 = 3333\ 3458$

Example 6 To find the *yōga*, " y ", at the same moment as in *Example 5*

The formula for finding the *yōga*-index is either $s+n="y"$, the *yōga*-index, or, in cases where it is not necessary to calculate n (the *nakshatra*), $2"s"+a="y"$. Here, at mean sunrise on 14 June A D 625, we have found " s " = 2328 8118 and " n " = 3328 9730. The *yōga*-index, " y ", therefore, = 5657 7848, and reference to Table VIII, *Indian Calendar*, cols 12-13, or Table LXVIII (*above*, Vol XVI, cols 6, 8, 9, 10), shews that the mean moon was at that moment in the *yōga* Siddhi. Again $2s=4657\ 6236$, and thus + " a ," which was found to be 1000 1612 = 5657 7848, the same as before.

TABLE XC

REMARKS

K Y 3736 expired, A D 635-36 A very close case in the matter of intercalation of lunar month Mean new moon occurred about 2^m after the moment of the *Karka-samkrānti* (mean sun at long 90°), and, therefore, at that moment the mean moon was waning, while she was waxing at the next, *Simha-samkrānti* (mean sun at 120°) Accordingly the intercalated month was Śrāvana

K Y. 3923 expired, A D 822-23 According to the 19-year sequence of intercalations the same month is generally intercalated four times running, i e at intervals of 19 years each Here, however, is an instance of a fifth intercalation of the same month [See § 329 of text above]

K Y 4110 expired, A D 1009-10 A similar case Āśvina intercalated for the fifth time

K Y 4297 expired, A D 1196-97 Another Kārttika intercalated for the fifth time

K Y 4408 expired, A D 1307-08 Another Pausha intercalated for the fifth time. This was a very close case The moment of mean new moon was about 1 minute after the mean sun reached the *Dhanus-samkrānti* (mean sun at long 240°), but she was actually waning at the moment of the *samkrānti* and was waxing at the next, *Makara, samkrānti* Consequently the lunar month Pausha was intercalated

TABLE

MEAN SYSTEM TABLE,

Numbers of columns conform

(Cols 1 to 4)—The years herein stated are the *current* years corresponding
 (Cols 6 and 7)—*Samvatsara*-names of mean solar years in italics show cases

CONCURRENT YEAR								Mean intercalated (<i>adhika</i>) lunar month
Kali	Saka.	Chaitradī Vikram	Mīśāhī solar year in Bengal	Kollam	A.D.	JUVIAN SAMVATARA		
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
3701	522	657	6		599-600	50 Anala		...
3702	523	658	7		*600-01	51 Pingala . . .		2 Vasikha .
3703	524	659	8		601-02	52 Kālayukta		..
3704	525	660	9		602-03	53 Siddhārthm		10 Pausha .
3705	526	661	10		603-04	54 Randra . . .		..
3706	527	662	11		*604-05	55 Durmati . . .		.
3707	528	663	12		605-06	56 Dundubhi . . .		7 Āśvina .
3708	529	664	13		606-07	57 Rudhirōdgārin		..
3709	530	665	14		607-08	58 Raktāksha . . .		.
3710	531	666	15		*608-09	59 Krōdhana . . .		3 Jyēshtha .
3711	532	667	16		609-10	60 Kehaya . . .		...
3712	533	668	17		610-11	1 Prabhava . . .		12 Phālguna .
3713	534	669	18		611-12	2 Vibhava		...
3714	535	670	19		*612-13	3 Śūkla . . .		...
3715	536	671	20		613-14	4 Pramōda . . .		8 Kārttika
3716	537	672	21		614-15	5 Prajāpati . . .		...
3717	538	673	22		615-16	6 Angras		...
3718	539	674	23		*616-17	7 Śrīmukha . . .		5 Śrāvana .
3719	540	675	24		617-18	8 Bhāva . . .		...
3720	541	676	25		618-19	9 Yuvan . . .		...

XC.

BRAHMA-SIDDHANTA

to Table I, "Indian Calendar."

to the A D. years in col 5, as in Table I, "Indian Calendar "

where differences exist from *Sūrya-Siddhānta* nomenclature in true solar years

COMMENCEMENT OF THE						
MEAN SOLAR YEAR.			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 PŪRṢ)			Kah
Day and month, A D	Week-day	Time of mean M̄śha-samkr̄ānti	Day and month, A D	Week-day	α (here = t , the index of the <i>tithi</i>)	
13	14	17	19	20	23	1
		H M S				
21 Mar. (80)	0 Sat	5 15 0	3 Mar (82)	3 Tues	133 1013	3701
20 Mar (80)	1 Sun	11 27 9	20 Feb (81)	0 Sat	8 8241	3702
20 Mar (79)	2 Mon	17 39 18	10 Mar (89)	6 Fri	43 5085	3703
20 Mar (79)	3 Tues	23 51 27	28 Feb (89)	4 Wed	257 8614	3704
21 Mar (80)	5 Thur	6 3 36	19 Mar. (78)	3 Tues	292 5437	3705
20 Mar (80)	6 Fri	12 15 45	7 Mar (87)	0 Sat.	168 2666	3706
20 Mar (79)	0 Sat.	18 27 54	24 Feb (85)	4 Wed	43 3394	3707
21 Mar (80)	2 Mon	0 40 3	15 Mar (74)	3 Tues	78 6718	3708
21 Mar (80)	3 Tues	6 52 12	5 Mar (84)	1 Sun	293 0266	3709
20 Mar (80)	4 Wed	13 4 21	22 Feb (83)	5 Thur	168 7494	3710
20 Mar (79)	5 Thur	19 16 30	12 Mar (71)	4 Wed	203 4218	3711
21 Mar (80)	0 Sat.	1 23 39	1 Mar (80)	1 Sun	70 1547	3712
21 Mar (80)	1 Sun	7 40 48	20 Mar. (79)	0 Sat.	113 8371	3713
20 Mar (80)	2 Mon.	13 52 57	9 Mar (89)	5 Thur	323 1918	3714
20 Mar (79)	3 Tues	20 5 6	26 Feb (87)	2 Mon	203 9147	3715
21 Mar. (80)	5 Thur	2 17 15	17 Mar (76)	1 Sun	238 5972	3716
21 Mar (80)	6 Fri	8 29 24	6 Mar (85)	5 Thur	114 3199	3717
20 Mar (80)	0 Sat	14 41 33	24 Feb (85)	3 Tues	328 6747	3718
20 Mar (79)	1 Sun	20 53 42	13 Mar (72)	1 Sun	24 7252	3719
21 Mar (80)	3 Tues	3 5 51	3 Mar (82)	6 Fri	239 0301	3720

TABLE

CONCURRENT YEAR						JOVIAN SAMVATSARA		Mean intercalated (adhika) lunar month
1	2	Chaitra Vkr	Vedull-sarvkr	Kellam	A D	Southern system	Northern system	
						6	7	8a
1771	112	177	-		619 20	10 Dhätvi		1 Chaitra
1772	113	178	17		*620 21	11 Isvara	.	.
1773	114	179	35		621 22	12 Bahudhanya	.	10 Pausa
1774	115	180	53		622 23	13 Pramathin	.	.
1775	116	181	20		623 24	14 Vikrama	.	.
1776	117	182	31		*624 25	15 Vpsha	.	6 Bhādrapada
1777	118	183	21		625 26	16 Chitrabhānu	.	...
1778	119	184	30		626 27	17 Sabhānu	.	..
1779	120	185	31		627 28	18 Tārana	.	3 Jyēsthā
1780	121	186	11		*628 29	19 Pārthiva	.	.
1781	122	187	2		629 30	20 Vjaya	.	11 Māgha
1782	123	188	17		630 31	21 Sarvajit	.	...
1783	124	189	2		631 32	22 Sarvabhānu	.	..
1784	125	190	11		*632 33	23 Virōdhan	.	8 Kārttika
1785	126	191	21		633 34	24 Vikrāta	.	...
1786	127	192	31		634 35	25 Khara	.	.
1787	128	193	42		635 36	26 Nandana	.	5 Śrāvāṇa §
1788	129	194	4		*636 37	27 Vajra	.	...
1789	130	195	14		637 38	28 Jaya	.	.
1790	131	196	25		738 39	29 Vanmatha	.	1 Chaitra
1791	132	197	35		739 40	30 Durakha	.	...
1792	133	198	45		*740 41	31 Hōmāra	.	10 Pausa
1793	134	199	55		741 42	32 Vāra	.	..
1794	135	200	5		742 43	33 Vikāra	.	..
1795	136	201	15		743 44	34 Bhādrapada	.	6 Bhādrapada

...

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COMMENCEMENT OF THE

MEAN SOLAR YEAR			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			Kali
Day and month, A D	Week-day	Time of mean Mīśhu-samkrānti	Day and month, A D	Week day	α (here= t , the index of the $tīthī$)	
13	14	17	19	20	23	1
		H M S				
21 Mar (80)	4 Wed	9 18 0	20 Feb (51)	3 Tues	114 8028	3721
20 Mar (80)	5 Thur.	15 30 9	10 Mar (70)	2 Mon	149 4852	3722
20 Mar (79)	6 Fri.	21 42 18	27 Feb (58)	6 Fri	25 2081	3723
21 Mar (80)	1 Sun	3 54 27	18 Mar (77)	5 Thur	59 8904	3724
21 Mar (80)	2 Mon	10 6 36	8 Mar (67)	3 Tues	274 2453	3725
20 Mar (80)	3 Tues	16 18 45	25 Feb (56)	0 Sat.	149 9682	3726
20 Mar (79)	4 Wed	22 30 54	15 Mar (74)	6 Fri	184 6506	3727
21 Mar (80)	6 Fri	4 43 3	4 Mar (63)	3 Tues	60 3734	3728
21 Mar (80)	0 Sat	10 55 12	22 Feb (53)	1 Sun	274 7282	3729
20 Mar (80)	1 Sun	17 7 21	12 Mar (72)	0 Sat.	309 4106	3780
20 Mar (79)	2 Mon	23 19 30	1 Mar (60)	4 Wed.	185 1334	3731
21 Mar (80)	4 Wed	5 31 39	20 Mar (79)	3 Tues	219 8158	3732
21 Mar. (80)	5 Thur	11 43 48	9 Mar (68)	0 Sat	95 5387	3733
20 Mar (80)	6 Fri.	17 55 57	27 Feb (58)	5 Thur	309 8935	3734
21 Mar (80)	1 Sun.	0 8 6	16 Mar (75)	3 Tues	5 9489	3735
21 Mar. (80)	2 Mon	6 20 15	6 Mar (65)	1 Sun	220 2987	3736
21 Mar. (80)	3 Tues	12 32 24	23 Feb (54)	5 Thur	96 0216	3737
20 Mar. (80)	4 Wed	18 44 33	13 Mar (73)	4 Wed	130 7040	3738
21 Mar (80)	6 Fri	0 56 42	2 Mar (61)	1 Sun	6 4268	3739
21 Mar (80)	0 Sat	7 8 51	20 Feb (51)	6 Fri	220 7816	3740
21 Mar (80)	1 Sun	13 21 0	11 Mar (70)	5 Thur	255 4640	3741
20 Mar (80)	2 Mon	19 33 9	23 Feb. (59)	2 Mon	131 1868	3742
21 Mar. (80)	4 Wed	1 45 18	18 Mar (77)	1 Sun	165 8692	3743
21 Mar (80)	5 Thur	7 57 27	7 Mar (66)	5 Thur	41 5921	3744
21 Mar (80)	6 Fri	14 9 36	25 Feb (50)	3 Tues	255 9470	3745

TABLE

CONCURRENT YEAR								
Kalī	Śaka	Chaitradī Vikrama.	Mēshādi solar year in Bengal	Kollam	A D	JOVIAN SAMVATSARA.		Mean intercalated (<i>adhika</i>) lunar month
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
3746	567	702	51		*644 45	35 Plava		.
3747	568	703	52		645 46	36 Śubhakṛit	.	...
3748	569	704	53		646-47	37 Śobhana		3 Jyēshtha .
3749	570	705	54		647-48	38 Krōdhm		..
3750	571	706	55		*648 49	39 Visāvasu †		11 Māgha .
3751	572	707	56		649 50	41 <i>Plavānga</i>		..
3752	573	708	57		650 51	42 <i>Kīlaka</i>		..
3753	574	709	58		651-52	43 <i>Saumya</i>	.	8 Kārttika .
3754	575	710	59		*652-53	44 <i>Sādhārana</i>		...
3755	576	711	60		653-54	45 <i>Vīrōdhakṛit</i>		...
3756	577	712	61		654 55	46 Paridhāvin		4 Āshādha .
3757	578	713	62		655 56	47 Pramādm		...
3758	579	714	63		*656 57	48 Ānanda	.	.
3759	580	715	64		657-58	49 Rākshasa		1 Chaitra .
3760	581	716	65		658 59	50 Anala	.	...
3761	582	717	66		659 60	51 Pingala		9 Mārgasīra .
3762	583	718	67		*660 61	52 Kālayukta	.	.
3763	584	719	68		661-62	53 Siddhārthm		.
3764	585	720	69		662 63	54 Raudra		6 Bhādrapada .
3765	586	721	70		663 64	55 Durmati		...
3766	587	722	71		*664 65	56 Dandubhī	.	...
3767	588	723	72		665-66	57 Rudhirōdgāra		2 Vāśākha .
3768	589	724	73		666 67	58 Raktāksha	.	..
3769	590	725	74		667-68	59 Krōdhana	.	11 Māgha .
3770	591	726	75		*668-69	60 Kshaya

† 40 Parābhava was suppressed, both in mean and true reckoning

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COMMENCEMENT OF THE

MEAN SOLAR YEAR			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			Kali 1
Day and month, A.D.	Week-day	Time of mean Mēsha-samkrānti	Day and month, A.D.	Week-day	a (here = t, the index of the tithi)	
13	14	17	19	20	23	
		H M S				
20 Mar (80)	0 Sat.	20 21 45	15 Mar (75)	2 Mon	290 6293	3746
21 Mar (80)	2 Mon	2 33 54	4 Mar (68)	6 Fri	166 9522	3747
21 Mar (80)	3 Tues	8 46 3	21 Feb (52)	3 Tues	42 0750	3748
21 Mar (80)	4 Wed	14 58 12	12 Mar (71)	2 Mon	76 7573	3749
20 Mar (80)	5 Thur	21 10 21	1 Mar (61)	0 Sat	291 1122	3750
21 Mar (80)	0 Sat.	3 22 30	20 Mar (79)	6 Fri	325 7946	3751
21 Mar (80)	1 Sun	9 34 39	9 Mar (68)	3 Tues	201 5175	3752
21 Mar (80)	2 Mon	15 46 48	26 Feb (57)	0 Sat	77 2402	3753
20 Mar (80)	3 Tues	21 58 57	16 Mar (76)	0 Sat.	111 9227	3754
21 Mar (80)	5 Thur	4 11 6	6 Mar (65)	4 Wed	326 2775	3755
21 Mar (80)	6 Fri	10 23 15	23 Feb (54)	1 Sun	202 0003	3756
21 Mar (80)	0 Sat.	16 35 24	14 Mar (73)	0 Sat.	236 6827	3757
20 Mar (80)	1 Sun	22 47 33	2 Mar (62)	4 Wed	112 4056	3758
21 Mar (80)	3 Tues	4 59 42	20 Feb (51)	2 Mon	326 7604	3759
21 Mar (80)	4 Wed	11 11 51	10 Mar (69)	0 Sat.	22 8108	3760
21 Mar (80)	5 Thur	17 24 0	23 Feb (59)	5 Thur	237 1656	3761
20 Mar (80)	6 Fri.	23 36 9	18 Mar (78)	4 Wed	271 8440	3762
21 Mar (80)	1 Sun	5 48 18	7 Mar (66)	1 Sun	147 5708	3763
21 Mar (80)	2 Mon	12 0 27	24 Feb (55)	5 Thur	23 2037	3764
21 Mar (80)	3 Tues	18 12 36	15 Mar (74)	4 Wed	57 9761	3765
21 Mar (81)	5 Thur	0 24 45	4 Mar (64)	2 Mon	272 9310	3766
21 Mar (80)	6 Fri	6 36 54	21 Feb (52)	6 Fri	148 0537	3767
21 Mar (80)	0 Sat.	12 49 3	12 Mar (71)	5 Thur	182 7861	3768
21 Mar (80)	1 Sun	19 1 12	1 Mar (60)	2 Mon	58 4590	3769
21 Mar (81)	3 Tues	1 18 21	19 Mar (79)	1 Sun	93 1413	3770

TABLE

CONCURRENT YEAR								
Kali	Śaka	Chakrādi Vikrama	Mśādi solar year in Bengal	Kollam	A.D.	JOVIAN SAMVATSARA		Mean intercalated (<i>adhika</i>) lunar month
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
3771	592	797	76		669-70	1 Prabhava . . .		
3772	593	798	77		670-71	2 Vibhava . . .	7 Āśvina . . .	
3773	594	729	78		671-72	3 Sukla . . .		
3774	595	730	79		*672-73	4 Pramōda . . .	..
3775	596	731	80		673-74	5 Prajāpati . . .	4 Āshādha . . .	
3776	597	732	81		674-75	6 Angiras . . .	...
3777	598	733	82		675-76	7 Śrīmukha . . .		
3778	599	734	83		*676-77	8 Bhāva . . .	1 Chaitra . . .	
3779	600	735	84		677-78	9 Yuvan . . .	...
3780	601	736	85		678-79	10 Dhātṛi . . .	9 Mārgaśira . . .	
3781	602	737	86		679-80	11 Īśvara . . .	...
3782	603	738	87		*680-81	12 Bahudhānya . . .	.
3783	604	739	88		681-82	13 Pramāthm . . .	6 Bhādrapada . . .	
3784	605	740	89		682-83	14 Vikrama . . .	...
3785	606	741	90		683-84	15 Vṛisha . . .	...
3786	607	742	91		*684-85	16 Chitrabhānu . . .	2 Vaiśākha . . .	
3787	608	743	92		685-86	17 Subhānu . . .	.
3788	609	744	93		686-87	18 Tārana . . .	11 Māgha . . .	
3789	610	745	94		687-88	19 Pārthiva . . .	...
3790	611	746	95		*688-89	20 Vyaya . . .	.
3791	612	747	96		689-90	21 Sarvajit . . .	7 Āśvina . . .	
3792	613	748	97		690-91	22 Sarvadharm . . .	...
3793	614	749	98		691-92	23 Virōdhm	
3794	615	750	99		*692-93	24 Vikṛita . . .	4 Āshādha . . .	
3795	616	751	100		693-94	25 Khara	

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COMMENCEMENT OF THE						
MEAN SOLAR YEAR			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			Kal.
Day and month, A.D.	Week-day.	Time of mean Māsha-samkrānti	Day and month, A.D.	Week-day	α (here= t , the index of the t & h)	
13	14	17	19	20	23	J
		H M S				
21 Mar (80)	4 Wed	7 25 30	9 Mar (68)	6 Fri	307 4962	3771
21 Mar (80)	5 Thur	13 37 39	26 Feb (57)	3 Tues	183 2190	3772
21 Mar (80)	6 Fri	19 49 48	17 Mar (76)	2 Mon	217 9015	3773
21 Mar (81)	1 Sun	2 1 57	5 Mar (65)	6 Fri	93 6242	3774
21 Mar (80)	2 Mon	8 14 6	23 Feb (54)	4 Wed	307 9791	3775
21 Mar (80)	3 Tues	14 26 15	13 Mar (72)	2 Mon	4 0295	3776
21 Mar (80)	4 Wed.	20 38 24	3 Mar (62)	0 Sat	218 3843	3777
21 Mar (81)	6 Fri	2 50 33	20 Feb (51)	4 Wed.	94 1071	3778
21 Mar (80)	0 Sat.	9 2 42	10 Mar (69)	3 Tues	123 7896	3779
21 Mar (80)	1 Sun	15 14 51	27 Feb (58)	0 Sat.	4 5124	3780
21 Mar. (80)	2 Mon	21 27 0	18 Mar (77)	6 Fri	39 1947	3781
21 Mar (81)	4 Wed	3 39 9	7 Mar (67)	4 Wed	253 5496	3782
21 Mar (80)	5 Thur	9 51 18	24 Feb (55)	1 Sun	129 2725	3783
21 Mar. (80)	6 Fri	16 3 27	15 Mar (74)	0 Sat	163 9549	3784
21 Mar (80)	0 Sat.	22 15 36	4 Mar. (68)	4 Wed	39 6776	3785
21 Mar (81)	2 Mon	4 27 45	22 Feb. (53)	2 Mon	254 0325	3786
21 Mar (80)	3 Tues	10 39 54	12 Mar (71)	1 Sun	288 7149	3787
21 Mar (80)	4 Wed	16 52 3	1 Mar (60)	5 Thur	164 4377	3788
21 Mar (80)	5 Thur	23 4 12	20 Mar (79)	4 Wed	199 1200	3789
21 Mar (81)	0 Sat.	5 16 21	8 Mar (66)	1 Sun	74-8430	3790
21 Mar (80)	1 Sun	11 28 30	26 Feb (57)	6 Fri	289 1978	3791
21 Mar. (80)	2 Mon	17 40 39	17 Mar (76)	5 Thur	328 8902	3792
21 Mar. (80)	3 Tues	23 52 48	6 Mar (65)	2 Mon	199 6080	3793
21 Mar (81)	5 Thur	6 4 57	23 Feb. (54)	6 Fri	76 3259	3794
21 Mar. (80)	6 Fri.	12 17 6	13 Mar. (72)	5 Thur.	110 0082	3795

TABLE

CONCURRENT YEAR								Mean intercalated (adhika) lunar month
Ksh.	Saka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal	Kollam	A D.	JOVIAN SAMVATSARA.		
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
3796	617	752	101		694-95	26 Nandana	.	12 Phālguna
3797	618	753	102		695-96	27 Vijaya	. .	
3798	619	754	103		*695-97	28 Jaya	.	
3799	620	755	104		697-98	29 Manmatha	.	9 Mārgasīra
3800	621	756	105		698-99	30 Durmukha	.	
3801	622	757	106		699 700	31 Hēmalamba	. .	
3802	623	758	107		*700 01	32 Vilamba	. .	5 Śrāvana
3803	624	759	108		701 02	33 Vikārin	. .	..
3804	625	760	109		702-03	34 Śārvarin	.	.
3805	626	761	110		703 04	35 Plava	.	2 Vaiśākha
3806	627	762	111		*704-05	36 Śubhakṛt	.	
3807	628	763	112		705 06	37 Śobhana	.	10 Pausa
3808	629	764	113		706-07	38 Krōdhin	. .	
3809	630	765	114		707-08	39 Viśvāvan	.	..
3810	631	766	115		*708-09	40 Parābhava	.	7 Āśvina
3811	632	767	116		709-10	41 Plavanga	.	..
3812	633	768	117		710-11	42 Kilaka	.	..
3813	634	769	118		711-12	43 Saumya	. .	4 Ashāḍha
3814	635	770	119		*712-13	44 Sādhārana	. .	..
3815	636	771	120		713-14	45 Virōdhakṛt	.	12 Phālguna
3816	637	772	121		714-15	46 Paridhāvin	. .	..
3817	638	773	122		715-16	47 Pramādin	. .	..
3818	639	774	123		*716-17	48 Ānanda	. .	9 Mārgasīra
3819	640	775	124		717-18	49 Rākshasa
3820	641	776	125		718-19	50 Ānala

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COMMENCEMENT OF THE						
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			Kal.
Day and month, A.D.	Week-day.	Time of mean Mēsha-samkrānti	Day and month, A.D.	Week-day.	a (here= t , the index of the t th)	
13	14	17	19	20	23	1
		H M. S.				
21 Mar. (80) . . .	0 Sat. . .	18 20 15	3 Mar. (62) . . .	3 Tues . . .	324 3031	3796
22 Mar (81) . . .	2 Mon. . .	0 41 24	21 Mar. (80) . . .	1 Sun . . .	20 4185	3797
21 Mar (81) . . .	3 Tues . . .	6 53 33	10 Mar. (70) . . .	6 Fri . . .	234-7683	3798
21 Mar. (80) . . .	4 Wed. . .	13 5 42	27 Feb. (58) . . .	3 Tues . . .	110 4911	3799
21 Mar (80) . . .	5 Thur . . .	19 17 51	18 Mar (77) . . .	2 Mon . . .	145 1735	3800
22 Mar (81) . . .	0 Sat. . .	1 30 0	7 Mar (60) . . .	6 Fri. . .	20 8963	3801
21 Mar (81) . . .	1 Sun . . .	7 42 9	25 Feb (56) . . .	4 Wed. . .	235 2512	3802
21 Mar (80) . . .	2 Mon . . .	13 54 13	15 Mar. (74) . . .	3 Tues . . .	239 9336	3803
21 Mar (80) . . .	3 Tues . . .	20 6 27	4 Mar. (63) . . .	0 Sat . . .	145 6564	3804
22 Mar. (81) . . .	5 Thur . . .	2 18 36	21 Feb (52) . . .	4 Wed. . .	21 3792	3805
21 Mar. (81) . . .	6 Fri. . .	8 30 45	11 Mar (71) . . .	3 Tues . . .	56 0616	3806
21 Mar (80) . . .	0 Sat . . .	14 42 54	1 Mar (60) . . .	1 Sun. . .	270 4164	3807
21 Mar. (80) . . .	1 Sun . . .	20 55 3	20 Mar (79) . . .	0 Sat. . .	305 0988	3808
22 Mar (81) . . .	3 Tues. . .	3 7 12	9 Mar (68) . . .	4 Wed . . .	180 8217	3809
21 Mar. (81) . . .	4 Wed . . .	9 19 21	28 Feb (57) . . .	1 Sun . . .	56 5444	3810
21 Mar. (80) . . .	5 Thur. . .	15 31 30	18 Mar (75) . . .	0 Sat. . .	91 2269	3811
21 Mar. (80) . . .	6 Fri. . .	21 43 39	6 Mar (65) . . .	5 Thur. . .	305 5817	3812
22 Mar (81) . . .	1 Sun . . .	3 55 48	23 Feb (54) . . .	2 Mon . . .	181 3046	3813
21 Mar (81) . . .	2 Mon . . .	10 7 57	13 Mar (73) . . .	1 Sun . . .	215-9869	3814
21 Mar (80) . . .	3 Tues . . .	16 20 6	2 Mar (61) . . .	5 Thur. . .	91 7098	3815
21 Mar. (80) . . .	4 Wed . . .	22 32 15	21 Mar (80) . . .	4 Wed . . .	126 3922	3816
22 Mar (81) . . .	6 Fri. . .	4 44 24	10 Mar (69) . . .	1 Sun . . .	2 1150	3817
21 Mar. (81) . . .	0 Sat. . .	10 56 33	23 Feb (59) . . .	6 Fri . . .	216 4698	3818
21 Mar. (80) . . .	1 Sun . . .	17 8 42	13 Mar (77) . . .	5 Thur . . .	251 1632	3819
21 Mar. (80) . . .	2 Mon . . .	23 20 51	Mar (66) . . .	2 Mon . . .	126-8751	3820

TABLE

CONCURRENT YEAR.								
Kalī	Śaka	Chaitraśū Vikrama	Māhātī solar year in Bengal	Kollam	A D.	JUVIAN SAMVATSARA.		Mean intercalated (adhika) lunar month
						Southern system.	Northern system	
1	2	3	3a	4	5	6	7	8a
3821	642	777	126		719-20	51 Pingala	.	5 Śrāvana
3822	643	778	127		*720-21	52 Kālayukta	.	...
3823	644	779	128		721-22	53 Siddhārthun	.	...
3824	645	780	129		722-23	54 Raudra	.	2 Vaisākha
3825	646	781	130		723-24	55 Durmati	.	..
3826	647	782	131		*724-25	56 Dandabhi	.	10 Pausa
3827	648	783	132		725-26	57 Rudhrōdgārīn	.	...
3828	649	784	133		726-27	58 Raktāksha	.	...
3829	650	785	134		727-28	59 Krōdhana	.	7 Āśvina
3830	651	786	135		*728-29	60 Kshaya	.	...
3831	652	787	136		729-30	1 Prabhava	.	...
3832	653	788	137		730-31	2 Vibhava	.	3 Jyēshtha
3833	654	789	138		731-32	3 Śukla	.	...
3834	655	790	139		*732-33	4 Pramōda	.	12 Phālguna
3835	656	791	140		733-34	5 Prayāpatī†	.	...
3836	657	792	141		734-35	7 Śrīmukha	.	...
3837	658	793	142		735-36	8 Bhāva	.	8 Kārttika
3838	659	794	143		*736-37	9 Fuvan	.	...
3839	660	795	144		737-38	10 Dhāty	.	...
3840	661	796	145		738-39	11 Īvara	.	5 Śrāvana
3841	662	797	146		739-40	12 Bahudhānya	.	...
3842	663	798	147		*740-41	13 Pramāthun	.	...
3843	664	799	148		741-42	14 Vikrama	.	1 Chaitra
3844	665	800	149		742-43	15 Vṛisha	.	...
3845	666	801	150		743-44	16 Chitrabhānu	.	10 Pausa

† No 6 Aṅgiras was suppressed according to the mean system By the *Brahma-Siddhānta* 'true' system K Y. 3836, A.D. 734-735, was called Aṅgiras, 7 Śrīmukha being suppressed. K Y 3837, A.D. 735-36, was 8 Bhāva by both systems.

XC—contd

COMMENCEMENT OF THE						
MEAN SOLAR YEAR			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS)			Kali
Day and month, A.D.	Week-day	Time of mean Mēsha-samkrānti.	Day and month, A D	Week-day	a (here = t, the index of the tithi)	
13	14	17	19	20	23	1
		H M S				
22 Mar (81)	4 Wed.	5 33 0	24 Feb (55)	6 Fri	25979	3821
21 Mar (81)	5 Thur	11 45 9	14 Mar (74)	5 Thur	37 2803	3822
21 Mar (80)	6 Fri	17 57 18	4 Mar (63)	3 Tues	251 6352	3823
22 Mar (81)	1 Sun	0 9 27	21 Feb (52)	0 Sat	127 3579	3824
22 Mar (81)	2 Mon	6 21 36	12 Mar (71)	6 Fri	162 0403	3825
21 Mar (81)	3 Tues	12 33 45	29 Feb, (60)	3 Tues	37 7632	3826
21 Mar (80)	4 Wed	18 45 54	19 Mar (78)	2 Mon	72 4457	3827
22 Mar (81)	6 Fri	0 58 3	9 Mar (68)	0 Sat.	236 8004	3828
22 Mar (81)	0 Sat.	7 10 12	26 Feb (57)	4 Wed	162 5233	3829
21 Mar (81)	1 Sun	13 22 21	16 Mar (76)	3 Tues	197 2057	3830
21 Mar (80)	2 Mon	19 34 30	5 Mar (64)	0 Sat.	72 9234	3831
22 Mar (81)	4 Wed	1 46 39	23 Feb (54)	5 Thur	287 2833	3832
22 Mar (81)	5 Thur	7 58 48	14 Mar (73)	4 Wed	321 9657	3833
21 Mar (81)	6 Fri	14 10 57	2 Mar (62)	1 Sun	197 6886	3834
21 Mar (80)	0 Sat.	20 23 6	21 Mar (80)	0 Sat	232 3709	3835
22 Mar (81)	2 Mon.	2 35 15	10 Mar. (69)	4 Wed	108 0938	3836
22 Mar (81)	3 Tues.	8 47 24	23 Feb (59)	2 Mon	322 4486	3837
21 Mar (81)	4 Wed.	14 59 33	17 Mar (77)	0 Sat	18 4990	3838
21 Mar (80)	5 Thur	21 11 42	7 Mar (66)	5 Thur	232 8538	3839
22 Mar (81)	0 Sat	3 23 51	24 Feb (55)	2 Mon	108 5767	3840
22 Mar (81)	1 Sun	9 36 0	15 Mar. (74)	1 Sun	143 2591	3841
21 Mar (81)	2 Mon	15 43 9	3 Mar. (63)	5 Thur	18 9819	3842
21 Mar (80)	3 Tues	22 0 18	21 Feb. (52)	3 Tues.	233 3367	3843
22 Mar (81)	5 Thur	4 12 27	12 Mar (71)	2 Mon.	268-0191	3844
22 Mar (81)	6 Fri	10 24 36	1 Mar (60)	6 Fri	143 7420	3845

TABLE

CONCURRENT YEAR.								
Kalī	Śaka	Chakrādi Vikrama	Mēshādi solar year in Bengal	Kollam	A D.	JUVIAN SAMVATARA		Mean intercalated (adhikā) Inn r month
						Southern system	Northern system.	
1	2	3	3a	4	5	6	7	8a
3846	667	802	151		*744-45	17 Subhānu . . .		
3847	668	803	152		745-46	18 Tārana . . .		..
3848	669	804	153		746-47	19 Pārthiva . . .		6 Bhādrapada .
3849	670	805	154		747-48	20 Vyāya . . .		
3850	671	806	155		*748-49	21 Sarvajit . . .		
3851	672	807	156		749-50	22 Sarvadhārin . . .		8 Jyēshtha .
3852	673	808	157		750-51	23 Virōdhin . . .		
3853	674	809	158		751-52	24 Vikṛta . . .		12 Phālguna .
3854	675	810	159		*752-53	25 Khara . . .		..
3855	676	811	160		753-54	26 Nandana . . .		
3856	677	812	161		754-55	27 Vijaya . . .		8 Kārtika .
3857	678	813	162		755-56	28 Jaya . . .		
3858	679	814	163		*756-57	29 Manmatha . . .		..
3859	680	815	164		757-58	30 Durmukha . . .		5 Srāvana .
3860	681	816	165		758-59	31 Hēmalamba . . .		..
3861	682	817	166		759-60	32 Vilamba . . .		..
3862	683	818	167		*760-61	33 Vikārin . . .		1 Chaitra .
3863	684	819	168		761-62	34 Śārvarin . . .		..
3864	685	820	169		762-63	35 Plava . . .		10 Pausa .
3865	686	821	170		763-64	36 Subhakti . . .		..
3866	687	822	171		*764-65	37 Śobhana . . .		..
3867	688	823	172		765-66	38 Krōdhin . . .		6 Bhādrapada .
3868	689	824	173		766-67	39 Visvāvasu . . .		..
3869	690	825	174		767-68	40 Parābhava
3870	691	826	175		*768-69	41 Plavanga . . .		8 Jyēshtha .

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COMMENCEMENT OF THE

MEAN SOLAR YEAR			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 RND8)			Kal.
Day and month, A D	Week-day	Time of mean Māsha-samkrānti	Day and month, A D.	Week-day	a (here = t, the index of the tithi)	
13	14	17	19	20	23	1
		H M. S.				
21 Mar (81)	0 Sat.	16 36 45	19 Mar (79)	5 Thur	178 4243	3846
21 Mar (80)	1 Sun	22 48 54	8 Mar (67)	2 Mon	54 1472	3847
22 Mar (81)	3 Tues	5 1 3	26 Feb (57)	0 Sat.	268 5021	3848
22 Mar (81)	4 Wed	11 13 12	17 Mar (76)	6 Fri	303 1844	3849
21 Mar (81)	5 Thur	17 25 21	5 Mar (65)	3 Tues	178 9072	3850
21 Mar (80)	6 Fri.	23 37 30	22 Feb (53)	0 Sat.	54 6301	3851
22 Mar (81)	1 Sun	5 49 39	13 Mar (72)	6 Fri	89 3125	3852
22 Mar (81)	2 Mon	12 1 48	3 Mar (62)	4 Wed	303 6673	3853
21 Mar (81)	3 Tues	18 13 57	20 Mar. (80)	2 Mon	9999-7177§	3854
22 Mar (81)	5 Thur	0 26 6	10 Mar (69)	0 Sat	214 0726	3855
22 Mar (81)	6 Fri	6 38 15	27 Feb (58)	4 Wed	89 7958	3856
22 Mar (81)	0 Sat	12 50 24	18 Mar (77)	3 Tues	124 4778	3857
21 Mar (81)	1 Sun	19 2 33	6 Mar (66)	0 Sat.	0 2006	3858
22 Mar (81)	3 Tues	1 14 42	24 Feb (55)	5 Thur	214 5555	3859
22 Mar (81)	4 Wed	7 26 51	15 Mar (74)	4 Wed	249 2378	3860
22 Mar (81)	5 Thur	13 39 0	4 Mar (63)	1 Sun	124 9607	3861
21 Mar (81)	6 Fri	19 51 9	21 Feb (52)	5 Thur	0 6835	3862
22 Mar (81)	1 Sun.	2 3 18	11 Mar (70)	4 Wed	35 3658	3863
22 Mar (81)	2 Mon	8 15 27	1 Mar (60)	2 Mon	249-7207	3864
22 Mar (81)	3 Tues	14 27 36	20 Mar (79)	1 Sun.	284 4031	3865
21 Mar (81)	4 Wed	20 39 45	8 Mar (68)	5 Thur	160 1261	3866
22 Mar (81)	6 Fri	2 51 54	25 Feb (56)	2 Mon	35 8488	3867
22 Mar (81)	0 Sat.	9 4 3	16 Mar. (75)	1 Sun	70 5312	3868
22 Mar (81)	1 Sun	15 16 12	6 Mar (65)	6 Fri	284 8650	3869
21 Mar (81)	2 Mon.	21 28 21	23 Feb (54)	3 Tues.	160 6088	3870

§ Chaitra sukla 1 was suppressed.

TABLE

CONCURRENT YEAR.								
Kali	Śaka	Chaitradī Vikrama.	Mēshādī solar year in Bengal	Kollam	A.D.	JUVIAN SAMVATŚARA		Mean intercalated (adhik) or lunar month
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8
3871	692	827	176		769-70	42 Kīlaka		...
3872	693	828	177		770-71	43 Saunva		11 Māgha
3873	694	829	178		771-72	44 Sādhārana		.
3874	695	830	179		*772-73	45 Virōdhakṛit		.
3875	696	831	180		773-74	46 Paridhāvan		8 Kārttika
3876	697	832	181		774-75	47 Pramādan		.
3877	698	833	182		775-76	48 Ānanda		.
3878	699	834	183		*776-77	49 Rākshasa		4 Āshādha
3879	700	835	184		777-78	50 Anala		.
3880	701	836	185		778-79	51 Pingala		.
3881	702	837	186		779-80	52 Kālayukta		1 Chaitra
3882	703	838	187		*780-81	53 Svīdhārthun.		.
3883	704	839	188		781-82	54 Raudra		9 Mārgaśīra
3884	705	840	189		782-83	55 Durmati		.
3885	706	841	190		783-84	56 Dundubhi		.
3886	707	842	191		*784-85	57 Rudhirōdgārin		6 Bhādrapada
3887	708	843	192		785-86	58 Raktāksha		..
3888	709	844	193		786-87	59 Krōdhana		.
3889	710	845	194		787-88	60 Kahaya		3 Jyēshtha
3890	711	846	195		*788-89	1 Prabhava		.
3891	712	847	196		789-90	2 Vibhava		11 Māgha
3892	713	848	197		790-91	3 Śukla		...
3893	714	849	198		791-92	4 Pramōda		...
3894	715	850	199		*792-93	5 Prajāpati		8 Kārttika
3895	716	851	200		793-94	6 Angura		.

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COMMENCEMENT OF THE

MEAN SOLAR YEAR			NIPAN LUNI SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			Kali
Day and month, A D	Week-day	Time of mean Mīśha-samkīānti	Day and month, A D	Week day	a (here = t, the index of the <i>tikhi</i>)	
13	14	17	19	20	23	1
		H M S				
22 Mar (81)	4 Wed	3 40 30	13 Mar (72)	2 Mon	195 2912	3871
22 Mar (81)	5 Thur	9 52 39	2 Mar (61)	6 Fri	71 0141	3872
22 Mar (81)	6 Fri	16 4 48	21 Mar. (80)	5 Thur	105 6965	3873
21 Mar (81)	0 Sat	22 16 57	10 Mar (70)	3 Tues	320 0513	3874
22 Mar (81)	2 Mon	4 29 6	27 Feb (58)	0 Sat	195 7741	3875
22 Mar (81)	3 Tues	10 41 15	18 Mar (77)	6 Fri	230 4566	3876
22 Mar (81)	4 Wed.	16 53 24	7 Mar (66)	3 Tues	106 1793	3877
21 Mar (81)	5 Thur	23 5 33	25 Feb (56)	1 Sun	320 5342	3878
22 Mar (81)	0 Sat	5 17 42	14 Mar (73)	6 Fri	16 5846	3879
22 Mar (81)	1 Sun	11 29 51	4 Mar (63)	4 Wed	230 9395	3880
22 Mar (81)	2 Mon	17 42 0	21 Feb (52)	1 Sun	106 6622	3881
21 Mar (81)	3 Tues	23 54 9	11 Mar (71)	0 Sat	141 3446	3882
22 Mar (81)	5 Thur	6 6 18	28 Feb (59)	4 Wed	17 0675	3883
22 Mar (81)	6 Fri	12 18 27	19 Mar (78)	3 Tues	51·7499	3884
22 Mar (81)	0 Sat	18 30 36	9 Mar (68)	1 Sun	266 1047	3885
22 Mar (82)	2 Mon	0 42 45	26 Feb (57)	5 Thur.	141 8276	3886
22 Mar (81)	3 Tues	6 54 54	16 Mar (75)	4 Wed	176 5100	3887
22 Mar (81)	4 Wed	13 7 3	5 Mar (64)	1 Sun	52 2327	3888
22 Mar (81)	5 Thur	19 19 12	23 Feb (54)	6 Fri	266 5876	3889
22 Mar (82)	0 Sat	1 31 21	13 Mar (73)	5 Thur	301·2700	3890
22 Mar (81)	1 Sun	7 43 30	2 Mar (61)	2 Mon	176 9929	3891
22 Mar (81)	2 Mon	13 55 39	21 Mar (80)	1 Sun	211 6752	3892
22 Mar (81)	3 Tues	20 7 48	10 Mar (69)	5 Thur.	87 3981	3893
22 Mar (82)	5 Thur	2 19 57	28 Feb (59)	3 Tues	301 7530	3894
22 Mar (81)	6 Fri	8 32 6	17 Mar (76)	1 Sun	9997 8033 §	3895

§ Chaitra sukla 1 was suppressed.

TABLE

CONCURRENT YEAR.							Mean intercalated (<i>adhika</i>) lunar month	
Kalī	Śaka	Chaitrādi Vikrama-	Māghādi solar year in Bengal	Kollam	A.D	JOVIAN SAMVATSARA		
						Southern system		Northern system
1	2	3	3a	4	5	6	7	8a
3896	717	852	201		794-95	7 Śrīmuḷha .	..	..
3897	718	853	202		795-96	8 Bhāva	4 Āshādha .	..
3898	719	854	203		*796-97	9 Yava	..	..
3899	720	855	204		797-98	10 Dhātṛi . .	..	..
3900	721	856	205		798-99	11 Īvara	1 Chaitra .	..
3901	722	857	206		799-800	12 Bahudhānya . .	..	..
3902	723	858	207		*800-01	13 Pramāthun .	9 Mārgasīra .	..
3903	724	859	208		801-02	14 Vikrama	..	..
3904	725	860	209		802-03	15 Vṛṣha . .	..	..
3905	726	861	210		803-04	16 Chitrabhānu .	6 Bhādrapada	..
3906	727	862	211		*804-05	17 Subhānu	..	..
3907	728	863	212		805-06	18 Tārana . .	..	..
3908	729	864	213		806-07	19 Pārthiva	2 Vaiśākha	..
3909	730	865	214		807-08	20 Vyaya .	..	..
3910	731	866	215		*808-09	21 Saṅvājat .	11 Māgha	..
3911	732	867	216		809-10	22 Sarvadhārin	..	..
3912	733	868	217		810-11	23 Virōdhan	..	..
3913	734	869	218		811-12	24 Vikṛita	7 Āśvina .	..
3914	735	870	219		*812-13	25 Khara .	..	..
3915	736	871	220		813-14	26 Nandana . .	..	..
3916	737	872	221		814-15	27 Vijaya .	4 Āshādha	..
3917	738	873	222		815-16	28 Jaya	..	..
3918	739	874	223		*816-17	29 Manmatha . .	12 Phālguna .	..
3919	740	875	224		817-18	30 Durmukha . .	..	..
3920	741	876	225		818-19	31 Hēmalamba† . .	..	..

† 22 Vilamba was suppressed by mean reckoning. By *Brahma-Siddhānta* "true" reckoning the year K Y 3921, A.D 819 20, was 32 "Vilamba," and 33 Vikāra was suppressed.

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COMMENCEMENT OF THE						
MĀN SOLAR YEAR.			MĀN JUNI SOLAR YEAR (MĀN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			Kali
Day and month, A D.	Week-day.	Time of mean Mā-ha-samkrānti	Day and month, A D	Week day	a (here = t, the index of the t/ki)	
13	14	17	19	20	23	1
		H M S				
22 Mar (81) . . .	0 Sat	14 44 15	7 Mar (66)	6 Fri	212 1581	3896
22 Mar. (81) . . .	1 Sun	20 56 24	24 Feb (55) . . .	3 Tues	87 8810	3897
22 Mar (82) . . .	3 Tues.	3 8 33	14 Mar (74) . . .	2 Mon	122 5683	3898
22 Mar (81)	4 Wed . . .	9 20 42	3 Mar (62) . . .	6 Fri . . .	9998 2862§	3899
22 Mar (81)	5 Thur.	15 32 51	21 Feb (52)	4 Wed	212 6410	3900
22 Mar (81)	6 Fri	21 45 0	12 Mar (71) . . .	3 Tues	247 3234	3901
22 Mar (82)	1 Sun	3 57 9	29 Feb (60) . . .	0 Sat	123 0463	3902
22 Mar (81)	2 Mon	10 9 18	19 Mar (78)	6 Fri	157 7287	3903
22 Mar (81)	3 Tues.	16 21 27	8 Mar (67) . . .	3 Tues. . .	33 4515	3904
22 Mar (81)	4 Wed . . .	22 33 36	26 Feb (57)	1 Sun	247 8064	3905
22 Mar (82)	6 Fri . . .	4 45 45	16 Mar (76)	0 Sat	282 4888	3906
22 Mar (81)	0 Sat.	10 57 54	5 Mar (64)	4 Wed	158 2115	3907
22 Mar (81)	1 Sun . . .	17 10 3	22 Feb (53) . . .	1 Sun	33 9344	3908
22 Mar (81)	2 Mon	23 22 12	13 Mar (72) . . .	0 Sat . . .	68 6168	3909
22 Mar (82)	4 Wed	5 34 21	2 Mar (62)	5 Thur . . .	282 9716	3910
22 Mar (81)	5 Thur	11 46 30	21 Mar (80)	4 Wed	317 6540	3911
22 Mar (81) . . .	6 Fri	17 58 39	10 Mar (69)	1 Sun	193 3769	3912
23 Mar (82) . . .	1 Sun	0 10 48	27 Feb (58)	5 Thur	69-0998	3913
22 Mar (82) . . .	2 Mon	6 22 57	17 Mar (77) . . .	4 Wed	103 7821	3914
22 Mar. (81)	3 Tues	12 35 6	7 Mar (66) . . .	2 Mon	318 1369	3915
22 Mar (81)	4 Wed	18 47 15	24 Feb (55) . . .	6 Fri . . .	193 8598	3916
23 Mar (82)	6 Fri	0 59 24	15 Mar (74) . . .	5 Thur	228 5421	3917
22 Mar (82) . . .	0 Sat . . .	7 11 33	3 Mar (63)	2 Mon . . .	104 2650	3918
22 Mar (81) . . .	1 Sun . . .	18 23 42	22 Mar (81)	1 Sun	138 9474	3919
22 Mar. (81)	2 Mon. . .	19 35 51	11 Mar (70) . . .	5 Thur . . .	14 6703	3920

§ Chaitra sukla 1 was suppressed

TABLE

CONCURRENT YEAR								Mean intercalated (<i>adhika</i>) lunar month
Kali	Saka	Chaitra Vikrama	Mushahi solar year in Bengal	Kollam	A D	JUVIAN SAMVATSARA		
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
3921	742	877	226		819-20	33 <i>Vikārin</i>	.	9 Mārgasira
3922	743	878	227		*820 21	34 <i>Śarvarin</i>	.	
3923	744	879	228		821-22	35 <i>Plava</i>		
3924	745	880	229		822-23	36 <i>Śubhakrit</i>	.	6 Bhādrapada†
3925	746	881	230		823 24	37 <i>Śōbhana</i>		
3926	747	882	231		*824 25	38 <i>Krōdhin</i>		.
3927	748	883	232	0-1	825 26	39 <i>Viśvāvasu</i>	.	2 Vaisākha
3928	749	884	233	1-2	826-27	40 <i>Parābhava</i>	.	
3929	750	885	234	2 3	827-28	41 <i>Plavanga</i>	.	11 Māgha
3930	751	886	235	3-4	*828-29	42 <i>Kilaka</i>	.	
3931	752	887	236	4-5	829-30	43 <i>Samya</i>	.	
3932	753	888	237	5 6	830 31	44 <i>Sādhāraṇa</i>	.	7 Āśvina
3933	754	889	238	6-7	831-32	45 <i>Virodhakrit</i>	.	.
3934	755	890	239	7-8	*832-33	46 <i>Paridhāvin</i>		
3935	756	891	240	8 9	833 34	47 <i>Pramādin</i>	.	4 Āshādha
3936	757	892	241	9 10	834 35	48 <i>Ānanda</i>	.	
3937	758	893	242	10 11	835 36	49 <i>Rākshasa</i>	.	12 Phālguna
3938	759	894	243	11-12	*836 37	50 <i>Anala</i>	.	"
3939	760	895	244	12-13	837-38	51 <i>Pingala</i>	.	
3940	761	896	245	13 14	838 39	52 <i>Kālayukta</i>	.	9 Mārgasira
3941	762	897	245	14-15	839 40	53 <i>Siddhāthin</i>	.	.
3942	763	898	247	15-16	*840 41	54 <i>Raudra</i>		
3943	764	899	248	16-17	841 42	55 <i>Durmati</i>		5 Srāvana
3944	765	900	249	17-18	842-43	56 <i>Dundubhu</i>	.	.
3945	766	901	250	18 19	843-44	57 <i>Rudhirōḍgīn</i>	.	.

† See "Remarks," p 215 above.

XC—contd

COMMENCEMENT OF THE						
MEAN SOLAR YEAR			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS)			Kal.
Day and month, A.D.	Week-day	Time of mean Mēsha-samkrānti	Day and month, A.D.	Week-day	a (here = t, the index of the <i>tithi</i>)	
13	14	17	19	20	23	1
		H M S				
23 Mar (82)	4 Wed.	1 48 0	1 Mar (60)	3 Tues	229 0250	3921
22 Mar (82)	5 Thur	8 0 9	19 Mar (79)	2 Mon	263 7074	3922
22 Mar (81)	6 Fri	14 12 18	8 Mar (87)	6 Fri	139 4313	3923
22 Mar (81)	0 Sat	20 24 27	25 Feb (56)	3 Tues	15 1581	3924
23 Mar (82)	2 Mon	2 36 36	16 Mar (75)	2 Mon	49 8855	3925
22 Mar (82)	3 Tues	8 48 45	5 Mar (65)	0 Sat	264 1904	3926
22 Mar (81)	4 Wed	15 0 54	22 Feb (53)	4 Wed	139 9132	3927
22 Mar (81)	5 Thur	21 13 3	13 Mar (72)	3 Tues	174 5955	3928
23 Mar (82)	0 Sat.	3 25 12	2 Mar (61)	0 Sat.	50 3184	3929
22 Mar (82)	1 Sun	9 37 21	20 Mar (80)	6 Fri	85 0009	3930
22 Mar (81)	2 Mon	15 49 30	10 Mar (69)	4 Wed	299 3556	3931
22 Mar (81)	3 Tues	22 1 39	27 Feb (58)	1 Sun	175 0784	3932
23 Mar (82)	5 Thur	4 13 48	18 Mar (77)	0 Sat.	209 7609	3933
22 Mar (82)	6 Fri	16 25 57	6 Mar (66)	4 Wed	85 4837	3934
22 Mar (81)	0 Sat.	16 38 6	24 Feb (55)	2 Mon	299 8385	3935
22 Mar (81)	1 Sun.	22 50 15	14 Mar (73)	0 Sat.	9995 8889 §	3936
23 Mar (82)	3 Tues	5 2 24	4 Mar (63)	5 Thur	210 2438	3937
22 Mar (82)	4 Wed	11 14 33	22 Mar (82)	4 Wed.	244 9202	3938
22 Mar (81)	5 Thur	17 26 42	11 Mar (70)	1 Sun	120 6490	3939
22 Mar (81)	6 Fri	23 38 51	28 Feb (59)	5 Thur	9996 3718 §	3940
23 Mar (82)	1 Sun	5 51 0	19 Mar (78)	4 Wed	31 0542	3941
22 Mar (82)	2 Mon	12 3 9	8 Mar (68)	2 Mon	245 4090	3942
22 Mar (81)	3 Tues	18 15 18	25 Feb (56)	6 Fri	121 1819	3943
23 Mar (82)	5 Thur	0 27 27	16 Mar (75)	5 Thur	155 8143	3944
23 Mar (82)	6 Fri	6 39 36	5 Mar (64)	2 Mon	31 5372	3945

§ Chaitra sukla 1 was suppressed.

TABLE

CONCURRENT YEAR								Mean intercalated (adhika) lunar month
Kalī	Śaka	Chaitrādi Vikrama-	Mēshādi solar year in Bengal	Kollam	A D	JOVIAN SAMVATSARA		
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
8946	767	902	251	19 20	*844-45	58 Raktāksha	.	2 Vaiśākha
8947	768	903	252	20-21	845-46	59 Krōdhana	.	
8948	769	904	253	21-22	846-47	60 Kahaya	.	10 Pausha
8949	770	905	254	22-23	847-48	1 Prabhava	.	
8950	771	906	255	23 24	*848-49	2 Vibhava	.	...
8951	772	907	256	24 25	849-50	3 Śukla	.	7 Āśvina
8952	773	908	257	25-26	850 51	4 Pramōda	.	
8953	774	909	258	26 27	851-52	5 Prājāpati	.	
8954	775	910	259	27-28	*852-53	6 Angiras	.	3 Jyēsthā
8955	776	911	260	28 29	853-54	7 Śrīmukha	.	..
8956	777	912	261	29 30	854-55	8 Bhāva	.	12 Phālguna
8957	778	913	262	30-31	855-56	9 Yuvan	.	
8958	779	914	263	31-32	*856-57	10 Dhātṛi	.	
8959	780	915	264	32 33	857-58	11 Īsvara	.	8 Kārttika
8960	781	916	265	33-34	858-59	12 Bahudhānya	.	..
8961	782	917	266	34 35	859 60	13 Pramāthun	.	..
8962	783	918	267	35-36	*860 61	14 Vikrama	.	5 Srāvana
8963	784	919	268	36 37	861-62	15 Vṛisha	.	
8964	785	920	269	37-38	862 63	16 Chitrabhānu	.	..
8965	786	921	270	38-39	863 64	17 Subhānu	.	2 Vaiśākha
8966	787	922	271	39-40	*864 65	18 Tārana	.	...
8967	788	923	272	40-41	865 66	19 Pārthiva	.	10 Pausha
8968	789	924	273	41-42	866-67	20 Vyaya	.	...
8969	790	925	274	42-43	867 68	21 Sarvajit	.	...
8970	791	926	275	43-44	*868-69	22 Sarvadhāru	.	7 Āśvina

XC—contd

COMMENCEMENT OF THE						
MEAN SOLAR YEAR			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			Kal.
Day and month, A.D.	Week-day.	Time of mean Mēsha samkrānti.	Day and month, A.D.	Week-day	a (here = t, the index of the <i>śukla</i>)	
18	14	17	19	20	23	1
		H M S				
22 Mar (82) .	0 Sat.	12 51 45	23 Feb (54)	0 Sat.	245 8919	3946
22 Mar (81) . .	1 Sun	19 3 54	13 Mar (76)	6 Fri	280 5743	3947
23 Mar (82) .	3 Tues	1 16 3	2 Mar (61)	3 Tues	156 2972	3948
23 Mar. (82) . .	4 Wed	7 28 12	21 Mar (80)	2 Mon	190-9796	3949
22 Mar (82)	5 Thur.	13 40 21	9 Mar (69)	6 Fri	66 7024	3950
22 Mar (81)	6 Fri	19 52 30	27 Feb (58)	4 Wed.	281 0572	3951
23 Mar. (82) .	1 Sun	2 4 39	18 Mar (77)	3 Tues	315 7397	3952
23 Mar (82)	2 Mon	8 16 48	7 Mar (66)	0 Sat.	191 4624	3953
22 Mar. (82) .	3 Tues.	14 28 57	24 Feb (55)	4 Wed	67 1853	3954
22 Mar (81) . .	4 Wed	20 41 6	14 Mar (73)	3 Tues	101 8677	3955
23 Mar (82)	6 Fri	2 53 15	4 Mar (63)	1 Sun	316 2225	3956
23 Mar (82) .	0 Sat.	9 5 24	22 Mar (81)	6 Fri	12 2729	3957
22 Mar (82) .	1 Sun	15 17 33	11 Mar (71)	4 Wed	226 6278	3958
22 Mar (81)	2 Mon	21 29 42	28 Feb (59)	1 Sun	102 3506	3959
23 Mar (82)	4 Wed	3 41 51	19 Mar (78)	0 Sat.	137 0329	3960
23 Mar. (82) .	5 Thur	9 54 0	8 Mar. (67)	4 Wed.	12 7558	3961
22 Mar. (82) .	6 Fri.	16 6 9	26 Feb (57)	2 Mon.	227 1107	3962
22 Mar (81)	0 Sat.	22 18 18	16 Mar (75)	1 Sun	261-7930	3963
23 Mar (82)	2 Mon	4 30 27	5 Mar (64)	5 Thur.	137 5159	3964
23 Mar (82)	3 Tues	10 42 36	22 Feb (53)	2 Mon	13-2387	3965
22 Mar (82)	4 Wed.	16 54 45	12 Mar (72)	1 Sun.	47 9211	3966
22 Mar (81)	5 Thur	23 6 54	2 Mar. (61)	6 Fri.	262-2759	3967
23 Mar (82)	0 Sat.	5 19 3	21 Mar (80)	5 Thur.	296-9584	3968
23 Mar (82)	1 Sun	11 31 12	10 Mar (69)	2 Mon.	172 6812	3969
22 Mar (82)	2 Mon	17 43 21	27 Feb (53)	6 Fri.	43 4039	3970

TABLE

CONCURRENT YEAR								Mean intercalated (adhika) lunar month.
Kalī	Śaka	Chaitrādi Vikrama	Māghādi solar year in Bengal	Kollam	A D	JOYIAN SAMVATSABA		
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
3971	792	927	276	44-45	869-70	23 Virōdhin	.	.
3972	793	928	277	45-46	870-71	24 Vikṛita	.	...
3973	794	929	278	46-47	871-72	25 Khara	.	3 Jyēshtha
3974	795	930	279	47-48	*872-73	26 Nandana	.	"
3975	796	931	280	48-49	873-74	27 Vijaya	.	12 Phālguna
3976	797	932	281	49 50	874-75	28 Jaya	.	.
3977	798	933	282	50-51	875-76	29 Manmatha	.	.
3978	799	934	283	51-52	*876-77	30 Durmukha	.	8 Kārttika
3979	800	935	284	52-53	877-78	31 Hēmalamba	.	.
3980	801	936	285	53 54	878 79	32 Vilamba	.	.
3981	802	937	286	54 55	879-80	33 Vikārin	.	5 Śrāvana
3982	803	938	287	55-56	*880 81	34 Śārvarin	.	...
3983	804	939	288	56-57	881-82	35 Plava	.	.
3984	805	940	289	57-58	882-83	36 Śubhakṛt	.	1 Chaitra
3985	806	941	290	58-59	883 84	37 Śōbhana	.	.
3986	807	942	291	59 60	*884-85	38 Krōdhin	.	10 Pausa
3987	808	943	292	60 61	885-86	39 Viśvāvasu	.	...
3988	809	944	293	61-62	886 87	40 Parābhava	.	...
3989	810	945	294	62 63	887-88	41 Plavanga	.	6 Bhādrapada
3990	811	946	295	63 64	*888-89	42 Kīlaka	.	...
3991	812	947	296	64-65	889-90	43 Saumya	.	...
3992	813	948	297	65 66	890 91	44 Sādharana	.	3 Jyēshtha
3993	814	949	298	66 67	891-92	45 Virōdhakṛt	.	...
3994	815	950	299	67-68	*892-93	46 Paridhāvin	.	11 Māgha
3995	816	951	300	68-69	893 94	47 Pramādin	.	...

XC—contd.

COMMENCEMENT OF THE						
MEAN SOLAR YEAR.			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS)			Kal.
Day and month, A.D	Week-day	Time of mean Mēsha-samkrānti	Day and month, A.D	Week day	a (here= t , the index of the $tikā$)	
13	14	17	19	20	23	1
		H M S				
22 Mar (81)	3 Tues.	23 55 30	17 Mar (76)	5 Thur	83 0864	3971
23 Mar. (82)	5 Thur.	6 7 39	7 Mar (80)	3 Tues	297 4412	3972
23 Mar (82)	6 Fri	12 19 48	24 Feb (55)	0 Sat	173 1641	3973
22 Mar. (82)	0 Sat.	18 31 57	14 Mar (74)	6 Fri	207 8464	3974
23 Mar (82)	2 Mon	0 44 6	3 Mar. (82)	3 Tues	83 5693	3975
23 Mar (82)	3 Tues	6 56 15	22 Mar (81)	2 Mon	118 2517	3976
23 Mar (82)	4 Wed	13 8 24	12 Mar (71)	0 Sat	332 6065	3977
22 Mar (82)	5 Thur.	19 20 33	29 Feb (80)	4 Wed	208 3293	3978
23 Mar (82)	0 Sat.	1 32 42	19 Mar (78)	3 Tues	243 0118	3979
23 Mar (82)	1 Sun	7 44 51	8 Mar (87)	0 Sat	118 7346	3980
23 Mar (82)	2 Mon	13 57 0	26 Feb (57)	5 Thur	333-0894	3981
22 Mar (82)	3 Tues	20 9 9	15 Mar (75)	3 Tues	29 1398	3982
23 Mar (82)	5 Thur	2 21 18	5 Mar (84)	1 Sun	243 4947	3983
23 Mar (82)	6 Fri	8 33 27	22 Feb (58)	5 Thur	119 2175	3984
23 Mar (82)	0 Sat.	14 45 36	13 Mar. (72)	4 Wed.	153 8998	3985
22 Mar (82)	1 Sun	20 57 45	1 Mar (81)	1 Sun	20 6227	3986
23 Mar (82)	3 Tues	3 9 54	20 Mar (79)	0 Sat	64 3052	3987
23 Mar (82)	4 Wed	9 22 3	10 Mar (69)	5 Thur	273 6599	3988
23 Mar (82)	5 Thur	15 34 12	27 Feb (58)	2 Mon	154 3828	3989
22 Mar (82)	6 Fri	21 46 21	17 Mar (77)	1 Sun	189-0652	3990
23 Mar. (82)	1 Sun	3 58 30	6 Mar (85)	5 Thur	64 7881	3991
23 Mar. (82)	2 Mon	10 10 39	24 Feb (55)	3 Tues	279 1428	3992
23 Mar. (82)	3 Tues	16 22 48	15 Mar (74)	2 Mon	313 8252	3993
22 Mar. (82)	4 Wed.	22 34 57	3 Mar. (83)	6 Fri	189 5481	3994
23 Mar. (82)	6 Fri.	4 47 0	22 Mar. (81)	5 Thur	224 2304	3995

TABLE

CONCURRENT YEAR								Year intercalated (<i>adhika</i>) lunar month	
Kalī	Śaka.	Chaitradī Vikrama.	Mśāhādī solar year in Bengal	Kollam	A D	JUVIAN SAMVATSAHA.			
						Southern system	Northern system		
1	2	3	3a	4	5	6	7	8a	
3996	817	952	301	69 70	804-95	48 Ananda	.	...
3997	818	953	302	70 71	895 96	49 Rākshasa	.	8 Kārttika	
3998	819	954	303	71-72	*896-97	50 Anala	.	...
3999	820	955	304	72-73	897-98	51 Pingala	.	..	
4000	821	956	305	73 74	898-99	52 Kālayukta	.	5 Śāvana	
4001	822	957	306	74-75	899-900	53 Siddhārthina	.	...
4002	823	958	307	75 76	*900 01	54 Raudra	.	..	
4003	824	959	308	76-77	901 02	55 Durmati	.	1 Chaitra	
4004	825	960	309	77-78	902 03	56 Dandubhi	.	..	
4005	826	961	310	78-79	903-04	57 Rudhūrōdgārin†	.	10 Pausa	
4006	827	962	311	79 80	*904-05	58 Raktāksha	59 Krōdhana	.	
4007	828	963	312	80 81	905 06	59 Krōdhana	60 Kshaya
4008	829	964	313	81-82	906-07	60 Kshaya	1 Prabhava	6 Bhādrapada	
4009	830	965	314	82-83	907 08	1 Prabhava	2 Vibhava	..	
4010	831	966	315	83 84	*908-09	2 Vibhava	3 Śukla	.	
4011	832	967	316	84 85	909-10	3 Śukla	4 Pramōda	3 Jyēshtha	
4012	833	968	317	85-86	910 11	4 Pramōda	5 Prajāpati	.	
4013	834	969	318	86-87	911-12	5 Prajāpati	6 Angiras	11 Māgha	
4014	835	970	319	87-88	*912-13	6 Angiras	7 Śrīmukha	..	
4015	836	971	320	88-89	913 14	7 Śrīmukha	8 Bhāva	.	
4016	837	972	321	89-90	914-15	8 Bhāva	9 Yuvan	8 Kārttika	
4017	838	973	322	90-91	915-16	9 Yuvan	10 Dhātri	.	
4018	839	974	323	91-92	*916-17	10 Dhātri	11 Ísvara	..	
4019	840	975	324	92-93	917-18	11 Ísvara	12 Bahudhānya	4 Ashādha	
4020	841	976	325	93 94	918-19	12 Bahudhānya	13 Pramāthina	..	

† 58 Raktāksha was suppressed in the north By southern reckoning there was no suppression, and there has been none since. By *Brahma-Siddhānta* "true" reckoning K Y 4006, A D. 904 05, was 58 Raktāksha, 59 Krōdhana being suppressed in the north

XC—contd

COMMENCEMENT OF THE						
MEAN SOLAR YEAR			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			Kali
Day and month, A.D.	Week-day	Time of mean Mēsha-samkrānti	Day and month, A.D.	Week-day	a (here = t, the index of the <i>tithi</i>)	
13	14	17	19	20	23	1
		H M S				
23 Mar (82) . . .	0 Sat. . .	10 59 15	11 Mar (70) . . .	2 Mon	99 9583	3996
23 Mar (82) . . .	1 Sun	17 11 24	1 Mar (80) . . .	0 Sat.	314 3081	3997
22 Mar (82) . . .	2 Mon	23 23 33	18 Mar (78) . . .	5 Thur	10 3584	3998
23 Mar (82) . . .	4 Wed . . .	5 35 42	8 Mar (87) . . .	3 Tues . . .	224 7133	3999
23 Mar (82) . . .	5 Thur	11 47 51	25 Feb (56) . . .	0 Sat. . .	100 4362	1000
23 Mar (82) . . .	6 Fri	18 0 0	16 Mar (75) . . .	6 Fri	135 1186	4001
23 Mar (83) . . .	1 Sun	0 12 9	4 Mar (84) . . .	3 Tues . . .	10 8415	4002
23 Mar (82) . . .	2 Mon	6 24 18	22 Feb (58) . . .	1 Sun	225 4983	4003
23 Mar (82) . . .	3 Tues	12 36 27	13 Mar (72) . . .	0 Sat. . .	259 8786	4004
23 Mar (82) . . .	4 Wed	18 48 36	2 Mar (61) . . .	4 Wed	135 6015	4005
23 Mar (83) . . .	6 Fri	1 0 45	20 Mar (80) . . .	3 Tues	170 2839	4006
23 Mar (82) . . .	0 Sat.	7 12 54	9 Mar. (68) . . .	0 Sat	46 0067	4007
23 Mar (82) . . .	1 Sun.	13 25 3	27 Feb (58) . . .	5 Thur . . .	260 3616	4008
23 Mar (82) . . .	2 Mon	19 37 12	18 Mar (77) . . .	4 Wed.	295 0440	4009
23 Mar (83) . . .	4 Wed	1 49 21	6 Mar (66) . . .	1 Sun	170-7668	4010
23 Mar (82) . . .	5 Thur	8 1 30	23 Feb (54) . . .	5 Thur	46 4896	4011
23 Mar (82) . . .	6 Fri	14 13 39	14 Mar (73) . . .	4 Wed.	81 1720	4012
23 Mar (82) . . .	0 Sat.	20 25 48	4 Mar (63) . . .	2 Mon	295 5269	4013
23 Mar (83) . . .	2 Mon	2 37 57	22 Mar (82) . . .	1 Sun . . .	330 2092	4014
23 Mar (82) . . .	3 Tues	8 50 6	11 Mar (70) . . .	5 Thur	205 9321	4015
23 Mar (82) . . .	4 Wed	15 2 15	23 Feb (59) . . .	2 Mon	81 6549	4016
23 Mar (82) . . .	5 Thur	21 14 24	19 Mar (78) . . .	1 Sun.	116 3373	4017
23 Mar (83) . . .	0 Sat	3 26 33	8 Mar (68) . . .	6 Fri	330 8921	4018
23 Mar (82) . . .	1 Sun	9 38 42	25 Feb (56) . . .	3 Tues	206 4150	4019
23 Mar (82) . . .	2 Mon	15 50 51	16 Mar (75) . . .	2 Mon	241-0974	4020

TABLE

CONCURRENT YEAR.								Mean intercalated (adhika) lunar month
Kali	Śaka	Chaitrādi Vikrama.	Mēhādi solar year in Bengal	Kollam	A.D.	JOVIAN SAMVATSARA.		
						Southern sys'em	Northern system	
1	2	3	3a	4	5	6	7	8a
4021	842	977	826	94-95	919-20	13 Pramāthin	14 Vikrama	...
4022	843	978	827	95-96	*920 21	14 Vikrama	15 Vṛisha	1 Chaitra
4023	844	979	828	96-97	921-22	15 Vṛisha	16 Chitrabhānu	...
4024	845	980	829	97-98	922-23	16 Chitrabhānu	17 Subhānu	9 Mārgasīra
4025	846	981	830	98-99	923-24	17 Subhānu	18 Tārana	...
4026	847	982	831	99-100	*924-25	18 Tārana	19 Pārthiva	...
4027	848	983	832	100-01	925-26	19 Pārthiva	20 Vjaya	6 Bhādrapada
4028	849	984	833	101-02	926-27	20 Vyaya	21 Sarvaṣṭ	...
4029	850	985	834	102-03	927-28	21 Sarvaṣṭ	22 Sarvadhārin	...
4030	851	986	835	103-04	*928 29	22 Sarvadhārin	23 Virōdhin	2 Vāśāḥa
4031	852	987	836	104-05	929-30	23 Virōdhin	24 Vikṛita	...
4032	853	988	837	105-06	930-31	24 Vikṛita	25 Khara	11 Māgha
4033	854	989	838	106-07	931-32	25 Khara	26 Nandana	...
4034	855	990	839	107-08	*932 33	26 Nandana	27 Vijaya	...
4035	856	991	840	108-09	933-34	27 Vijaya	28 Jaya	7 Āśvina
4036	857	992	841	109-10	934-35	28 Jaya	29 Manmatha	...
4037	858	993	842	110 11	935-36	29 Manmatha	30 Durmukha	...
4038	859	994	843	111-12	*936-37	30 Durmukha	31 Hēmalamba	4 Ābhāḍha
4039	860	995	844	112-13	937-38	31 Hēmalamba	32 Vilamba	...
4040	861	996	845	113-14	938-39	32 Vilamba	33 Vikārin	...
4041	862	997	846	114-15	939-40	33 Vikārin	34 Śārvarin	1 Chaitra
4042	863	998	847	115-16	*940-41	34 Śārvarin	35 Piava	...
4043	864	999	848	116-17	941-42	35 Piava	36 Śubhakṛit	9 Mārgasīra
4044	865	1000	849	117-18	942-43	36 Subhakṛit	37 Śōbhana	...
4045	866	1001	850	118-19	943-44	37 Śōbhana	38 Krōdhin	...

XC—contd.

COMMENCEMENT OF THE						
MEAN SOLAR YEAR			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			Kal.
Day and month, A.D.	Week-day	Time of mean Mīśha-samkrānti	Day and month, A.D.	Week-day.	α (here= t , the index of the t th)	
13	14	17	19	20	23	1
		H M S				
23 Mar (82)	3 Tues	22 3 0	5 Mar (64)	6 Fri	116 8202	4021
23 Mar (83)	5 Thur	4 15 9	23 Feb (64)	4 Wed	831 1750	4022
23 Mar (82)	6 Fri	10 27 18	12 Mar. (71)	2 Mon	27 2254	4023
23 Mar (82)	0 Sat	16 39 27	2 Mar (61)	0 Sat.	241-5802	4024
23 Mar (82)	1 Sun	22 51 36	21 Mar (80)	6 Fri	276 2828	4025
23 Mar (83)	3 Tues	5 3 45	9 Mar (69)	3 Tues.	151-9855	4026
23 Mar. (82)	4 Wed.	11 15 54	20 Feb (67)	0 Sat.	27 7084	4027
23 Mar (82)	5 Thur.	17 23 3	17 Mar (76)	6 Fri	62 3907	4028
23 Mar (82)	6 Fri	23 40 12	7 Mar. (66)	4 Wed.	276 7455	4029
23 Mar (83)	1 Sun	5 52 21	24 Feb (55)	1 Sun	152 4684	4030
23 Mar (82)	2 Mon	12 4 30	14 Mar. (73)	0 Sat.	187 1507	4031
23 Mar (82)	3 Tues	18 16 39	3 Mar (62)	4 Wed	62 8736	4032
24 Mar. (83)	5 Thur	0 23 48	22 Mar. (81)	3 Tues.	97 5580	4033
23 Mar. (83)	6 Fri	6 40 57	11 Mar. (71)	1 Sun	311-9109	4034
23 Mar (82)	0 Sat.	12 53 6	28 Feb. (59)	5 Thur.	187 6886	4035
23 Mar. (82)	1 Sun	19 5 15	19 Mar (78)	4 Wed.	222 3161	4036
24 Mar (83)	3 Tues	1 17 24	8 Mar. (67)	1 Sun	98 0389	4037
23 Mar (83)	4 Wed.	7 29 38	26 Feb. (57)	6 Fri	312 3938	4038
23 Mar (82)	5 Thur.	13 41 42	16 Mar. (74)	4 Wed.	8 4441	4039
23 Mar (82)	6 Fri.	19 53 51	5 Mar (64)	2 Mon	222-7990	4040
24 Mar (83)	1 Sun.	2 6 0	22 Feb (58)	6 Fri.	98 5213	4041
23 Mar (83)	2 Mon	8 18 9	12 Mar. (72)	5 Thur	188 2042	4042
23 Mar (82)	3 Tues	14 30 18	1 Mar. (60)	2 Mon	8-9270	4043
23 Mar. (82)	4 Wed	20 42 27	20 Mar. (79)	1 Sun.	43-6094	4044
24 Mar (83)	6 Fri.	2 54 36	10 Mar. (69)	6 Fri.	257-9643	4045

TABLE

CONCURRENT YEAR								Mean intercalated (adhika) lunar month
Kali	Śaka	Chaitrādi Vikrama	Māhādī solar year in Bengal	Kollam	A.D	JOVIAN SĀMVATSARA		
						Southern system	Northern system	
1	2	3	3 a	4	5	6	7	8a
4046	867	1002	351	119 20	*944-45	38 Krōdhun	39 Viśvāvasu	6 Bhādrapada .
4047	868	1003	352	120 21	945-46	39 Viśvāvasu	40 Parābhava	.
4048	869	1004	353	121-22	946-47	40 Parābhava	41 Plavanga	.
4049	870	1005	354	122-23	947-48	41 Plavanga	42 Kīlaka	2 Vaiśākha .
4050	871	1006	355	123-24	*948-49	42 Kīlaka	43 Saumya	.
4051	872	1007	356	124-25	949 50	43 Saumya	44 Sādhārana	11 Māgha
4052	873	1008	357	125-26	950 51	44 Sādhārana	45 Virōdhakṛt	.
4053	874	1009	358	126-27	951-52	45 Virōdhakṛt	46 Paridhāvin	.
4054	875	1010	359	127-28	*952-53	46 Paridhāvin	47 Pramādin	7 Āśvina
4055	876	1011	360	128-29	953-54	47 Pramādin	48 Ānanda	.
4056	877	1012	361	129 30	954-55	48 Ānanda	49 Rākshasa	..
4057	878	1013	362	130 31	955-56	49 Rākshasa	50 Anala	4 Āshādha .
4058	879	1014	363	131-32	*956-57	50 Anala	51 Pingala	.
4059	880	1015	364	132-33	957-58	51 Pingala	52 Kālayukta	12 Phālguna
4060	881	1016	365	133 34	958-59	52 Kālayukta	53 Siddhārthun	.
4061	882	1017	366	134-35	959 60	53 Siddhārthun	54 Raudra	.
4062	883	1018	367	135 36	*960-61	54 Raudra	55 Durmatī	9 Mārgaśīra
4063	884	1019	368	136-37	961-62	55 Durmatī	56 Dandabhī	.
4064	885	1020	369	137 38	962-63	56 Dandabhī	57 Rudhūrōdgārū	.
4065	886	1021	370	138 39	963 64	57 Rudhūrōdgārū	58 Raktāksha	5 Śrāvana
4066	887	1022	371	139-40	*964 65	58 Raktāksha	59 Krōdhana	.
4067	888	1023	372	140-41	965-66	59 Krōdhana	60 Kshaya	.
4068	889	1024	373	141-42	966 67	60 Kshaya	1 Prabhava	2 Vaiśākha .
4069	890	1025	374	142-43	967-68	1 Prabhava	2 Vibhava	...
4070	891	1026	375	143-44	*968-69	2 Vibhava	3 Sukla	10 Pausa .

XC—contd

COMMENCEMENT OF THE						
MEAN SOLAR YEAR.			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			Kal.
Day and month, A.D	Week-day	Time of mean Mēsha-samkrānti	Day and month, A.D	Week day	a (here = t, the index of the <i>t</i> (<i>k</i>))	
13	14	17	19	20	23	1
		H M S				
23 Mar (83)	0 Sat.	9 6 45	27 Feb (58)	3 Tues	133 6871	4016
23 Mar (82)	1 Sun	15 18 54	17 Mar (76)	2 Mon	168 3695	4047
23 Mar (82)	2 Mon	21 31 3	6 Mar (65)	6 Fri	44 0923	4018
24 Mar (83)	4 Wed	3 43 12	24 Feb (55)	4 Wed	258 4471	4049
23 Mar (83)	5 Thur	9 55 21	14 Mar (74)	3 Tues	293 1295	4050
23 Mar (82)	6 Fri	16 7 30	3 Mar (62)	0 Sat	168 8524	4051
23 Mar (82)	0 Sat	22 19 39	22 Mar (81)	6 Fri	203 5348	4052
24 Mar (83)	2 Mon	4 31 48	11 Mar (70)	3 Tues	79 2576	4053
23 Mar (83)	3 Tues	10 43 57	29 Feb (60)	1 Sun	293 6125	4054
23 Mar (82)	4 Wed	16 56 6	19 Mar (78)	0 Sat.	328 2949	4055
23 Mar (82)	5 Thur	23 8 15	8 Mar (67)	4 Wed	201 0176	4056
24 Mar (83)	0 Sat	5 20 24	25 Feb (56)	1 Sun.	79 7105	4057
23 Mar (83)	1 Sun	11 32 33	15 Mar (75)	0 Sat	114 4229	4058
23 Mar (82)	2 Mon	17 44 42	5 Mar (64)	5 Thur	328 7778	4059
23 Mar (82)	3 Tues	23 56 51	23 Mar (82)	1 Sun	24 8281	4060
24 Mar (83)	5 Thur	6 9 0	13 Mar (72)	1 Sun	239 1830	4061
23 Mar (83)	6 Fri	12 21 9	1 Mar (61)	5 Thur	114 9058	4062
23 Mar (82)	0 Sat	18 33 18	20 Mar (79)	4 Wed	149 5881	4063
24 Mar (83)	2 Mon	0 45 27	9 Mar (68)	1 Sun	25 3110	4064
24 Mar (83)	3 Tues	6 57 36	27 Feb (58)	6 Fri	239 6659	4065
23 Mar (83)	4 Wed	13 9 45	17 Mar (77)	5 Thur	274 3433	4066
23 Mar (82)	5 Thur	19 21 54	6 Mar (65)	2 Mon.	150-0710	4067
24 Mar. (83)	0 Sat	1 34 3	23 Feb (54)	6 Fri	25-7949	4068
24 Mar (83)	1 Sun	7 46 12	14 Mar (73)	5 Thur	60 4763	4069
23 Mar (83)	2 Mon.	13 58 21	3 Mar (63)	3 Tues	274 8311	4070

TABLE

CONCURRENT YEAR								
Kalī	Śaka	Chakravādi Vikrama	Mēshādi solar year in Bengal	Kollam	A.D	JOVIAN SAMVATSARA		Mean intercalated (adhikā) lunar month
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
4071	892	1027	376	144-45	969-70	3 Śukla	4 Pramoda	..
4072	893	1028	377	145-46	970-71	4 Pramōda	5 Prajāpati	...
4073	894	1029	378	146-47	971-72	5 Prajāpati	6 Angiras	7 Āvina
4074	895	1030	379	147-48	*972-73	6 Angiras	7 Śrīmukha	.
4075	896	1031	380	148-49	973-74	7 Śrīmukha	8 Bhāva	..
4076	897	1032	381	149-50	974-75	8 Bhāva	9 Yuvan	4 Ābhāda
4077	898	1033	382	150-51	975-76	9 Yuvan	10 Dhātṛ	...
4078	899	1034	383	151-52	*976-77	10 Dhātṛ	11 Īvara	12 Phālguna
4079	900	1035	384	152-53	977-78	11 Īvara	12 Bahudhānya	.
4080	901	1036	385	153-54	978-79	12 Bahudhānya	13 Pramāthun	.
4081	902	1037	386	154-55	979-80	13 Pramāthun	14 Vikrama	9 Mārgasira
4082	903	1038	387	155-56	*980-81	14 Vikrama	15 Vṛisha	.
4083	904	1039	388	156-57	981-82	15 Vṛisha	16 Chitrabhānu	.
4084	905	1040	389	157-58	982-83	16 Chitrabhānu	17 Subhānu	5 Srāvana
4085	906	1041	390	158-59	983-84	17 Subhānu	18 Tārana	..
4086	907	1042	391	159-60	*984-85	18 Tārana	19 Pārthiva	...
4087	908	1043	392	160-61	985-86	19 Pārthiva	20 Vyaya	2 Vaiśākha
4088	909	1044	393	161-62	986-87	20 Vyaya	21 Sarvajit	...
4089	910	1045	394	162-63	987-88	21 Sarvajit	22 Sarvadhārin	10 Pausa
4090	911	1046	395	163-64	*988-89	22 Sarvadhārin	23 Virōdhin	...
4091	912	1047	396	164-65	989-90	23 Virōdhin	24 Vikṛita †	...
4092	913	1048	397	165-66	990-91	24 Vikṛita	25 Nandana	7 Āvina
4093	914	1049	398	166-67	991-92	25 Khara	27 Vyaya	...
4094	915	1050	399	167-68	*992-93	26 Nandana	28 Jaya	..
4095	916	1051	400	168-69	993-94	27 Vijaya	29 Manmatha	3 Jyēshtha

† 25 Khara was suppressed in the north by the *Brahma-Siddhanta* system, whether calculated by "true" or mean reckoning

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COMMENCEMENT OF THE

MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			Kal.
Day and month, A D	Week-day	Time of mean Mēsha-samkrānti	Day and month, A D	Week-day.	<i>a</i> (here= <i>t</i> , the index of the <i>tsth</i>)	
13	14	17	19	20	23	1
		H M S				
23 Mar (82)	3 Tues	20 10 30	22 Mar (81)	2 Mon	309 5185	4071
24 Mar (83)	5 Thur	2 22 39	11 Mar (70)	6 Fri	185 2364	4072
24 Mar (83)	6 Fri	8 34 48	28 Feb (59)	3 Tues	60 9598	4073
23 Mar (83)	0 Sat	14 46 57	18 Mar (78)	2 Mon	95 6416	4074
23 Mar (82)	1 Sun	20 59 6	8 Mar (67)	0 Sat.	309 9964	4075
24 Mar. (83)	3 Tues.	3 11 15	25 Feb (56)	4 Wed.	185-7198	4076
24 Mar (83)	4 Wed	9 23 24	16 Mar (75)	3 Tues	220 4016	4077
23 Mar (83)	5 Thur	15 35 33	4 Mar (64)	0 Sat.	96 1245	4078
23 Mar (82)	6 Fri	21 47 42	23 Mar (82)	6 Fri	130 8069	4079
24 Mar (83)	1 Sun	3 59 51	12 Mar (71)	3 Tues	6 5298	4080
24 Mar (83)	2 Mon	10 12 0	2 Mar (61)	1 Sun	220 8845	4081
23 Mar (83)	3 Tues	16 24 9	20 Mar (80)	0 Sat.	255 5669	4082
23 Mar (82)	4 Wed.	22 36 18	9 Mar. (68)	4 Wed	131 2898	4083
24 Mar (83)	6 Fri	4 48 27	26 Feb (57)	1 Sun.	7 0127	4084
24 Mar (83)	0 Sat.	11 0 36	17 Mar (76)	0 Sat.	41 6950	4085
23 Mar (83)	1 Sun.	17 12 45	6 Mar (66)	5 Thur	258 0499	4086
23 Mar. (82)	2 Mon	23 24 54	23 Feb (54)	2 Mon	131-7727	4087
24 Mar (83)	4 Wed	5 37 3	14 Mar (73)	1 Sun.	166 4550	4088
24 Mar (83)	5 Thur	11 49 12	3 Mar (62)	5 Thur	42 1779	4089
23 Mar (83)	6 Fri.	18 1 21	21 Mar. (81)	4 Wed	76 8603	4090
24 Mar (83)	1 Sun	0 13 30	11 Mar (70)	2 Mon.	291 2152	4091
24 Mar (83)	2 Mon.	6 25 39	23 Feb (59)	6 Fri.	166 9398	4092
24 Mar (83)	3 Tues.	12 37 48	19 Mar (78)	5 Thur	201-6204	4093
23 Mar (83)	4 Wed.	18 49 57	7 Mar (67)	2 Mon.	77 8432	4094
24 Mar (83)	6 Fri.	1 2 6	25 Feb (56)	0 Sat.	291-6980	4095

TABLE

CONCURRENT YEAR								Mean intercalate I (adhika) lunar month
Kal.	Saka	Chaitrādi Vikrama.	Mēshādi solar year in Bengal	Kollam	A.D	JOVIAN SAMVATSARA		
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
4096	917	1052	401	169-70	994-95	28 Jaya	30 <i>Durmukha</i>	...
4097	918	1053	402	170 71	995 96	29 Manmatha	31 Hēmalamba	12 Pūlguṇa
4098	919	1054	403	171-72	*996-97	30 <i>Durmukha</i>	32 Vilamba	.
4099	920	1055	404	172-73	997-98	31 Hēmalamba	33 Vikārin .	
4100	921	1056	405	173 74	998-99	32 Vilamba	34 Śārvarin	8 Kārttika
4101	922	1057	406	174 75	999 1000	33 Vikārin	35 Plava	
4102	923	1058	407	175-76	*1000 01	34 Śārvarin	36 Śubhakṛit	
4103	924	1059	408	176 77	1001-02	35 Plava	37 Śōbhana	5 Śrāvana
4104	925	1060	409	177-78	1002-03	36 Śubhakṛit	38 Krōdhin	
4105	926	1061	410	178-79	1003 04	37 Śōbhana	39 Visvāvasu	...
4106	927	1062	411	179 80	*1004-05	38 Krōdhin	40 Parābhava	1 Chaitra
4107	928	1063	412	180 81	1005-06	39 Visvāvasu	41 Plavanga	..
4108	929	1064	413	181-82	1006-07	40 Parābhava	42 Kilaka	10 Pausha
4109	930	1065	414	182-83	1007-08	41 Plavanga	43 Saumya	..
4110	931	1066	415	183 84	*1008 09	42 Kilaka	44 Sādhārana	...
4111	932	1067	416	184 85	1009-10	43 Saumya .	45 Virōdhakṛit	7 Āśvina†
4112	933	1068	417	185 86	1010-11	44 Sādhārana	46 Paradhāvin	..
4113	934	1069	418	186-87	1011-12	45 Virōdhakṛit	47 Pramādin	..
4114	935	1070	419	187-88	*1012-13	46 Paradhāvin	48 Ānanda	3 Jyēshtha
4115	936	1071	420	188-89	1013-14	47 Pramādin	49 Rākshasa	
4116	937	1072	421	189-90	1014-15	48 Ānanda	50 Anala	12 Phālguna
4117	938	1073	422	190-91	1015 16	49 Rākshasa	51 Pīngala	
4118	939	1074	423	191-92	*1016-17	50 Anala .	52 Kālayukta	
4119	940	1075	424	192-93	1017-18	51 Pīngala .	53 Siddhārthin	8 Kārttika
4120	941	1076	425	193-94	1018 19	52 Kālayukta	54 Randra

† See "Remarks," p 215 above

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COMMENCEMENT OF THE						
MEAN SOLAR YEAR			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA SUKLA 1 FALLS)			Kali
Day and month, A D	Week-day.	Time of mean Mēsha-samkrānti	Day and month, A D	Week-day	a (here = t , the index of the $tithi$)	
13	14	H M S	19	20	23	
24 Mar (83)	0 Sat	7 14 15	16 Mar (75)	6 Fri	326 3804	4096
24 Mar (83)	1 Sun	13 26 24	5 Mar (64)	3 Tues	202 1033	4097
23 Mar (83)	2 Mon	19 38 33	23 Mar (83)	2 Mon	236 7856	4098
24 Mar (83)	4 Wed	1 50 42	12 Mar (71)	6 Fri	112 5085	4099
24 Mar (83)	5 Thur	8 2 51	2 Mar (61)	4 Wed	326 8633	4100
24 Mar (83)	6 Fri	14 15 0	20 Mar (79)	2 Mon.	22 9136	4101
23 Mar (83)	0 Sat	20 27 9	9 Mar (69)	0 Sat	237 2685	4102
24 Mar (83)	2 Mon	2 39 18	26 Feb (57)	4 Wed	112 9914	4103
24 Mar (83)	3 Tues	8 51 27	17 Mar (76)	3 Tues	147 6737	4104
24 Mar (83)	4 Wed.	15 3 36	6 Mar (65)	0 Sat	23 3966	4105
23 Mar (83)	5 Thur	21 15 45	24 Feb (55)	5 Thur	237 7514	4106
24 Mar (83)	0 Sat.	3 27 54	14 Mar (73)	4 Wed	272 4338	4107
24 Mar (83)	1 Sun	9 40 3	3 Mar (62)	1 Sun	148 1566	4108
24 Mar (83)	2 Mon	15 52 12	22 Mar (81)	0 Sat	182 8390	4109
23 Mar (83)	3 Tues	22 4 21	10 Mar (70)	4 Wed	58 5618	4110
24 Mar (83)	5 Thur	4 16 30	28 Feb (59)	2 Mon	272 9167	4111
24 Mar (83)	6 Fri	10 28 39	19 Mar (78)	1 Sun	307 5991	4112
24 Mar (83)	0 Sat	16 40 48	8 Mar (67)	5 Thur	183 3219	4113
23 Mar (83)	1 Sun	22 52 57	25 Feb (56)	2 Mon	59 0447	4114
24 Mar (83)	3 Tues	5 5 6	15 Mar (74)	1 Sun	93 7270	4115
24 Mar (83)	4 Wed	11 17 15	5 Mar (64)	6 Fri	808 0820	4116
24 Mar (83)	5 Thur	17 29 24	23 Mar (82)	4 Wed	4 1323	4117
23 Mar (83)	6 Fri.	23 41 33	12 Mar (72)	2 Mon	216 4872	4118
24 Mar (83)	1 Sun	5 53 42	1 Mar (60)	6 Fri	94 2100	4119
24 Mar (83)	2 Mon	12 5 51	20 Mar (79)	5 Thur	128 8024	4120

TABLE

CONCURRENT YEAR.

Kalī	Śaka	Chaitrīdi Vikrama	Mēshādi solar year in Pongal	Kollam	A.D.	JOVIAN SAMVATARA.		Mean intercalated (adhikā) lunar month
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
4121	942	1077	426	194-95	1019-20	53 Siddhārthun	55 Durmatī .	
4122	943	1078	427	195-96	*1020-21	54 Raudra .	56 Dundubhī	5 Śrāvana .
4123	944	1079	428	196-97	1021-22	55 Durmatī .	57 Rudhirōdgārūn .	
4124	945	1080	429	197-98	1022-23	56 Dundubhī	58 Raktāksha	
4125	946	1081	430	198-99	1023-24	57 Rudhirōdgārūn	59 Krōdhana .	1 Chaitra .
4126	947	1082	431	199-200	*1024-25	58 Raktāksha .	60 Kshaya	
4127	948	1083	432	200-01	1025-26	59 Krōdhana	1 Prabhava .	10 Pausa .
4128	949	1084	433	201-02	1026-27	60 Kshaya	2 Vibhava	..
4129	950	1085	434	202-03	1027-28	1 Prabhava	3 Śukla	
4130	951	1086	435	203-04	*1028-29	2 Vibhava .	4 Pramōda	6 Bhādrapada
4131	952	1087	436	204-05	1029-30	3 Śukla .	5 Prajāpatī	
4132	953	1088	437	205-06	1030-31	4 Pramōda .	6 Angaras	
4133	954	1089	438	206-07	1031-32	5 Prajāpatī	7 Śrīmukha .	3 Jyēsthā
4134	955	1090	439	207-08	*1032-33	6 Angaras	8 Bhāva .	
4135	956	1091	440	208-09	1033-34	7 Śrīmukha	9 Yuvan .	11 Māgha .
4136	957	1092	441	209-10	1034-35	8 Bhāva .	10 Dhātī .	
4137	958	1093	442	210-11	1035-36	9 Yuvan .	11 Īsvara .	
4138	959	1094	443	211-12	*1036-37	10 Dhātī .	12 Bahudhānya	8 Kārttika .
4139	960	1095	444	212-13	1037-38	11 Īsvara .	13 Pramāthun	
4140	961	1096	445	213-14	1038-39	12 Bahudhānya	14 Vikrama	
4141	962	1097	446	214-15	1039-40	13 Pramāthun	15 Vṛṣha .	4 Āshādhā .
4142	963	1098	447	215-16	*1040-41	14 Vikrama .	16 Chitrabhānu	..
4143	964	1099	448	216-17	1041-42	15 Vṛṣha .	17 Subhānu	...
4144	965	1100	449	217-18	1042-43	16 Chitrabhānu	18 Tārana .	1 Chaitra
4145	966	1101	450	218-19	1043-44	17 Subhānu .	19 Pārthiva	...

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COMMENCEMENT OF THE

MEAN SOLAR YEAR			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			Kali
Day and month, A D	Week-day	Time of mean Mīśha-samkrānti	Day and month, A D	Week day	α (here = t , the index of the <i>śukla</i>)	
13	14	17	19	20	23	1
		II N S				
24 Mar (83)	3 Tues	18 18 0	9 Mar (68)	2 Mon	4 6181	4121
21 Mar (84)	5 Thur	0 30 9	27 Feb (58)	0 Sat	218 9701	4122
21 Mar (83)	6 Fri	6 42 18	17 Mar (76)	6 Fri	258 6525	4123
24 Mar (83)	0 Sat	12 51 27	6 Mar (65)	3 Tues	120 3753	4124
21 Mar (83)	1 Sun	19 6 36	23 Feb (54)	0 Sat	5 0981	4125
24 Mar (84)	3 Tues	1 18 45	18 Mar (73)	6 Fri	39 7806	4126
24 Mar (83)	4 Wed	7 30 54	3 Mar (62)	4 Wed	254 1354	4127
24 Mar (83)	5 Thur	13 43 3	22 Mar (81)	3 Tues	288 8177	4128
24 Mar (83)	6 Fri	19 55 12	11 Mar (70)	0 Sat	164 5406	4129
24 Mar (84)	1 Sun	2 7 21	28 Feb (59)	4 Wed	40 2635	4130
24 Mar (83)	2 Mon	8 19 30	18 Mar (77)	3 Tues	74 9458	4131
24 Mar (83)	3 Tues	14 31 39	8 Mar (67)	1 Sun	230 3006	4132
24 Mar (83)	4 Wed.	20 43 48	25 Feb (56)	5 Thur	165 0235	4133
24 Mar (84)	6 Fri	2 55 57	15 Mar (75)	4 Wed	199 7059	4134
24 Mar (83)	0 Sat	9 8 6	4 Mar. (63)	1 Sun	75 4287	4135
24 Mar (83)	1 Sun	15 20 15	23 Mar (82)	0 Sat	110 1111	4136
24 Mar (83)	2 Mon	21 32 24	13 Mar (72)	5 Thur	324 4660	4137
24 Mar (84)	4 Wed	3 44 33	1 Mar (61)	2 Mon	200 1888	4138
24 Mar (83)	5 Thur	9 56 42	20 Mar (79)	1 Sun	234 8712	4139
24 Mar (83)	6 Fri	16 8 51	9 Mar (68)	5 Thur	110 5940	4140
24 Mar (83)	0 Sat	22 21 0	27 Feb (58)	3 Tues	324 9489	4141
24 Mar (84)	2 Mon	4 33 9	16 Mar (76)	1 Sun	20 9992	4142
24 Mar (83)	3 Tues	10 45 18	6 Mar (65)	6 Fri.	235 3541	4143
24 Mar (83)	4 Wed	16 57 27	23 Feb (54)	3 Tues	111 0793	4144
24 Mar (83)	5 Thur	23 9 36	14 Mar (73)	2 Mon	145 7593	4145

TABLE

CONCURRENT YEAR								Mean intercalated (adhika) lunar month
Kan	Saka	Chaitra Vikram	Muhūrti solar year in Bengal	Ko'lam	A.D	Jovian Samvatsara		
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8z
4146	967	1102	451	219 20	*1014 45	18 Tārana	20 Vyaya	9 Mārgasīra
4147	968	1103	452	220 21	1015 16	19 Pārthiva	21 Sarvajit	.
4148	969	1104	453	221-22	1016-47	20 Vyaya	22 Sarvadhārin	.
4149	970	1105	454	222-23	1017-48	21 Sarvajit	23 Virōdhan	6 Bhādrapada
4150	971	1106	455	223 24	*1018 49	22 Sarvadhārin	24 Vikṛita	.
4151	972	1107	456	224-25	1019 50	23 Virōdhan	25 Khara	...
4152	973	1108	457	225 26	1050-51	24 Vikṛita	26 Nandana	3 Jyēsthā
4153	974	1109	458	226-27	1051-52	25 Khara	27 Vijaya	.
4154	975	1110	459	227-28	*1052 53	26 Nandana	28 Jaya	11 Māgha
4155	976	1111	460	228-29	1053 54	27 Vijaya	29 Manmatha	...
4156	977	1112	461	229 30	1054-55	28 Jaya	30 Darmukha	...
4157	978	1113	462	230-31	1055-56	29 Manmatha	31 Hēmalamba	8 Kārttika
4158	979	1114	463	231-32	*1056-57	30 Darmukha	32 Vilamba	...
4159	980	1115	464	232-33	1057-58	31 Hēmalamba	33 Vikārin	.
4160	981	1116	465	233-34	1058 59	32 Vilamba	34 Śārvarin	4 Āshādha
4161	982	1117	466	234-35	1059-60	33 Vikārin	35 Plava	.
4162	983	1118	467	235-36	*1060 61	34 Śārvarin	36 Śubhaljit	..
4163	984	1119	468	236 37	1061-62	35 Plava	37 Śōbhana	1 Chaitra
4164	985	1120	469	237-38	1062 63	36 Śubhaljit	38 Krōdhan	..
4165	986	1121	470	238-39	1063-64	37 Śōbhana	39 Viśvāvasu	9 Mārgasīra
4166	987	1122	471	239 40	*1064-65	38 Krōdhan	40 Parābhava	.
4167	988	1123	472	240-41	1065-66	39 Viśvāvasu	41 Plavanga	.
4168	989	1124	473	241-42	1066-67	40 Parābhava	42 Kīlaka	6 Bhādrapada
4169	990	1125	474	242-43	1067-68	41 Plavanga	43 Saumya	...
4170	991	1126	475	243-44	*1068-69	42 Kīlaka	44 Sadhārana	...

XC—contd.

COMMENCEMENT OF THE						
MEAN SOLAR YEAR			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			Kalā
Day and month, A.D.	Week-day	Time of mean Mēsha-samkrānti.	Day and month, A.D.	Week-day.	α (here = t , the index of the t/λ)	
13	14	17	19	20	23	1
		H M S				
24 Mar (84)	0 Sat.	5 21 45	2 Mar (62)	6 Fri.	21 4821	4146
24 Mar (83)	1 Sun	11 38 54	21 Mar (80)	5 Thur	56 1645	4147
24 Mar (83)	2 Mon.	17 46 3	11 Mar (70)	3 Tues	270 5194	4148
24 Mar (83)	3 Tues	23 58 12	28 Feb (59)	0 Sat.	146 2422	4149
24 Mar (84)	5 Thur	6 10 21	18 Mar (78)	6 Fri	180 9246	4150
24 Mar (83)	6 Fri	12 22 30	7 Mar (66)	3 Tues	56 6475	4151
24 Mar (83)	0 Sat.	18 34 39	25 Feb (56)	1 Sun	271 0023	4152
25 Mar (84)	2 Mon	0 46 48	16 Mar (75)	0 Sat.	305 6846	4153
24 Mar (84)	3 Tues	6 58 57	4 Mar (64)	4 Wed.	181 4075	4154
24 Mar (83)	4 Wed	13 11 6	23 Mar (82)	3 Tues	216 0899	4155
24 Mar (83)	5 Thur	19 23 15	12 Mar (71)	0 Sat.	91 8127	4156
25 Mar (84)	0 Sat.	1 35 24	2 Mar. (61)	5 Thur	306 1675	4157
24 Mar (84)	1 Sun	7 47 33	19 Mar (79)	3 Tues	2 2180	4158
24 Mar (83)	2 Mon	13 59 42	9 Mar. (68)	1 Sun	216 5723	4159
24 Mar (83)	3 Tues	20 11 51	26 Feb. (57)	5 Thur	92 2956	4160
25 Mar (84)	5 Thur	2 24 0	17 Mar (76)	4 Wed	126 9780	4161
24 Mar (84)	6 Fri	8 36 9	5 Mar. (65)	1 Sun.	2 7009	4162
24 Mar (83)	0 Sat.	14 48 18	23 Feb (54)	6 Fri.	217 0556	4163
24 Mar. (83)	1 Sun	21 0 27	14 Mar (73)	5 Thur.	251-7380	4164
25 Mar (84)	3 Tues.	8 13 36	3 Mar (62)	2 Mon.	127 4809	4165
24 Mar (84)	4 Wed	9 24 45	21 Mar (81)	1 Sun.	162 1433	4166
24 Mar (83)	5 Thur.	15 36 54	10 Mar. (69)	5 Thur.	37 8661	4167
24 Mar (83)	6 Fri	21 49 3	28 Feb (59)	3 Tues.	252 2210	4168
25 Mar (84)	1 Sun	4 1 12	19 Mar. (78)	2 Mon.	236 9054	4169
24 Mar. (84)	2 Mon.	10 13 21	7 Mar. (67)	6 Fri.	162 6262	4170

TABLE

CONCURRENT YEAR								
Kal.	Śaka	Chakrādi Vikram.	Māshī solār y ear in Bengal.	Kollam	A.D	JUVIAN SAMVATSARA		Mean intercalated (adhīṭa) lunar month
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
4171	992	1127	476	244-45	1069-70	43 Saumya	45 Virōdhakṛt	2 Vaiśākha
4172	993	1128	477	245-46	1070-71	44 Sādhārana	46 Paridhāvin	.
4173	994	1129	478	246-47	1071-72	45 Virōdhakṛt	47 Pramādin	11 Māgha
4174	995	1130	479	247-48	*1072-73	46 Paridhāvin	48 Ānanda	.
4175	996	1131	480	248-49	1073-74	47 Pramādin	49 Rākshasa	.
4176	997	1132	481	249-50	1074-75	48 Ānanda	50 Anala†	7 Āśvina
4177	998	1133	482	250-51	1075-76	49 Rākshasa	52 Kālayukta	.
4178	999	1134	483	251-52	*1076-77	50 Anala	53 Siddhārthin	.
4179	1000	1135	484	252-53	1077-78	51 Pingala	54 Raudra	4 Āshādha
4180	1001	1136	485	253-54	1078-79	52 Kālayukta	55 Durmatī	...
4181	1002	1137	486	254-55	1079-80	53 Siddhārthin	56 Dundubhī	12 Phālguna
4182	1003	1138	487	255-56	*1080-81	54 Raudra	57 Rudhirōdgārīn	...
4183	1004	1139	488	256-57	1081-82	55 Durmatī	58 Raktāksha	.
4184	1005	1140	489	257-58	1082-83	56 Dundubhī	59 Krōdhana	9 Mārgasīra
4185	1006	1141	490	258-59	1083-84	57 Rudhirōdgārīn	60 Kshaya	.
4186	1007	1142	491	259-60	*1084-85	58 Raktāksha	1 Prabhava	.
4187	1008	1143	492	260-61	1085-86	59 Krōdhana	2 Vibhava	6 Bhādrapada
4188	1009	1144	493	261-62	1086-87	60 Kshaya	3 Śukla	...
4189	1010	1145	494	262-63	1087-88	1 Prabhava	4 Pramōda	.
4190	1011	1146	495	263-64	*1088-89	2 Vibhava	5 Prajāpati	2 Vaiśākha
4191	1012	1147	496	264-65	1089-90	3 Śukla	6 Angiras	..
4192	1013	1148	497	265-66	1090-91	4 Pramōda	7 Śrīmukha	11 Māgha
4193	1014	1149	498	266-67	1091-92	5 Prajāpati	8 Bhāva	...
4194	1015	1150	499	267-68	*1092-93	6 Angiras	9 Yuvan	..
4195	1016	1151	500	268-69	1093-94	7 Śrīmukha	10 Dhātṛ	7 Āśvina

† 51 Pingala was suppressed in the north, according to both "true" and mean systems, in *Brahma-Śiddhānta* reckoning

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COMMENCEMENT OF THE						
MEAN SOLAR YEAR			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS)			Kalā
Day and month, A.D	Week day	Time of mean M̄c̄ha-samkrānti	Day and month, A.D	Week-day.	a (here = t, the index of the tithi)	
13	14	17	19	20	23	1
		H M S				
24 Mar (83)	3 Tues	16 25 30	24 Feb (55)	3 Tues	38 3490	4171
21 Mar. (83)	4 Wed.	22 37 39	15 Mar. (74)	2 Mon	73 0314	4172
25 Mar (84)	6 Fri	4 49 48	5 Mar (64)	0 Sat	287 3863	4173
24 Mar. (84)	0 Sat	11 1 57	23 Mar. (83)	6 Fri	322 0686	4174
24 Mar (83)	1 Sun	17 14 6	12 Mar (71)	3 Tues	197 7915	4175
24 Mar (83)	2 Mon	23 26 15	1 Mar (60)	0 Sat	73 5143	4176
25 Mar. (84)	4 Wed.	5 38 24	20 Mar (79)	6 Fri	106 1967	4177
24 Mar (84)	5 Thur	11 50 33	9 Mar (69)	4 Wed	322 5515	4178
24 Mar (83)	0 Fri	18 2 42	26 Feb (57)	1 Sun	198 2744	4179
25 Mar. (84)	1 Sun	0 14 51	17 Mar (75)	0 Sat	232 9568	4180
25 Mar (84)	2 Mon	6 27 0	6 Mar (65)	4 Wed	108 6796	4181
24 Mar. (84)	3 Tues	12 39 9	24 Mar (84)	3 Tues	143 3620	4182
24 Mar (83)	4 Wed	18 51 18	13 Mar (72)	0 Sat	19 0848	4183
25 Mar (84)	6 Fri	1 3 27	3 Mar. (62)	5 Thur	233 4397	4184
25 Mar. (84)	0 Sat.	7 15 36	22 Mar. (81)	4 Wed	268 1220	4185
24 Mar (84)	1 Sun	13 27 45	10 Mar (70)	1 Sun	143 8449	4186
24 Mar (83)	2 Mon	10 39 54	27 Feb (58)	5 Thur	19 5678	4187
25 Mar. (84)	4 Wed	1 52 3	18 Mar (77)	4 Wed.	54 2501	4188
25 Mar. (84)	5 Thur	8 4 12	8 Mar (67)	2 Mon	268 6050	4189
24 Mar. (84)	6 Fri	14 16 21	25 Feb (56)	6 Fri	144 3278	4190
24 Mar (83)	0 Sat	20 28 30	15 Mar (74)	5 Thur	179 0102	4191
25 Mar (84)	2 Mon.	2 40 39	4 Mar. (68)	2 Mon	54 7380	4192
25 Mar. (84)	3 Tues	8 52 48	23 Mar (82)	1 Sun.	89 4154	4193
24 Mar. (84)	4 Wed	15 4 57	12 Mar (72)	6 Fri	203 7703	4194
24 Mar. (83)	5 Thur.	21 17 6	1 Mar (60)	3 Tues	179 4930	4195

TABLE

CONCURRENT YEAR								Mean intercalated (adhika) lunar month
Kalī	Saka	Chaitrīdi Vikrama.	Mūhūrta solar year in Bengal	Kollam	A D	JOYIAN SAMYATBARA.		
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
4196	1017	1152	501	269-70	1094-95	8 Bhūva	11 Śīvara	
4197	1018	1153	502	270-71	1095-96	9 Yuvan	12 Bahudhānya	..
4198	1019	1154	503	271-72	*1096-97	10 Dhātṛi	13 Pramāthin	4 Āshūdha
4199	1020	1155	504	272-73	1097-98	11 Śīvara	14 Vikrama	.
4200	1021	1156	505	273-74	1098-99	12 Bahudhānya	15 Vṛisha	12 Phālguna
4201	1022	1157	506	274-75	1099-1100	13 Pramāthin	16 Chitrabhānu	
4202	1023	1158	507	275-76	*1100-01	14 Vikrama	17 Subhānu	.
4203	1024	1159	508	276-77	1101-02	15 Vṛisha	18 Tārana	9 Mārgasīra
4204	1025	1160	509	277-78	1102-03	16 Chitrabhānu	19 Pārthiva	...
4205	1026	1161	510	278-79	1103-04	17 Subhānu	20 Vyaya	..
4206	1027	1162	511	279-80	*1104-05	18 Tārana	21 Sarvajit	5 Śrāvana
4207	1028	1163	512	280-81	1105-06	19 Pārthiva	22 Sarvadhārin	...
4208	1029	1164	513	281-82	1106-07	20 Vyaya	23 Virōdhin	.
4209	1030	1165	514	282-83	1107-08	21 Sarvajit	24 Vikṛita	2 Vaisākha
4210	1031	1166	515	283-84	*1108-09	22 Sarvadhārin	25 Khara	..
4211	1032	1167	516	284-85	1109-10	23 Virōdhin	26 Nandana	10 Pausha
4212	1033	1168	517	285-86	1110-11	24 Vikṛita	27 Vijaya	...
4213	1034	1169	518	286-87	1111-12	25 Khara	28 Jaya	.
4214	1035	1170	519	287-88	*1112-13	26 Nandana	29 Manmatha	7 Āśvina
4215	1036	1171	520	288-89	1113-14	27 Vijaya	30 Darmukha	.
4216	1037	1172	521	289-90	1114-15	28 Jaya	31 Hēmalamba	.
4217	1038	1173	522	290-91	1115-16	29 Manmatha	32 Vilamba	3 Jyēsthā
4218	1039	1174	523	291-92	*1116-17	30 Darmukha	33 Vikārin	...
4219	1040	1175	524	292-93	1117-18	31 Hēmalamba	34 Śārvarin	12 Phālguna
4220	1041	1176	525	293-94	1118-19	32 Vilamba	35 Plava	..

XC—contd

COMMENCEMENT OF THE

MEAN SOLAR YEAR			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			Kali.
Day and month, A.D.	Week-day	Time of mean Mēśha-samkrānti	Day and month, A.D.	Week-day	α (here= t , the index of the t th)	
13	14	H M S	19	20	23	1
25 Mar (84) . . .	0 Sat.	8 29 15	20 Mar (79)	2 Mon	214 1755	4196
25 Mar (84) . . .	1 Sun	9 41 24	9 Mar (68) . . .	6 Fri	89 8988	4197
24 Mar (84) . . .	2 Mon . . .	15 53 33	27 Feb (58) . . .	4 Wed. . .	304 2581	4198
24 Mar (83)	3 Tues . . .	22 5 42	16 Mar (75) . . .	2 Mon.	0 8035	4199
25 Mar (84) . . .	5 Thur	4 17 51	6 Mar (65)	0 Sat. . .	214 6584	4200
25 Mar (84) . . .	6 Fri	10 30 0	25 Mar (84)	6 Fri . . .	249 3408	4201
24 Mar (84) . . .	0 Sat. . .	16 42 9	13 Mar (73)	3 Tues . . .	125 0687	4202
24 Mar (83) . . .	1 Sun . . .	22 54 18	2 Mar (61)	0 Sat.	0 7865	4203
25 Mar (84) . . .	3 Tues	5 6 27	21 Mar (80)	6 Fri	35 4689	4204
25 Mar (84)	4 Wed	11 18 36	11 Mar (70) . . .	4 Wed. . .	249 8237	4205
24 Mar (84) . . .	5 Thur	17 30 45	28 Feb (59) . . .	1 Sun.	125 5466	4206
24 Mar (83) . . .	6 Fri . . .	23 42 54	18 Mar. (77)	0 Sat. . .	160 2289	4207
25 Mar (84)	1 Sun	5 55 3	7 Mar. (66) . . .	4 Wed	35-9518	4208
25 Mar (84) . . .	2 Mon . . .	12 7 12	25 Feb (56) . . .	2 Mon	250 8066	4209
24 Mar (84) . . .	3 Tues . . .	18 19 21	15 Mar. (75)	1 Sun. . .	284 9889	4210
25 Mar (84)	5 Thur	0 31 30	4 Mar (63)	5 Thur . . .	160 7118	4211
25 Mar (84) . . .	6 Fri . . .	6 43 39	23 Mar (82) . . .	4 Wed.	195 3942	4212
25 Mar (84) . . .	0 Sat.	12 55 48	12 Mar (71)	1 Sun . . .	71 1171	4213
24 Mar (84) . . .	1 Sun . . .	19 7 57	1 Mar (61)	6 Fri. . .	285 4718	4214
25 Mar (84) . . .	3 Tues	1 20 6	20 Mar (79)	5 Thur . . .	320 1543	4215
25 Mar. (84)	4 Wed . . .	7 32 15	9 Mar (68)	2 Mon	195 8771	4216
25 Mar (84) . . .	5 Thur . . .	13 44 24	26 Feb (57) . . .	6 Fri. . .	71 5999	4217
24 Mar (84) . . .	6 Fri	19 56 33	16 Mar (76) . . .	5 Thur . . .	106 2823	4218
25 Mar. (84) . . .	1 Sun . . .	2 8 42	6 Mar (65) . . .	3 Tues . . .	320 6872	4219
25 Mar (84) . . .	2 Mon . . .	8 20 51	24 Mar. (83) . . .	1 Sun . . .	16 6876	4220

TABLE

CONCURRENT YEAR.								
Kalī	Śaka	Chaitrāñī Vikrama.	Mehādī solar year in Bongal	Kollam	A.D.	JUVIAN SAMVATSARA		Mean intercalated (adhika) lunar month
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
4221	1042	1177	526	294-95	1119-20	33 Vikārin	36 Śubhakṛt	..
4222	1043	1178	527	295-96	*1120-21	34 Śārvarin	37 Śōbhana	8 Kārttika
4223	1044	1179	528	296-97	1121-22	35 Plava	38 Krōdhin	...
4224	1045	1180	529	297-98	1122-23	36 Śubhakṛt	39 Viśvāvasu	.
4225	1046	1181	530	298-99	1123-24	37 Śōbhana	40 Parābhava	5 Srāvana
4226	1047	1182	531	299-300	*1124-25	38 Krōdhin	41 Plavanga	...
4227	1048	1183	532	300-01	1125-26	39 Viśvāvasu	42 Kilaka	.
4228	1049	1184	533	301-02	1126-27	40 Parābhava	43 Saumya	2 Vaiśākha
4229	1050	1185	534	302-03	1127-28	41 Plavanga	44 Sādhāvana	
4230	1051	1186	535	303-04	*1128-29	42 Kilaka	45 Virōdhakṛt	10 Pausa
4231	1052	1187	536	304-05	1129-30	43 Saumya	46 Paridhāvin	...
4232	1053	1188	537	305-06	1130-31	44 Sādhāvana	47 Pramādin	.
4233	1054	1189	538	306-07	1131-32	45 Virōdhakṛt	48 Ānanda	7 Āśvina
4234	1055	1190	539	307-08	*1132-33	46 Paridhāvin	49 Rāksasa	.
4235	1056	1191	540	308-09	1133-34	47 Pramādin	50 Ānala	.
4236	1057	1192	541	309-10	1134-35	48 Ānanda	51 Pingala	3 Jyēshtha
4237	1058	1193	542	310-11	1135-36	49 Rāksasa	52 Kālayukta	.
4238	1059	1194	543	311-12	*1136-37	50 Ānala	53 Siddhārthin	12 Phālguna
4239	1060	1195	544	312-13	1137-38	51 Pingala	54 Raudra	...
4240	1061	1196	545	313-14	1138-39	52 Kālayukta	55 Durmatī	.
4241	1062	1197	546	314-15	1139-40	53 Siddhārthin	56 Dandabhī	8 Kārttika
4242	1063	1198	547	315-16	*1140-41	54 Raudra	57 Rudhirōdgārin	
4243	1064	1199	548	316-17	1141-42	55 Durmatī	58 Raktāksha	
4244	1065	1200	549	317-18	1142-43	56 Dandabhī	59 Krōdhana	5 Srāvana
4245	1066	1201	550	318-19	1143-44	57 Rudhirōdgārin	60 Kshaya	...

XC—contd

COMMENCEMENT OF THE						
MEAN SOLAR YEAR			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS)			Kali.
Day and month, A.D	Week-day	Time of mean Mēsha-samkrānti	Day and month, A.D	Week-day	a (here = t, the index of the t/A)	
13	14	17	19	20	23	1
		H M S				
25 Mar (84)	3 Tues	11 33 0	14 Mar (78)	6 Fri	231-0424	4221
24 Mar (84)	4 Wed.	20 45 9	2 Mar (82)	3 Tues	106-7652	4222
25 Mar. (84)	6 Fri.	2 57 18	21 Mar (80)	2 Mon.	141 4477	4223
25 Mar (84)	0 Sat.	9 9 27	10 Mar (80)	6 Fri	17-1704	4224
25 Mar (84)	1 Sun.	15 21 36	23 Feb (89)	4 Wed	231 5253	4225
24 Mar (84)	2 Mon	21 33 45	18 Mar (78)	3 Tues.	266 2077	4226
25 Mar (84)	4 Wed.	3 45 54	7 Mar (86)	0 Sat.	141-9306	4227
25 Mar. (84)	5 Thurs	9 58 3	24 Feb (55)	4 Wed.	17 6533	4228
25 Mar (84)	6 Fri	16 10 12	15 Mar (74)	3 Tues.	52-3357	4229
24 Mar (84)	0 Sat.	22 22 21	4 Mar (64)	1 Sun	266 6906	4230
25 Mar. (84)	2 Mon.	4 34 30	23 Mar. (82)	0 Sat.	361 3729	4231
25 Mar (84)	3 Tues	10 46 39	12 Mar (71)	4 Wed.	177-0958	4232
25 Mar (84)	4 Wed.	16 58 48	1 Mar. (80)	1 Sun.	52-8186	4233
24 Mar (84)	5 Thurs.	23 10 57	19 Mar (79)	0 Sat	87-5011	4234
25 Mar (84)	0 Sat	5 23 6	9 Mar (68)	5 Thurs	301-8558	4235
25 Mar (84)	1 Sun	11 35 15	26 Feb (57)	2 Mon	177 5767	4236
25 Mar (84)	2 Mon	17 47 24	17 Mar (76)	1 Sun	212-2611	4237
24 Mar (84)	3 Tues	23 59 33	5 Mar (85)	5 Thurs	87-9349	4238
25 Mar. (84)	5 Thurs	6 11 42	24 Mar (83)	4 Wed	122-6663	4239
25 Mar (84)	6 Fri	12 23 51	13 Mar. (72)	1 Sun.	9998 3892 §	4240
25 Mar (84)	0 Sat	18 36 0	3 Mar (82)	6 Fri.	212-7440	4241
25 Mar. (85)	2 Mon	0 48 9	21 Mar (81)	5 Thurs.	247 4284	4242
25 Mar. (84)	3 Tues	7 0 18	10 Mar (69)	2 Mon	123-0492	4243
25 Mar. (84)	4 Wed	13 12 27	27 Feb (58)	6 Fri.	9998-8721 §	4244
25 Mar (84)	5 Thurs	19 24 36	18 Mar (77)	5 Thurs.	38 5545	4245

§ Chaitra sukla 1 was suppressed.

CONCURRENT YEAR								Mean intercalated (adhika) lunar month.
Kal.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam	A.D.	JOYIAN SAMVATBARA		
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
4246	1067	1202	551	319-20	*1144-45	58 Raktāksha	1 Prabhava	...
4247	1068	1203	552	320-21	1145-46	59 Krōdhana	2 Vibhava	1 Chaitra
4248	1069	1204	553	321-22	1146-47	60 Kshaya	3 Śukla	
4249	1070	1205	554	322-23	1147-48	1 Prabhava	4 Pramōda	10 Pausha
4250	1071	1206	555	323-24	*1148-49	2 Vibhava	5 Prajāpati	..
4251	1072	1207	556	324-25	1149-50	3 Śukla	6 Angiras	...
4252	1073	1208	557	325-26	1150-51	4 Pramōda	7 Śrīmukha	6 Bhādrapada
4253	1074	1209	558	326-27	1151-52	5 Prajāpati	8 Bhāva	..
4254	1075	1210	559	327-28	*1152-53	6 Angiras	9 Yuvan	
4255	1076	1211	560	328-29	1153-54	7 Śrīmukha	10 Dhātṛ	3 Jyēshtha
4256	1077	1212	561	329-30	1154-55	8 Bhāva	11 Ívara	..
4257	1078	1213	562	330-31	1155-56	9 Yuvan	12 Bahudhānya	11 Māgha
4258	1079	1214	563	331-32	*1156-57	10-Dhātṛ	13 Pramāthun	..
4259	1080	1215	564	332-33	1157-58	11 Ívara	14 Vikrama	
4260	1081	1216	565	333-34	1158-59	12 Bahudhānya	15 Vṛsha	8 Kārttika
4261	1082	1217	566	334-35	1159-60	13 Pramāthun	16 Chutrabhānu†	
4262	1083	1218	567	335-36	*1160-61	14 Vikrama	18 Tārana	..
4263	1084	1219	568	336-37	1161-62	15 Vṛsha	19 Pārthiva	5 Śrāvana
4264	1085	1220	569	337-38	1162-63	16 Chutrabhānu	20 Vyaya	..
4265	1086	1221	570	338-39	1163-64	17 Subhānu	21 Sarvaṣṭ	...
4266	1087	1222	571	339-40	*1164-65	18 Tārana	22 Sarvadhārin	1 Chaitra
4267	1088	1223	572	340-41	1165-66	19 Pārthiva	23 Virōdhin	
4268	1089	1224	573	341-42	1166-67	20 Vyaya	24 Vikṛta	10 Pausha
4269	1090	1225	574	342-43	1167-68	21 Sarvaṣṭ	25 Khara	..
4270	1091	1226	575	343-44	*1168-69	22 Sarvadhārin	26 Nandana	

† 17 Subhānu was suppressed in the north by the *Brahma-Siddhānta*, both in true and mean reckoning

XC—contd

COMMENCEMENT OF THE

MEAN SOLAR YEAR			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			Kali
Day and month, A.D.	Week-day	Time of mean Mēsha-sankrānti	Day and month, A.D.	Week day	α (No. = t , the index of the t th)	
13	14	17	19	20	23	1
		H. M. S.				
25 Mar. (85)	0 Sat.	1 36 45	7 Mar (67)	3 Tues.	247-9098	4248
25 Mar. (84)	1 Sun	7 48 54	24 Feb (55)	0 Sat.	123-6821	4247
25 Mar (84)	2 Mon	14 1 3	15 Mar. (74)	6 Fri.	158 8145	4248
25 Mar (84)	3 Tues.	20 13 12	4 Mar (68)	3 Tues.	84-0373	4249
25 Mar (85)	5 Thurs.	2 25 21	22 Mar (82)	2 Mon	68 7197	4250
25 Mar (84)	6 Fri.	8 37 30	12 Mar (71)	0 Sat.	283-0746	4251
25 Mar. (84)	0 Sat.	14 49 39	1 Mar. (60)	4 Wed.	158-7974	4252
25 Mar. (84)	1 Sun	21 1 48	20 Mar. (70)	3 Tues.	198 4798	4253
25 Mar (85)	3 Tues.	3 13 57	8 Mar (68)	0 Sat.	69 2026	4254
25 Mar (84)	4 Wed.	9 26 6	26 Feb (57)	5 Thur	283 5575	4255
25 Mar. (84)	5 Thur	15 38 15	17 Mar (70)	4 Wed	318 2398	4256
25 Mar. (84)	6 Fri	21 50 24	6 Mar (65)	1 Sun.	193 9627	4257
25 Mar (85)	1 Sun.	4 2 38	24 Mar (84)	0 Sat.	228-6451	4258
25 Mar. (84)	2 Mon	10 14 42	18 Mar (72)	4 Wed.	104-8680	4259
25 Mar. (84)	3 Tues	16 26 51	8 Mar. (62)	2 Mon.	318-7227	4260
25 Mar. (84)	4 Wed.	22 39 0	21 Mar (80)	0 Sat.	14-7781	4261
25 Mar (85)	6 Fri.	4 51 9	10 Mar. (70)	5 Thur	229 1280	4262
25 Mar (84)	0 Sat.	11 3 18	27 Feb (58)	2 Mon	104-8508	4263
25 Mar (84)	1 Sun.	17 16 27	18 Mar (77)	1 Sun.	189-5882	4264
25 Mar (84)	2 Mon	23 27 36	7 Mar. (66)	5 Thur.	15 2561	4265
25 Mar. (85)	4 Wed.	5 39 45	25 Feb (56)	3 Tues	229 6109	4266
25 Mar. (84)	5 Thur.	11 51 54	15 Mar (74)	2 Mon.	264 2382	4267
25 Mar. (84)	6 Fri.	18 4 3	4 Mar. (63)	6 Fri.	140-0141	4268
26 Mar. (85)	1 Sun	0 16 12	23 Mar. (82)	5 Tues	174-6565	4269
25 Mar. (85)	2 Mon.	6 28 21	11 Mar. (71)	2 Mon.	50-4218	4270

TABLE

CONCURRENT YEAR.								Mean intercalated (adhika) lunar month
Kali.	Śaka	Chaitrādi Vikrama.	Māghādi solar year in Bengal.	Kollam	A.D	JOVIAN SAMVATSARA.		
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
4271	1092	1227	576	344-45	1169-70	23 Virōdhin .	27 Vijaya .	6 Bhādrapada .
4272	1093	1228	577	345-46	1170-71	24 Vikṛta	28 Jaya .	.
4273	1094	1229	578	346-47	1171-72	25 Khara	29 Manmatha	.
4274	1095	1230	579	347-48	*1172-73	26 Nandana .	30 Durmukha .	3 Jyēshṭha .
4275	1096	1231	580	348-49	1173-74	27 Vijaya .	31 Hēmalamba .	.
4276	1097	1232	581	349-50	1174-75	28 Jaya .	32 Vilamba .	11 Māgha .
4277	1098	1233	582	350-51	1175-76	29 Manmatha .	33 Vikārin .	...
4278	1099	1234	583	351-52	*1176-77	30 Durmukha .	34 Śarvarin	.
4279	1100	1235	584	352-53	1177-78	31 Hēmalamba	35 Plava .	8 Kārttika .
4280	1101	1236	585	353-54	1178-79	32 Vilamba	36 Śubhakṛit	.
4281	1102	1237	586	354-55	1179-80	33 Vikārin	37 Śōbhana	.
4282	1103	1238	587	355-56	*1180-81	34 Śarvarin .	38 Krōdhin	4 Āshādha
4283	1104	1239	588	356-57	1181-82	35 Plava .	39 Viśvāvasu .	...
4284	1105	1240	589	357-58	1182-83	36 Śubhakṛit	40 Parābhava	.
4285	1106	1241	590	358-59	1183-84	37 Śōbhana .	41 Plavanga .	1 Chaitra .
4286	1107	1242	591	359-60	*1184-85	38 Krōdhin	42 Kilaka .	.
4287	1108	1243	592	360-61	1185-86	39 Viśvāvasu .	43 Saumya	9 Mārgaśira .
4288	1109	1244	593	361-62	1186-87	40 Parābhava	44 Sādharṣna	.
4289	1110	1245	594	362-63	1187-88	41 Plavanga .	45 Virōdhakṛit .	...
4290	1111	1246	595	363-64	*1188-89	42 Kilaka .	46 Paridhāvin	6 Bhādrapada .
4291	1112	1247	596	364-65	1189-90	43 Saumya .	47 Pramādin .	...
4292	1113	1248	597	365-66	1190-91	44 Sādharṣna	48 Ānanda	.
4293	1114	1249	598	366-67	1191-92	45 Virōdhakṛit .	49 Rākṣasa .	2 Vaiśākha .
4294	1115	1250	599	367-68	*1192-93	46 Paridhāvin .	50 Anala .	...
4295	1116	1251	600	368-69	1193-94	47 Pramādin .	51 Pīṅgalā .	11 Māgha .

XC—contd.

COMMENCEMENT OF THE						
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA SUKLA 1 E.D.S).			Kali
Day and month, A D	Week day	Time of mean Mēshasankrānti	Day and month, A D	Week-day	α (here = t , the index of the t_s/h_t)	
13	14	17	19	20	23	1
		H M S				
25 Mar (84) . . .	3 Tues	12 40 30	1 Mar (80)	0 Sat	264 7782	4271
25 Mar (84) . . .	4 Wed	18 52 39	20 Mar (79) . . .	6 Fri	290 4586	4272
26 Mar (85) . . .	6 Fri	1 4 48	9 Mar (88)	3 Tues	175 1815	4273
25 Mar (85) . . .	0 Sat.	7 16 57	28 Feb (87)	0 Sat . . .	50 9042	4274
25 Mar (84) . . .	1 Sun	13 29 6	16 Mar (75)	6 Fri	85 5866	4275
25 Mar (84) . . .	2 Mon	19 41 15	6 Mar (85)	4 Wed . . .	299 0415	4276
26 Mar (85) . . .	4 Wed	1 53 24	24 Mar (83)	2 Mon	9995 9918 §	4277
25 Mar (85) . . .	5 Thur	8 5 33	13 Mar (73)	0 Sat.	210 3467	4278
25 Mar (84) . . .	6 Fri	14 17 42	2 Mar (81)	4 Wed	86 0695	4279
25 Mar. (84) . . .	0 Sat.	20 29 51	21 Mar (80)	3 Tues	120 7519	4280
26 Mar (85)	2 Mon	2 48 0	10 Mar. (80)	0 Sat.	9990 4747 §	4281
25 Mar (85) . . .	3 Tues	8 54 9	28 Feb (80) . . .	5 Thur	210 8296	4282
25 Mar (84) . . .	4 Wed	15 6 18	18 Mar (77)	4 Wed.	245 5120	4283
25 Mar. (84) . . .	5 Thur	21 18 27	7 Mar (88)	1 Sun	121 2340	4284
26 Mar. (85)	0 Sat	3 30 36	24 Feb (85) . . .	5 Thur.	9996 9576 §	4285
25 Mar (85) . . .	1 Sun	9 42 45	14 Mar. (74)	4 Wed . . .	81 6400	4286
25 Mar. (84) . . .	2 Mon	15 54 54	4 Mar (83)	2 Mon	245 9949	4287
25 Mar. (84) . . .	3 Tues	22 7 3	23 Mar (82)	1 Sun . . .	280 6772	4288
26 Mar (85) . . .	5 Thur	4 19 12	12 Mar (71)	5 Thur	156 4061	4289
25 Mar (85) . . .	6 Fri	10 31 21	29 Feb (80)	2 Mon	32 1230	4290
25 Mar. (84) . . .	0 Sat	16 43 30	19 Mar (78) . . .	1 Sun. . .	66 8054	4291
25 Mar. (84) . . .	1 Sun	22 55 39	9 Mar (88)	6 Fri . . .	281 1602	4292
26 Mar. (85)	3 Tues . . .	5 7 48	28 Feb (87)	3 Tues	156 8830	4293
25 Mar (85) . . .	4 Wed.	11 19 57	16 Mar (76) . . .	2 Mon . . .	191 5654	4294
25 Mar. (84) . . .	6 Thur	17 32 6	5 Mar (84) . . .	6 Fri.	67 2882	4295

§ Chaitra sukla 1 was suppressed

TABLE

CONCURRENT YEAR

Kal.	Śaka.	Chaitāñi Vikram.	M'chidi solar year in Bengal	Kollam	A D	JOVIAN SAMVATSARA.		Mean intercalated (adhika) lunar month.
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
4226	1117	1252	601	369-70	1194-95	48 Ānanda .	52 Kālayukta .	.
4227	1118	1253	602	370-71	1195-96	49 Rākshasa	53 Siddhārthin .	.
4228	1119	1254	603	371-72	*1196-97	50 Anala	54 Raudra	8 Kārttika †
4229	1120	1255	604	372-73	1197-98	51 Pūngala .	55 Durmatī	..
4200	1121	1256	605	373-74	1198-99	52 Kālayukta	56 Dundubhi	.
4201	1122	1257	606	374-75	1199-1200	53 Siddhārthin	57 Rudhūrōdgārin	4 Āshādha .
4302	1123	1258	607	375-76	*1200-01	54 Raudra	58 Raktāksha .	.
4203	1124	1259	608	376-77	1201-02	55 Durmatī	59 Krōdhana	.
4304	1125	1260	609	377-78	1202-03	56 Dundubhi	60 Kshaya	1 Chaitra
4305	1126	1261	610	378-79	1203-04	57 Rudhūrōdgārin	1 Prabhava	.
4306	1127	1262	611	379-80	*1204-05	58 Raktāksha	2 Vibhava	9 Mārgasīra
4307	1128	1263	612	380-81	1205-06	59 Krōdhana .	3 Sukla .	..
4308	1129	1264	613	381-82	1206-07	60 Kshaya .	4 Pramōda	..
4309	1120	1265	614	382-83	1207-08	1 Prabhava .	5 Prajāpati	6 Bhādrapada
4310	1131	1266	615	383-84	*1208-09	2 Vibhava .	6 Angiras	.
4311	1132	1267	616	384-85	1209-10	3 Śukla	7 Śrīmukha	..
4312	1133	1268	617	385-86	1210-11	4 Pramōda .	8 Bhāva	2 Vaiśākha
4313	1134	1269	618	386-87	1211-12	5 Prajāpati	9 Yuvan	..
4314	1135	1270	619	387-88	*1212-13	6 Angiras .	10 Dhātṛ .	11 Māgha
4215	1136	1271	620	388-89	1213-14	7 Śrīmukha	11 Īśvara	.
4316	1137	1272	621	389-90	1214-15	8 Bhāva .	12 Bahudhānya	.
4317	1138	1273	622	390-91	1215-16	9 Yuvan	13 Pramāthin .	7 Āsīna .
4318	1139	1274	623	391-92	*1216-17	10 Dhātṛ .	14 Vikrama	..
4319	1140	1275	624	392-93	1217-18	11 Īśvara .	15 Vṛsha .	..
4320	1141	1276	625	393-94	1218-19	12 Bahudhānya	16 Chitrabhānu .	4 Āshādha

† See "Roma ka." p. 215 above.

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COMMENCEMENT OF THE						
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			Kali.
Day and month, A.D.	Week-day	Time of mean Mēsha-samkrānti	Day and month, A.D.	Week-day.	a (here = t , the index of the $tīthi$)	
18	14	H M S	19	20	23	1
25 Mar. (84)	6 Fri.	23 44 15	24 Mar (83)	5 Thur.	101 9706	4296
26 Mar (85)	1 Sun	5 56 24	14 Mar. (78)	3 Tues	316 3255	4297
25 Mar (85)	2 Mon	12 8 33	2 Mar (62)	0 Sat.	192 0432	4298
25 Mar (84)	3 Tues	18 20 42	21 Mar (80)	6 Fri.	226-7307	4299
26 Mar (85)	5 Thur	0 32 51	10 Mar (69)	3 Tues.	102 4535	4300
26 Mar (85)	6 Fri	6 45 0	28 Feb. (59)	1 Sun	816 8033	4301
25 Mar. (85)	0 Sat.	12 57 9	17 Mar. (77)	6 Fri	12 8587	4302
25 Mar (84)	1 Sun	19 9 18	7 Mar (66)	4 Wed	227 2136	4303
26 Mar. (85)	3 Tues	1 21 27	24 Feb (55)	1 Sun.	102 9363	4304
26 Mar (85)	4 Wed	7 33 36	15 Mar (74)	0 Sat.	137 6183	4305
25 Mar. (85)	5 Thur.	13 45 45	3 Mar. (63)	4 Wed.	13 3416	4306
25 Mar. (84)	6 Fri	19 57 54	22 Mar (81)	3 Tues	48 0239	4307
26 Mar (85)	1 Sun	2 10 3	12 Mar (71)	1 Sun	262 3783	4308
26 Mar (85)	2 Mon.	8 22 12	1 Mar. (60)	5 Thur	138 1017	4309
25 Mar (85)	3 Tues	14 34 21	19 Mar (79)	4 Wed.	172-7340	4310
25 Mar. (84)	4 Wed	20 46 30	8 Mar. (67)	1 Sun.	48 5069	4311
26 Mar (85)	5 Fri	2 58 39	26 Feb (57)	6 Fri	262 8617	4312
26 Mar. (85)	0 Sat.	9 10 43	17 Mar (76)	5 Thur.	297 5441	4313
25 Mar (85)	1 Sun	15 22 57	5 Mar (65)	2 Mon.	173 2669	4314
25 Mar (84)	2 Mon	21 35 6	24 Mar (83)	1 Sun.	207 9493	4315
26 Mar (85)	4 Wed.	3 47 15	13 Mar (72)	5 Thur.	83 6723	4316
26 Mar (85)	5 Thur	9 59 24	3 Mar. (62)	3 Tues.	298-0269	4317
25 Mar (85)	6 Fri	16 11 33	21 Mar (81)	2 Mon	332-7094	4318
25 Mar (84)	0 Sat.	22 23 42	10 Mar (69)	6 Fri.	203 4322	4319
26 Mar (85)	2 Mon.	4 35 51	27 Feb (58)	3 Tues.	84 1551	4320

TABLE

CONCURRENT YEAR								
Kal.	Śaka	Chaitrīdī Vikram.	Mṛāśādi solar year in Bengal.	Kollam	A.D.	JOVIAN SAMVATSARA		Mean intercalated (adhika) lunar month
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
4321	1142	1277	626	394-95	1219-20	18 Pramāthun .	17 Subhānu .	..
4322	1143	1278	627	395-96	*1220-21	14 Vikrama .	18 Tārana .	12 Phālguna
4323	1144	1279	628	396-97	1221-22	15 Vṛiṣha .	19 Pāthuva .	..
4324	1145	1280	629	397-98	1222-23	16 Chut-abhānu .	20 Vyaya .	.
4325	1146	1281	630	398-99	1223-24	17 Subhānu .	21 Sarvajit .	9 Mārgaśira .
4326	1147	1282	631	399-400	*1224-25	18 Tārana .	22 Sarvadhāru .	..
4327	1148	1283	632	400-01	1225-26	19 Pārthiva .	23 Virōdhin .	..
4328	1149	1284	633	401-02	1226-27	20 Vyaya .	24 Vikṛta .	5 Śrāvana .
4329	1150	1285	634	402-03	1227-28	21 Sarvajit .	25 Khara .	..
4330	1151	1286	635	403-04	*1228-29	22 Sarvadhāru .	26 Nandana .	..
4331	1152	1287	636	404-05	1229-30	23 Virōdhin .	27 Vijaya .	2 Vasākha .
4332	1153	1288	637	405-06	1230-31	24 Vikṛta .	28 Jaya .	..
4333	1154	1289	638	406-07	1231-32	25 Khara .	29 Manmatha .	10 Pausa .
4334	1155	1290	639	407-08	*1232-33	26 Nandana .	30 Durmukha .	..
4335	1156	1291	640	408-09	1233-34	27 Vijaya .	31 Hēmalamba .	..
4336	1157	1292	641	409-10	1234-35	28 Jaya .	32 Vilamba .	7 Āśvina .
4337	1158	1293	642	410-11	1235-36	29 Manmatha .	33 Vikāru .	..
4338	1159	1294	643	411-12	*1236-37	30 Durmukha .	34 Śārvaru .	..
4339	1160	1295	644	412-13	1237-38	31 Hēmalamba .	35 Plava .	4 Āshādha .
4340	1161	1296	645	413-14	1238-39	32 Vilamba .	36 Śubhakṛit .	.
4341	1162	1297	646	414-15	1239-40	33 Vikāru .	37 Śōbhana .	12 Phālguna .
4342	1163	1298	647	415-16	*1240-41	34 Śārvaru .	38 Krōdhin .	..
4343	1164	1299	648	416-17	1241-42	35 Plava .	39 Viśvāvan .	..
4344	1165	1300	649	417-18	1242-43	36 Śubhakṛit .	40 Parābhava .	9 Mārgaśira .
4345	1166	1301	650	418-19	1243-44	37 Śōbhana .	41 Plavanga .	..

XC—contd.

COMMENCEMENT OF THE						
MEAN SOLAR YEAR.			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			Kal
Day and month, A.D.	Week-day	Time of mean Mēśha-samkrānti	Day and month, A.D.	Week-day	a (here = t, the index of the <i>śukla</i>)	
13	14	17	19	20	23	1
		H N S				
26 Mar. (85)	3 Tues	10 48 0	18 Mar (77)	2 Mon	118 8374	4321
25 Mar (85)	4 Wed.	17 0 9	7 Mar (67)	0 Sat	333 1923	4322
25 Mar (84)	5 Thur.	23 12 18	25 Mar (84)	5 Thur	29 2427	4323
26 Mar (85)	0 Sat.	5 24 27	15 Mar (74)	3 Tues	243 5975	4324
26 Mar. (85)	1 Sun	11 36 36	4 Mar (63)	0 Sat	119 3203	4325
25 Mar (85)	2 Mon.	17 48 45	22 Mar. (82)	6 Fri	154 0027	4326
26 Mar (85)	4 Wed	0 0 54	11 Mar (70)	3 Tues	29 7256	4327
26 Mar. (85)	5 Thur	6 13 3	1 Mar (60)	1 Sun	244 0804	4328
26 Mar (85)	6 Fri	12 25 12	20 Mar (79)	0 Sat.	278-7623	4329
25 Mar (85)	0 Sat	18 37 21	8 Mar (68)	4 Wed	154 4857	4330
26 Mar (85)	2 Mon	0 49 30	25 Feb (56)	1 Sun	36-2084	4331
26 Mar (85)	3 Tues	7 1 39	16 Mar (75)	0 Sat.	64 8908	4332
26 Mar (85)	4 Wed.	13 13 48	6 Mar. (65)	5-Thur	279-2457	4333
25 Mar (85)	5 Thur	19 25 57	24 Mar (84)	4 Wed.	313-9231	4334
26 Mar (85)	0 Sat	1 38 6	13 Mar (72)	1 Sun	189 6809	4335
26 Mar (85)	1 Sun	7 50 15	2 Mar (61)	5 Thur	65 8733	4336
26 Mar (85)	2 Mon	14 2 24	21 Mar (80)	4 Wed	100-0562	4337
25 Mar (85)	3 Tues	20 14 33	10 Mar (70)	2 Mon	314 4110	4338
26 Mar (85)	5 Thur	2 26 42	27 Feb (58)	6 Fri	190 1338	4339
26 Mar (85)	6 Fri	8 38 51	18 Mar. (77)	5 Thur	224 8162	4340
26 Mar (85)	0 Sat	14 51 0	7 Mar (66)	2 Mon	100 5391	4341
25 Mar (85)	1 Sun	21 3 9	25 Mar (85)	1 Sun	135 2214	4342
26 Mar (85)	3 Tues.	3 15 18	14 Mar (73)	5 Thur	10-9443	4343
26 Mar (85)	4 Wed	9 27 27	4 Mar (63)	3 Tues	225 2991	4344
26 Mar. (85)	5 Thur	15 39 36	23 Mar (82)	2 Mon	259 9815	4345

TABLE

CONCURRENT YEAR								Mean intercalated (adhika) lunar month.
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshūdi solar year in Bengal.	Kollam	A.D.	JOVIAN SAMVATSARA		
						Southern system.	Northern system	
1	2	3	3a	4	5	6	7	8a
4346	1167	1302	651	419-20	*1244-45	38 Krōdhun .	42 Kīlakaf .	...
4347	1168	1303	652	420-21	1245-46	39 Viśvāvasu .	44 Sādhārana	5 Śrāvana .
4348	1169	1304	653	421-22	1246-47	40 Parābhava .	45 Virōdhakṛt .	...
4349	1170	1305	654	422-23	1247-48	41 Plavanga .	46 Paridhāvin .	...
4350	1171	1306	655	423-24	*1248-49	42 Kīlaka .	47 Pramādin	2 Vaiśākha .
4351	1172	1307	656	424-25	1249-50	43 Saumya .	48 Ānanda .	..
4352	1173	1308	657	425-26	1250-51	44 Sādhārana .	49 Rākshasa .	10 Pausha .
4353	1174	1309	658	426-27	1251-52	45 Virōdhakṛt .	50 Anala .	..
4354	1175	1310	659	427-28	*1252-53	46 Paridhāvin .	51 Pingala .	..
4355	1176	1311	660	428-29	1253-54	47 Pramādin .	52 Kālayukta .	7 Āśvina .
4356	1177	1312	661	429-30	1254-55	48 Ānanda .	53 Siddhārthin .	...
4357	1178	1313	662	430-31	1255-56	49 Rākshasa .	54 Baudra .	..
4358	1179	1314	663	431-32	*1256-57	50 Anala .	55 Durmati .	3 Jyēsthā .
4359	1180	1315	664	432-33	1257-58	51 Pingala .	56 Dundubhi .	.
4360	1181	1316	665	433-34	1258-59	52 Kālayukta .	57 Rudhirōdgārīn .	12 Phālguna .
4361	1182	1317	666	434-35	1259-60	53 Siddhārthin .	58 Raktāksha .	...
4362	1183	1318	667	435-36	*1260-61	54 Baudra .	59 Krōdhana .	.
4363	1184	1319	668	436-37	1261-62	55 Durmati .	60 Kshaya .	8 Kārttika .
4364	1185	1320	669	437-38	1262-63	56 Dundubhi .	1 Prabhava .	..
4365	1186	1321	670	438-39	1263-64	57 Rudhirōdgārīn .	2 Vibhava .	...
4366	1187	1322	671	439-40	*1264-65	58 Raktāksha .	3 Śukla .	5 Śrāvana .
4367	1188	1323	672	440-41	1265-66	59 Krōdhana .	4 Pramōda .	..
4368	1189	1324	673	441-42	1266-67	60 Kshaya .	5 Prajāpati .	...
4369	1190	1325	674	442-43	1267-68	1 Prabhava .	6 Angīras .	1 Chaitra .
4370	1191	1326	675	443-44	*1268-69	2 Vibhava .	7 Śrīmukha .	...

† 43 Baum-a was suppressed in the north by the mean system. By the "true" system K Y 4346 (expired), A.D. 1245-46, was called "Saumya," 44 Sādhārana being suppressed. The next year was 45 Virōdhakṛt by both systems of reckoning.

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COMMENCEMENT OF THE

MEAN SOLAR YEAR			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY OF WHICH CHAITRA ŚUKLA 1 PŪDŚ)			Kal.
Day and month, A.D.	Week-day.	Time of mean Mīśha-samkrānti.	Day and month, A.D.	Week-day	a (here = t, the index of the tithi)	
13	14	17	19	20	23	1
		H. M S				
25 Mar. (85) . . .	6 Fri. . .	21 51 45	11 Mar (71) . . .	6 Fri	135 7043	4346
26 Mar (85) . . .	1 Sun . . .	4 3 54	28 Feb (59) . . .	3 Tues	11 4272	4347
26 Mar (85) . . .	2 Mon . . .	10 16 3	10 Mar (78) . . .	2 Mon . . .	46 1096	4348
26 Mar. (85) . . .	3 Tues . . .	16 23 12	9 Mar (68) . . .	0 Sat . . .	280 4544	4349
25 Mar (85) . . .	4 Wed. . .	22 40 21	26 Feb (57) . . .	4 Wed	186 1872	4350
26 Mar (85) . . .	6 Fri . . .	4 52 30	16 Mar (75) . . .	3 Tues . . .	170 3696	4351
26 Mar (85) . . .	0 Sat. . .	11 4 39	5 Mar (64) . . .	0 Sat. . .	46 5925	4352
26 Mar. (85) . . .	1 Sun . . .	17 16 48	24 Mar (83) . . .	6 Fri . . .	81 2748	4353
25 Mar (85) . . .	2 Mon . . .	23 28 57	13 Mar (73) . . .	4 Wed	295 3297	4354
26 Mar. (85) . . .	4 Wed . . .	5 41 6	2 Mar (61) . . .	1 Sun	171 3526	4355
26 Mar (85) . . .	5 Thur. . .	11 53 15	21 Mar (80) . . .	0 Sat . . .	206 6849	4356
26 Mar (85) . . .	6 Fri . . .	18 6 24	10 Mar (69) . . .	4 Wed	81-7577	4357
26 Mar. (86) . . .	1 Sun. . .	0 17 33	28 Feb (59) . . .	2 Mon	296 1126	4358
26 Mar. (85) . . .	2 Mon . . .	6 29 42	18 Mar. (77) . . .	1 Sun . . .	330-7950	4359
26 Mar (85) . . .	3 Tues . . .	12 41 51	7 Mar (66) . . .	5 Thur	206 5178	4360
26 Mar. (85) . . .	4 Wed. . .	18 54 0	26 Mar. (85) . . .	4 Wed . . .	241 2002	4361
26 Mar. (86) . . .	6 Fri. . .	1 6 9	14 Mar (74) . . .	1 Sun . . .	116 9231	4362
26 Mar (85) . . .	0 Sat . . .	7 18 18	4 Mar (63) . . .	6 Fri	331 2778	4363
26 Mar. (85) . . .	1 Sun. . .	13 30 27	22 Mar (81) . . .	4 Wed	27 3283	4364
26 Mar (85) . . .	2 Mon. . .	10 42 36	12 Mar (71) . . .	2 Mon . . .	241 6831	4365
26 Mar. (86) . . .	4 Wed. . .	1 54 45	29 Feb. (60) . . .	6 Fri. . .	117 4060	4366
26 Mar. (85) . . .	5 Thur. . .	8 6 54	19 Mar. (76) . . .	5 Thur . . .	152 0883	4367
26 Mar (85) . . .	6 Fri. . .	14 19 3	8 Mar (67) . . .	2 Mon . . .	27 8112	4368
26 Mar (85) . . .	0 Sat. . .	20 31 12	26 Feb (57) . . .	0 Sat . . .	242 1660	4369
26 Mar (86) . . .	2 Mon. . .	2 43 21	16 Mar (76) . . .	6 Fri. . .	276 8483	4370

TABLE

CONCURRENT YEAR								Mean intercalated (adhika) lunar month
Kal	Śaka	Chaitrādi Vikrama.	Mīshādi solar year in Bengal	Kollam	A D.	JULIAN SAMVATSBARA		
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
4371	1192	1327	676	444-45	1269 70	3 Śukla	8 Bhāva .	10 Pausa .
4372	1193	1328	677	445 46	1270-71	4 Pramōla .	9 Yavana . .	
4373	1194	1329	678	446 47	1271-72	5 Prajāpati .	10 Dhātṛ . .	...
4374	1195	1330	679	447-48	*1272-73	6 Angiras	11 Isvara .	7 Āsura .
4375	1196	1331	680	448 49	1273 74	7 Śrīmukha .	12 Bhudhānya	.
4376	1197	1332	681	449 50	1274-75	8 Bhāva .	13 Pramāthin .	...
4377	1198	1333	682	450 51	1275 76	9 Yavana	14 Vikrama	3 Jyēsthā .
4378	1199	1334	683	451-52	*1276 77	10 Dhātṛ	15 Vṛsha .	
4379	1200	1335	684	452 53	1277-78	11 Isvara . .	16 Chitrabhāna .	12 Pūṅgava .
4380	1201	1336	685	453 54	1278-79	12 Bahudhānya .	17 Subhāna	.
4381	1202	1337	686	454 55	1279 80	13 Pramāthin	18 Tārana . .	..
4382	1203	1338	687	455 56	*1280 81	14 Vikrama .	19 Pārthiva	8 Kārtika .
4383	1204	1339	688	456-57	1281-82	15 Vṛsha .	20 Vyaya .	...
4384	1205	1340	689	457-58	1282-83	16 Chitrabhāna	21 Sarvaṇt . .	
4385	1206	1341	690	458 59	1283 84	17 Subhāna	22 Sarvadhārm	5 Srāvana .
4386	1207	1342	691	459 60	*1284 85	18 Tārana .	23 Virōdhin .	..
4387	1208	1343	692	460 61	1285 86	19 Pārthiva .	24 Vikṛta	
4388	1209	1344	693	461 62	1286 87	20 Vyaya .	25 Khara . .	1 Chaitra .
4389	1210	1345	694	462-63	1287-88	21 Sarvaṇt	26 Nandana	.
4390	1211	1346	695	463 64	*1288 89	22 Sarvadhārm	27 Vijaya . .	10 Pausa .
4391	1212	1347	696	464-65	1289 90	23 Virōdhin .	28 Jaya . .	
4392	1213	1348	697	465 66	1290 91	24 Vikṛta . .	29 Manmatha .	...
4393	1214	1349	698	466 67	1291-92	25 Khara . .	30 Duroukha	6 Bhādrapada .
4394	1215	1350	699	467-68	*1292-93	26 Nandana	31 Hēmalambā
4395	1216	1351	700	468-69	1293-94	27 Vijaya . .	32 Vilamba

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COMMENCEMENT OF THE						
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			Kal.
Day and month, A.D.	Week-day.	Time of mean Mēsha-samkrānti	Day and month, A.D.	Week day.	<i>a</i> (here = <i>t</i> , the index of the <i>tikā</i>)	
13	14	17	19	20	23	1
		H M S				
26 Mar (85) . . .	3 Tues . . .	8 55 30	5 Mar (84) . . .	3 Tues	152 5712	4371
26 Mar (85) . . .	4 Wed . . .	15 7 39	24 Mar (83) . . .	2 Mon . . .	187 2586	4372
26 Mar (85) . . .	5 Thur . . .	21 19 48	18 Mar (72) . . .	6 Fri . . .	62 9765	4373
26 Mar (86) . . .	0 Sat . . .	3 31 57	2 Mar (62) . . .	4 Wed . . .	277 3313	4374
26 Mar. (85) . . .	1 Sun . . .	9 44 6	21 Mar (80) . . .	3 Tues	312 0137	4375
26 Mar (85) . . .	2 Mon. . .	15 56 15	10 Mar (69) . . .	0 Sat. . .	187 7365	4376
26 Mar (85) . . .	3 Tues. . .	22 8 24	27 Feb (58) . . .	4 Wed. . .	63 4593	4377
26 Mar (86) . . .	5 Thur . . .	4 20 33	17 Mar (77) . . .	3 Tues	98 1417	4378
26 Mar (86) . . .	6 Fri . . .	10 32 42	7 Mar (66) . . .	1 Sun . . .	312 4966	4379
26 Mar (85) . . .	0 Sat. . .	16 44 51	25 Mar (84) . . .	6 Fri. . .	8 5470	4380
26 Mar (85) . . .	1 Sun . . .	22 57 0	15 Mar (74) . . .	4 Wed . . .	222 9018	4381
26 Mar (86) . . .	3 Tues . . .	5 9 9	3 Mar (63) . . .	1 Sun . . .	98 6246	4382
26 Mar (85) . . .	4 Wed. . .	11 21 18	22 Mar (81) . . .	0 Sat . . .	183 3071	4383
26 Mar. (85) . . .	5 Thur . . .	17 33 27	11 Mar (70) . . .	4 Wed . . .	9 0299	4384
26 Mar (85) . . .	6 Fri . . .	23 45 36	1 Mar (60) . . .	2 Mon. . .	223 3347	4385
26 Mar. (86) . . .	1 Sun . . .	5 57 45	19 Mar (70) . . .	1 Sun. . .	258 0671	4386
26 Mar (85) . . .	2 Mon . . .	12 9 54	8 Mar (67) . . .	5 Thur . . .	133 7900	4387
26 Mar (85) . . .	3 Tues . . .	18 22 3	25 Feb. (66) . . .	2 Mon . . .	9 5127	4388
27 Mar (86) . . .	5 Thur . . .	0 34 12	16 Mar (75) . . .	1 Sun . . .	44 1962	4389
26 Mar (86) . . .	6 Fri. . .	6 46 21	5 Mar (65) . . .	6 Fri . . .	258 5500	4390
26 Mar (85) . . .	0 Sat. . .	12 58 30	24 Mar (83) . . .	5 Thur. . .	293 2324	4391
26 Mar (85) . . .	1 Sun. . .	19 10 39	13 Mar (72) . . .	2 Mon . . .	168 9552	4392
27 Mar. (86) . . .	3 Tues . . .	1 22 48	2 Mar (61) . . .	6 Fri. . .	44 6781	4393
26 Mar. (86) . . .	4 Wed. . .	7 34 57	20 Mar (80) . . .	5 Thur. . .	79 3605	4394
26 Mar. (85) . . .	5 Thnr. . .	13 47 6	19 Mar (69) . . .	3 Tues . . .	293-7152	4395

TABLE

CONCURRENT YEAR						JOVIAN SAMVATSARA.		Mean intercalated (adhika) lunar month.
Kali.	Saka	Chutukali Vikramam	Nishadi solai year in Rongral	Kollam	A D	Southern system.	Northern system.	
1	2	3	3a	4	5	6	7	8a
4396	1217	1352	701	459-70	1294-95	28 Jaya . .	33 Vikarn . .	3 Jyeshtha .
4397	1218	1353	702	470-71	1295 95	29 Manmatha . .	34 Sarvarin . .	..
4398	1219	1354	703	471-72	*1296 97	30 Durmulha . .	35 Plava . .	11 Magha .
4399	1220	1355	704	472-73	1297-98	31 Hemalamba . .	36 Subhakrit . .	..
4400	1221	1356	705	473-74	1298-99	32 Vilamba . .	37 Sobhana . .	..
4401	1222	1357	706	474-75	1299-1300	33 Vikarn . .	38 Krোধun . .	8 Kartika .
4402	1223	1358	707	475-76	*1300-01	34 Sarvarin . .	39 Visvāvasu . .	..
4403	1224	1359	708	476 77	1301-02	35 Plava . .	40 Parābhava . .	..
4404	1225	1360	709	477-78	1302 03	36 Subhakrit . .	41 Plavanga . .	4 Ashādha .
4405	1226	1361	710	478-79	1303-04	37 Sobhana . .	42 Kilaka . .	..
4406	1227	1362	711	479-80	*1304-05	38 Krোধun . .	43 Saumya . .	..
4407	1228	1363	712	480-81	1305-06	39 Visvāvasu . .	44 Sādhāraṇa . .	1 Chaitra .
4408	1229	1364	713	481-82	1306-07	40 Parābhava . .	45 Virōdhakrit . .	..
4409	1230	1365	714	482-83	1307-08	41 Plavanga . .	46 Paridhāvin . .	10 Pausa ‡
4410	1231	1366	715	483 84	*1308-09	42 Kilaka . .	47 Pramādin . .	..
4411	1232	1367	716	484-85	1309-10	43 Saumya . .	48 Ānanda . .	..
4412	1233	1368	717	485-86	1310-11	44 Sādhāraṇa . .	49 Rākshasa . .	6 Bhādrapada .
4413	1234	1369	718	486-87	1311-12	45 Virōdhakrit . .	50 Anala . .	..
4414	1235	1370	719	487-88	*1312-13	46 Paridhāvin . .	51 Pingala . .	..
4415	1236	1371	720	488-89	1313-14	47 Pramādin . .	52 Kālayukta . .	3 Jyeshtha
4416	1237	1372	721	489 90	1314-15	48 Ānanda . .	53 Siddhārthun . .	..
4417	1238	1373	722	490-91	1315-16	49 Rākshasa . .	54 Baudra . .	11 Magha
4418	1239	1374	723	491 92	*1316-17	50 Anala . .	55 Durmatī . .	..
4419	1240	1375	724	492 93	1317-18	51 Pingala . .	56 Dandubhi . .	..
4420	1241	1376	725	493 94	1318-19	52 Kālayukta . .	57 Rudhurōdgarn . .	8 Kartika .

‡ see "Remarks," p 215, preceding this Table.

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COMMENCEMENT OF THE						
MEAN SOLAR YEAR			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			Kali
Day and month, A.D.	Week day	Time of mean M̄c̄ha-samkrānti	Day and month, A.D.	Week-day.	a (here = t, the index of the <i>tithi</i>)	
13	14	17	19	20	23	1
		H M S				
26 Mar (85) .	6 Fri	19 59 15	27 Feb (58) .	0 Sat	169 4381	4396
27 Mar (86) .	1 Sun .	2 11 24	18 Mar. (77) .	6 Fri .	204 1205	4397
26 Mar (86) .	2 Mon	8 23 33	6 Mar (66)	3 Tues	79 8493	4398
26 Mar (85) .	3 Tues .	14 35 42	25 Mar (84) .	2 Mon	114 5257	4399
26 Mar (85) .	4 Wed	20 47 51	15 Mar (74)	0 Sat	323 8806	4400
27 Mar (86) .	6 Fri .	3 0 0	4 Mar (63) .	4 Wed .	204 6034	4401
26 Mar (86)	0 Sat	9 12 9	22 Mar (82)	3 Tues .	239 2859	4402
26 Mar. (85)	1 Sun	15 24 18	11 Mar. (70)	0 Sat .	115 0037	4403
26 Mar (85)	2 Mon	21 36 27	1 Mar. (60) .	5 Thur .	320 3635	4404
27 Mar (86)	4 Wed .	3 48 36	19 Mar. (78) .	3 Tues .	25 4139	4405
26 Mar (86)	5 Thur	10 0 45	8 Mar (68) .	1 Sun	239 7688	4406
26 Mar (85)	6 Fri	16 12 54	25 Feb. (56)	5 Thur.	115 4915	4407
26 Mar. (85)	0 Sat.	22 25 3	18 Mar (75) .	4 Wed .	150 1739	4408
27 Mar (86)	2 Mon	4 37 12	5 Mar (64) .	1 Sun. .	25 8968	4409
26 Mar (86)	3 Tues .	10 49 21	23 Mar (83)	0 Sat. .	60 5791	4410
26 Mar. (85)	4 Wed .	17 1 30	13 Mar (72) .	5 Thur	274 9340	4411
26 Mar (85)	5 Thur .	23 13 39	2 Mar (61)	2 Mon .	150 6569	4412
27 Mar (86) .	0 Sat.	5 25 48	21 Mar. (80) .	1 Sun	185 3993	4413
26 Mar (86)	1 Sun	11 37 57	9 Mar (69) .	5 Thur .	61 0621	4414
26 Mar (85)	2 Mon	17 50 6	27 Feb (58) .	3 Tues .	275 4169	4415
27 Mar (86) .	4 Wed.	0 2 15	18 Mar (77) .	2 Mon .	310 0993	4416
27 Mar (86)	5 Thur.	6 14 24	7 Mar. (66)	6 Fri. .	185 8221	4417
26 Mar. (86)	6 Fri.	12 26 33	25 Mar (85) .	5 Thur	229 5045	4418
26 Mar. (85) .	0 Sat. .	18 38 43	14 Mar (73) .	2 Mon .	96 2274	4419
27 Mar (86)	2 Mon	0 50 51	4 Mar (63) .	0 Sat .	310 5822	4420

TABLE

CONCURRENT YEAR								Mean intercalated (<i>adhika</i>) lunar month
Kal.	Śaka	Chaitraśūl Vikrama.	Mēshādi solar year in Bengal	Kollam.	A.D	JOVIAN SAMVATSARA.		
						Southern system	Northern system	
1	2	3	4	5	6	7	8a	
4421	1242	1377	726	494-95	1319-20	53 Siddhārthm	58 Raktāksha	
4422	1243	1378	727	495-96	*1320-21	54 Raudra	59 Krōdhana	
4423	1244	1379	728	496-97	1321-22	55 Durmatī	60 Kshaya .	4 Āshādha .
4424	1245	1380	729	497-98	1322-23	56 Dundubhi	1 Prabhava	...
4425	1246	1381	730	498-99	1322-24	57 Rudhirōdgārīn	2 Vibhava	..
4426	1247	1382	731	499-500	*1324-25	58 Raktāksha	3 Śukla	1 Chaitra .
4427	1248	1383	732	500-01	1325-26	59 Krōdhana	4 Pramōda	...
4428	1249	1384	733	501-02	1326-27	60 Kshaya	5 Prajāpati .	9 Mārgasīra .
4429	1250	1385	734	502-03	1327-28	1 Prabhava	6 Angaras .	...
4430	1251	1386	735	503-04	*1328-29	2 Vibhava	7 Śrīmukha	..
4431	1252	1387	736	504-05	1329-30	3 Śukla	8 Bhava†	6 Bhādrapada
4432	1253	1388	737	505-06	1330-31	4 Pramōda	10 Dhātṛi .	...
4433	1254	1389	738	506-07	1331-32	5 Prajāpati .	11 Īvara .	...
4434	1255	1390	739	507-08	*1332-33	6 Angaras	12 Bahudhānya	2 Vaiśākha .
4435	1256	1391	740	508-09	1333-34	7 Śrīmukha	13 Pramāthm .	..
4436	1257	1392	741	509-10	1334-35	8 Bhāva .	14 Vikrama	11 Māgha
4437	1258	1393	742	510-11	1335-36	9 Yuvan	15 Vṛiṣha .	...
4438	1259	1394	743	511-12	*1336-37	10 Dhātṛi .	16 Chitrabhānu	...
4439	1260	1395	744	512-13	1337-38	11 Īvara .	17 Subhānu	7 Āsīna
4440	1261	1396	745	513-14	1338-39	12 Bahudhānya	18 Tārana .	
4441	1262	1397	746	514-15	1339-40	13 Pramāthm	19 Pārthiva .	
4442	1263	1398	747	515-16	*1340-41	14 Vikrama .	20 Vyaya .	4 Āshādha .
4443	1264	1399	748	516-17	1341-42	15 Vṛiṣha	21 Sarvajit .	
4444	1265	1400	749	517-18	1342-43	16 Chitrabhānu .	22 Sarvadharm .	12 Phālguna .
4445	1266	1401	750	518-19	1343-44	17 Subhānu .	23 Virōdhin .	

† 9 Yuvan was suppressed in the north by the mean system. By the "true" system K Y 4431 (expired), A.D. 1330-31. was called "Yuvan," and 10 Dhātṛi was suppressed. The next year was 11 Īvara by both systems.

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COMMENCEMENT OF THE						
MEAN SOLAR YEAR			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			Kal
Day and month, A.D.	Week-day	Time of mean Mīśha samkrānti	Day and month, A.D.	Week-day.	<i>a</i> (here = <i>t</i> , the index of the <i>tithi</i>)	
13	14	H. M S	19	20	23	1
27 Mar (80)	3 Tues	7 3 0	22 Mar (81)	5 Thur	6 6326	4421
26 Mar (86)	4 Wed	13 15 9	11 Mar (71)	3 Tues	220 9874	4422
26 Mar (85)	5 Thur	19 27 18	28 Feb (59)	0 Sat	96 7103	4423
27 Mar (86)	0 Sat.	1 39 27	19 Mar (78)	6 Fri	131 3926	4424
27 Mar (86)	1 Sun	7 51 36	8 Mar (67)	3 Tues	7 1155	4425
26 Mar (86)	2 Mon	14 3 45	26 Feb (57)	1 Sun	221 4703	4426
26 Mar (85)	3 Tues	20 15 54	16 Mar (75)	0 Sat	256 1527	4427
27 Mar (86)	5 Thur	2 28 3	5 Mar (64)	4 Wed	131 8755	4428
27 Mar (86)	6 Fri	8 40 12	24 Mar (83)	3 Tues	166 5579	4429
26 Mar. (86)	0 Sat.	14 52 21	12 Mar (72)	0 Sat.	42 2808	4430
26 Mar. (85)	1 Sun.	21 4 30	2 Mar (61)	5 Thur	256 6356	4431
27 Mar (86)	3 Tues	3 16 39	21 Mar (80)	4 Wed	291 3180	4432
27 Mar (86)	4 Wed	9 28 48	10 Mar. (60)	1 Sun	167 0409	4433
26 Mar (86)	5 Thur	15 40 57	27 Feb (58)	5 Thur	42 7637	4434
26 Mar (85)	6 Fri	21 53 6	17 Mar (70)	4 Wed	77 4100	4435
27 Mar. (86)	1 Sun	4 5 15	7 Mar (66)	2 Mon	291 8009	4436
27 Mar (86)	2 Mon	10 17 24	25 Mar (85)	1 Sun	326 4833	4437
26 Mar (86)	3 Tues	16 29 33	14 Mar (74)	5 Thur	202 2062	4438
26 Mar (85)	4 Wed	22 41 42	3 Mar (62)	2 Mon	77 9289	4439
27 Mar (86)	6 Fri	4 53 51	22 Mar (81)	1 Sun	112 6114	4440
27 Mar (86)	0 Sat	11 6 0	12 Mar (71)	6 Fri	326 9662	4441
26 Mar (86)	1 Sun	17 18 9	29 Feb (60)	3 Tues	202 6890	4442
26 Mar (85)	2 Mon	23 30 18	19 Mar (78)	2 Mon	237 3714	4443
27 Mar (80)	4 Wed.	5 42 27	8 Mar (67)	6 Fri.	113 6943	4444
27 Mar (86)	5 Thur	11 54 36	27 Mar (86)	5 Thur	147 7767	4445

TABLE

CONCURRENT YEAR								Mean intercalated (adhikā) lunar month.
Kalī	Śaka	Chaitrīlī Vikramā.	Mīshādi solar year in Bengal.	Kollam	A. D.	JOVIAN SAMVATŚARA		
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
4445	1267	1402	751	519-20	*1344-45	18 Tārana .	24 Vikrīta	
4447	1268	1403	752	520-21	1345-46	19 Pārthiva	25 Khara	9 Mārgaśira .
4448	1269	1404	753	521-22	1346-47	20 Vyāya .	26 Nandana	
4449	1270	1405	754	522-23	1347-48	21 Sarvaṅit	27 Vijaya	
4450	1271	1406	755	523-24	*1348-49	22 Sarvadhārin	28 Jaya	6 Bhādrapada
4451	1272	1407	756	524-25	1349-50	23 Virōdhin	29 Manmatha	
4452	1273	1408	757	525-26	1350-51	24 Vikrīta	30 Durmukha	
4453	1274	1409	758	526-27	1351-52	25 Khara	31 Hēmalamba	2 Vaiśākha
4454	1275	1410	759	527-28	*1352-53	26 Nandana	32 Vilamba	
4455	1276	1411	760	528-29	1353-54	27 Vijaya	33 Vikārin	11 Māgha .
4456	1277	1412	761	529-30	1354-55	28 Jaya .	34 Śārvarin	
4457	1278	1413	762	530-31	1355-56	29 Manmatha	35 Plava	
4458	1279	1414	763	531-32	*1356-57	30 Durmukha	36 Śubhakrīt	7 Āśvina
4459	1280	1415	764	532-33	1357-58	31 Hēmalamba	37 Śōbhana	
4460	1281	1416	765	533-34	1358-59	32 Vilamba .	38 Krōdhin .	
4461	1282	1417	766	534-35	1359-60	33 Vikārin	39 Viśvāvasu	4 Āshādha .
4462	1283	1418	767	535-36	*1360-61	34 Śārvarin	40 Parābhava	
4463	1284	1419	768	536-37	1361-62	35 Plava	41 Plavānga	12 Phālguna
4464	1285	1420	769	537-38	1362-63	36 Śubhakrīt	42 Kīlaka	
4465	1286	1421	770	538-39	1363-64	37 Śōbhana	43 Saumya	
4466	1287	1422	771	539-40	*1364-65	38 Krōdhin	44 Sādhārana	9 Mārgaśira
4467	1288	1423	772	540-41	1365-66	39 Viśvāvasu	45 Virōdhakrīt	
4468	1289	1424	773	541-42	1366-67	40 Parābhava	46 Paridhāvin	
4469	1290	1425	774	542-43	1367-68	41 Plavānga	47 Pramādin	5 Śrāvaṇa .
4470	1291	1426	775	543-44	*1368-69	42 Kīlaka	48 Ānanda	

XC—contd

COMMENCEMENT OF THE						
MEAN SOLAR YEAR.			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			Kali
Day and month, A D.	Week day	Time of mean Māha sahrānti	Day and month, A D	Week-day	<i>a</i> (here= <i>t</i> , the index of the <i>tithi</i>)	
13	14	17	19	20	23	1
		H M S				
26 Mar (86)	6 Fri	18 6 45	15 Mar (76)	2 Mon.	23 4905	4446
27 Mar (86)	1 Sun	0 18 54	5 Mar (81)	0 Sat.	237 8543	4447
27 Mar (86)	2 Mon.	6 31 3	24 Mar (83)	6 Fri	272 5367	4448
27 Mar (86)	3 Tues.	12 43 12	13 Mar. (72)	3 Tues.	148 2595	4449
26 Mar. (86)	4 Wed.	18 55 21	1 Mar (81)	0 Sat.	23 9824	4450
27 Mar. (86)	6 Fri	1 7 30	20 Mar (79)	6 Fri	58 6648	4451
27 Mar. (86)	0 Sat	7 19 39	10 Mar (80)	4 Wed	273 0197	4452
27 Mar (86)	1 Sun	13 31 48	27 Feb (58)	1 Sun	148 7424	4453
26 Mar (86)	2 Mon	19 43 57	17 Mar (77)	0 Sat	189 4248	4454
27 Mar (86)	4 Wed	1 56 6	6 Mar (85)	4 Wed	59 1477	4455
27 Mar (86)	5 Thur	8 8 15	25 Mar (84)	3 Tues	93 8300	4456
27 Mar. (86)	6 Fri	14 20 24	15 Mar (74)	1 Sun.	308 1849	4457
26 Mar. (86)	0 Sat	20 32 33	3 Mar. (83)	5 Thur	183-9077	4458
27 Mar (86)	2 Mon	2 44 42	22 Mar (81)	4 Wed	218-5902	4459
27 Mar. (86)	3 Tues	8 56 51	11 Mar. (70)	1 Sun	94 3129	4460
27 Mar. (86)	4 Wed	15 9 0	1 Mar. (80)	6 Fri	308 6678	4461
26 Mar (86)	5 Thur.	21 21 9	18 Mar (78)	4 Wed.	4 7182	4462
27 Mar (86)	0 Sat	3 33 18	8 Mar (87)	2 Mon.	219 0730	4463
27 Mar (86)	1 Sun	9 45 27	27 Mar (86)	1 Sun	253-7554	4464
27 Mar (86)	2 Mon.	15 57 36	16 Mar (75)	5 Thur.	129 4783	4465
26 Mar (86)	3 Tues.	22 9 45	4 Mar (84)	2 Mon.	5 2011	4466
27 Mar (86)	5 Thur	4 21 54	23 Mar (82)	1 Sun	39 8635	4467
27 Mar. (86)	6 Fri	10 04 3	13 Mar (72)	6 Fri	254-2383	4468
27 Mar (86)	0 Sat	16 46 12	2 Mar (81)	3 Tues	129 9812	4469
26 Mar (86)	1 Sun	22 58 21	20 Mar. (80)	2 Mon.	164-6435	4470

TABLE

CONCURRENT YEAR								
Kali.	Śaka	Chitrādi Vikrama.	MCabadi solar year in Bongal	Kollam	A.D	JOVIAN SAMVATSARA		Mean intercalated (adhika) lunar month
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
4471	1292	1427	776	544-45	1369-70	43 Saumya	49 Rākshasa	.
4472	1293	1428	777	545-46	1370-71	44 Sādhārana	50 Anala	2 Vaiśākha
4473	1294	1429	778	546-47	1371-72	45 Virōdhakṛt	51 Pingala	.
4474	1295	1430	779	547-48	*1372-73	46 Paridhāvin	52 Kālayukta	10 Pausa
4475	1296	1431	780	548-49	1373-74	47 Pramādin	53 Siddhārthin	.
4476	1297	1432	781	549-50	1374-75	48 Ānanda	54 Randra	.
4477	1298	1433	782	550-51	1375-76	49 Rākshasa	55 Durmati	7 Āśvina
4478	1299	1434	783	551-52	*1376-77	50 Anala	56 Dundubhi	.
4479	1300	1435	784	552-53	1377-78	51 Pingala	57 Rudhurōdgārin	.
4480	1301	1436	785	553-54	1378-79	52 Kālayukta	58 Raktāksha	3 Jyēshtha
4481	1302	1437	786	554-55	1379-80	53 Siddhārthin	59 Krōdhana	.
4482	1303	1438	787	555-56	*1380-81	54 Raudra	60 Kshaya	12 Phālguna
4483	1304	1439	788	556-57	1381-82	55 Durmati	1 Prabhava	..
4484	1305	1440	789	557-58	1382-83	56 Dundubhi	2 Vibhava	.
4485	1306	1441	790	558-59	1383-84	57 Rudhurōdgārin	3 Śukla	9 Mārgasira
4486	1307	1442	791	559-60	*1384-85	58 Raktāksha	4 Pramōda	.
4487	1308	1443	792	560-61	1385-86	59 Krōdhana	5 Prajāpati	.
4488	1309	1444	793	561-62	1386-87	60 Kshaya	6 Angaras	5 Śrāvana
4489	1310	1445	794	562-63	1387-88	1 Prabhava	7 Śrīmukha	.
4490	1311	1446	795	563-64	*1388-89	2 Vibhava	8 Bhāva	.
4491	1312	1447	796	564-65	1389-90	3 Śukla	9 Yuvan	2 Vaiśākha
4492	1313	1448	797	565-66	1390-91	4 Pramōda	10 Dhāty	.
4493	1314	1449	798	566-67	1391-92	5 Prajāpati	11 Isvara	10 Pausa
4494	1315	1450	799	567-68	*1392-93	6 Angaras	12 Bahudhānya	..
4495	1316	1451	800	568-69	1393-94	7 Śrīmukha	13 Pramāthin	...

XC—contd

COMMENCEMENT OF THE						Kal.
MEAN SOLAR YEAR			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			
Day and month, A.D.	Week-day	Time of mean Mēsha-samkrānti	Day and month, A.D.	Week-day	a (here= t , the index of the $t/11$)	
13	14	17	19	20	23	1
		H. M S				
27 Mar (86)	3 Tues	5 10 30	9 Mar (88)	6 Fri	40 3664	4471
27 Mar (86)	4 Wed	11 22 39	27 Feb (88)	4 Wed	254 7212	4472
27 Mar (86)	5 Thur	17 34 48	18 Mar (77)	3 Tues	289 4036	4473
26 Mar (86)	6 Fri	23 46 57	6 Mar (86)	0 Sat	165 1264	4474
27 Mar (86)	1 Sun	5 59 6	26 Mar (84)	6 Fri	199 8088	4475
27 Mar (86)	2 Mon	12 11 15	14 Mar (73)	3 Tues	75 5817	4476
27 Mar (86)	3 Tues	18 23 24	4 Mar (63)	1 Sun	289 8864	4477
27 Mar (87)	5 Thur	0 35 33	22 Mar (82)	0 Sat	324 5680	4478
27 Mar (86)	6 Fri	6 47 42	11 Mar (70)	4 Wed	200 2917	4479
27 Mar (86)	0 Sat	12 59 51	28 Feb (59)	1 Sun	76 0146	4480
27 Mar (86)	1 Sun	19 12 0	19 Mar (78)	0 Sat	110 6969	4481
27 Mar (87)	3 Tues	1 24 9	8 Mar (68)	5 Thur	325 0518	4482
27 Mar (86)	4 Wed	7 36 18	26 Mar (85)	3 Tues	21 1022	4483
27 Mar (86)	5 Thur	13 48 27	16 Mar (75)	1 Sun	235 4571	4484
27 Mar (86)	6 Fri	20 0 36	5 Mar (64)	5 Thur	111 1798	4485
27 Mar (87)	1 Sun	2 12 45	23 Mar (83)	4 Wed	145 8623	4486
27 Mar (86)	2 Mon	8 24 54	12 Mar (71)	1 Sun	21 5851	4487
27 Mar (86)	3 Tues	14 37 3	2 Mar (61)	6 Fri	235 9899	4488
27 Mar (86)	4 Wed	20 49 12	21 Mar (80)	5 Thur	270 6223	4489
27 Mar (87)	6 Fri	3 1 21	9 Mar (69)	2 Mon	146 3452	4490
27 Mar (86)	0 Sat	9 13 30	26 Feb (57)	6 Fri	22 0680	4491
27 Mar (86)	1 Sun	15 25 39	17 Mar (76)	5 Thur	56 7503	4492
27 Mar (86)	2 Mon	21 37 48	7 Mar (86)	3 Tues	271 1052	4493
27 Mar (87)	4 Wed	3 49 57	25 Mar (85)	2 Mon	305 7876	4494
27 Mar (86)	5 Thur	10 2 6	14 Mar (78)	6 Fri	181 5104	4495

TABLE

CONCURRENT YEAR								Mean intercalated (<i>adhika</i>) lunar month
Kal.	Śaka	Chaitrādi Vikrama	Mēshādi solar year in Bengal	Kollam	A D	JOVIAN SAMVATSARA		
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
4496	1317	1452	801	569-70	1394-95	8 Bhāva .	14 Vikrama	7 Āsvina
4497	1318	1453	802	570-71	1395-96	9 Yuvan . .	15 Vṛṣha .	
4498	1319	1454	803	571-72	*1396-97	10 Dhātṛ .	16 Chitrabhānu	
4499	1320	1455	804	572-73	1397-98	11 Ívara . .	17 Subhānu	3 Jyēshtha
4500	1321	1455	805	573-74	1398-99	12 Bahudhānya .	18 Tārana . .	
4501	1322	1457	806	574-75	1399-1400	13 Pramāthun	19 Pārthiva	12 Phālguna .
4502	1323	1458	807	575-76	*1400-01	14 Vikrama .	20 Vyaya . .	...

XC—concl'd

COMMENCEMENT OF THE						
MEAN SOLAR YEAR			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			Kali.
Day and month, A.D.	Week-day	Time of mean Māshasamkrānti	Day and month, A.D.	Week-day	a (hora= t , the index of the $tithi$)	
13	14	17	19	20	23	1
		H M S				
27 Mar (86)	6 Fri.	16 14 15	3 Mar (82)	8 Tues	57 2333	4496
27 Mar (86)	0 Sat.	22 26 24	22 Mar (81)	2 Mon.	91 9157	4497
27 Mar (87)	2 Mon.	4 38 33	11 Mar (71)	0 Sat.	303 2704	4498
27 Mar. (86)	3 Tues	10 50 42	28 Feb (59)	4 Wed.	181 9933	4499
27 Mar (86)	4 Wed.	17 2 51	19 Mar (78)	3 Tues	216 6757	4500
27 Mar (86)	5 Thur	23 15 0	8 Mar (87)	0 Sat.	92 3986	4501
27 Mar (87)	0 Sat.	5 27 9	26 Mar (86)	6 Fri	127 0810	4502

TABLE XCII

CENTURY-TABLE.

VALUE OF $a (= t)$ AT BEGINNING OF CENTURIES K Y, i.e. AT MEAN SUNRISE ON DAY OF OCCURRENCE OF MEAN MĒSHA-SAMKRĀNTI (MEAN SUN AT 0°) IN FIRST YEAR OF CENTURY. [CENTURIES 38, 44, WERE DEFECTIVE, THE REST COMMON]

Beginning of K Y century	Beginning in A D	Week-day	$a (= t)$
37	599	(0)	6228 4770
38	699	(0)	5100-3761
39	799	(6)	3633 6433
40	899	(6)	2505 5425
41	999	(6)	1377 4416
42	1099	(6)	249 3408
43	1199	(6)	9121 2399
44	1299	(6)	7993 1391
45	1399	(6)	6526 4068

For odd years of centuries use the *Siddhānta-Śirōmanī* Table LVII-B (above, Vol XV)

TABLE XCIII

MEAN SUNRISE VALUES OF a (DISTANCE OF MEAN MOON FROM MEAN SUN) IN 10,000THS OF CIRCLE FOR A MONTH PREVIOUS TO THE DAY ON WHICH MEAN MĒSHA-SAMKRĀNTI OCCURRED

Interval of days from mean Mēsha-samkrānti day	Week-day	a (mean sunrise value)	Interval of days from mean Mēsha-samkrānti day	Week-day	a (mean sunrise value)
1	2	3	1	2	3
31	(4)	9502 4085	15	(6)	4920 5202
30	(5)	9841 0404	14	(0)	5259 1522
29	(6)	179 6724	13	(1)	5597-7842
28	(0)	518 3044	12	(2)	5936 4162
27	(1)	856 9364	11	(3)	6275-0432
26	(2)	1195 5684	10	(4)	6613 6801
25	(3)	1534 2004	9	(5)	6952 3121
24	(4)	1872 8324	8	(6)	7290 9441
23	(5)	2211 4643	7	(0)	7629 5761
22	(6)	2550 0963	6	(1)	7968 2081
21	(0)	2888-7283	5	(2)	8306 8401
20	(1)	3227 3603	4	(3)	8645 4721
19	(2)	3565 9923	3	(4)	8984 1040
18	(3)	3904 6243	2	(5)	9322-7360
17	(4)	4243 2563	1	(6)	9661 3680
16	(5)	4581 8882	0	(0)	0-0

The use of this Table is explained in Example 2 of this article, and in Example 1 of article on the *First Ārya-Siddhānta, mean system* (above, Vol XVI).

TABLE XCIV.

TIME-EQUIVALENTS OF THE TITHI (a or t), NAKSHATRA (n), AND YŌGA (y) UNITS.

In very close cases it is sometimes necessary to calculate the exact moment of the beginning and ending of *tithis*, *nakshatras* and *yōgas*, with greater accuracy than can be obtained by the use of Table X, *Indian Calendar*, or Table LXX (*above*, Vol. XVI, p. 216), where the time-equivalent of the unit, respectively, is given only in hours and minutes. My general working Tables for several of the Hindu astronomical *Siddhāntas* already published yield results, stated in measurement by 10,000ths of the circle, with an accuracy extending to four places of decimals, and the following Table enables the result to be translated into time down to a fraction of a second. It may be used for all astronomical authorities.

The tithi-index unit

The *tithi*-unit is $\frac{1}{10,000}$ th of a mean lunation. The mean lunation, according to the *Ārya*- and *Sūrya-Siddhāntas*, occupies $29^d 12^h 44^m 2^s 79$. The unit, or 10,000th part of this, is $4^m 2524046$, or $4^m 15^s 144279$.

The nakshatra-index unit

The moon's *nakshatra*, or her position in the heavens, mean or true, is found by adding the *tithi*-index, a or t , to the index of the sun's longitude, s , mean or true. Both these values are found in the ordinary course of calculation for a date.

The mean *nakshatra*-value $n = 10,000$ is reached in $27^d 7^h 43^m 12^s 3$. In this period the sun's mean motion amounts, in 10,000ths of circle measurement, to 748 0087 (*Table XLIV above* (Vol. XIV)) and the moon's mean distance from mean sun increases (*Table LIV A, B* (Vol. XV)) to 9251 9913. Total 10,000.

$27^d 7^h 43^m 12^s 3 = 39343^m 205$, and this divided by 10,000 fixes the time-equivalent of the *nakshatra*-unit as $3^m 9343205$, or $3^m 56^s 05923$.

The yōga-index unit

Similarly the *yōga-chakra* is estimated by the *Sūrya-Siddhānta* (*Indian Calendar*, p. 62, § 113) as occupying 36605 116 minutes of time, or $25^d 10^h 5^m 6^s 96^1$. The *yōga*-unit therefore is $3^m 6605116$, or $3^m 39^s 6307$.

¹ The *yōga* formula is $y = s$ (sun's long) + n (moon's *nakshatra*), and, since $n = s + a$, $y = 2s + a$. In the period noted it will be found by calculation, using Table XLIV (*above*, Vol. XIV), that the mean sun s arrives, in 10,000ths of circle measurement, at long 695-9511, and by using Table LXIV (*Vol. XVI*) that in the same period the mean moon has increased her distance from mean sun (a) by 8608 0964. Twice $s = 1391 9022$, and this + 8608 0964 (the value of a) = 9999-9988, practically 10,000 exactly. Table LXIV was prepared according to the *First Ārya-Siddhānta*. Using *Siddhānta-Śrōmani* and *Brahma Siddhānta* estimates (*Table LIV*) the total amounts to 10,000-0015, I have as yet no similar Table according to *Sūrya-Siddhānta* requirements, but from what has been said it may be assumed that its estimate of the time occupied by one *yōga-chakra* (=10,000) is correct.

TABLE XCIV-A.

TIME-EQUIVALENTS

TITHI-INDEX UNITS

(" Arg " = a or t .)

Arg	H	M	S.	Arg	H	M	S	Arg	H	M	S	Arg	H	M	S
1	0	1	15 11	30	2	7	33	59	4	10	53 51	88	6	14	12 70
2	0	8	30 29	31	2	11	49 47	60	4	15	8 7	89	6	18	27 84
3	0	12	45 43	32	2	16	4 52	61	4	19	23 80	90	6	22	42 99
4	0	17	0 58	33	2	20	19 76	62	4	23	38 95	91	6	26	58 13
5	0	21	15 72	34	2	24	34 91	63	4	27	54 09	92	6	31	13 27
6	0	25	30 87	35	2	28	50 05	64	4	32	9 23	93	6	35	28 42
7	0	29	46 01	36	2	33	5 19	65	4	36	24 38	94	6	39	43 56
8	0	34	1 15	37	2	37	20 34	66	4	40	39 52	95	6	43	58 71
9	0	38	16 30	38	2	41	35 48	67	4	44	54 67	96	6	48	13 85
10	0	42	31 44	39	2	45	50 63	68	4	49	9 81	97	6	52	29 00
11	0	46	46 59	40	2	50	5 77	69	4	53	24 96	98	6	56	44 14
12	0	51	1 73	41	2	54	20 92	70	4	57	40 10	99	7	0	59 28
13	0	55	16 88	42	2	58	36 06	71	5	1	55 24	100	7	5	14 43
14	0	59	32 02	43	3	2	51 20	72	5	6	10 39	200	14	10	28 86
15	1	3	47 16	44	3	7	6 35	73	5	10	25 53	300	21	15	43 28
16	1	8	2 31	45	3	11	21 49	74	5	14	40 68	400	28	20	57 71
17	1	12	17 45	46	3	15	36 64	75	5	18	55 82	500	35	26	12 14
18	1	16	32 60	47	3	19	51 78	76	5	23	10 97	600	42	31	26 57
19	1	20	47 74	48	3	24	6 93	77	5	27	26 11	700	49	36	41 00
20	1	25	2 29	49	3	28	22 07	78	5	31	41 25	800	56	41	55 42
21	1	29	18 03	50	3	32	37 21	79	5	35	56 40	900	63	47	9 85
22	1	33	33 17	51	3	36	52 36	80	5	40	11 54	1000	70	52	24 28
23	1	37	48 32	52	3	41	7 50	81	5	44	26 69				
24	1	42	3 46	53	3	45	22 65	82	5	48	41 83				
25	1	46	18 61	54	3	49	37 79	83	5	52	56 98				
26	1	50	33 75	55	3	53	52 94	84	5	57	12 20				
27	1	54	48 90	56	3	58	8 08	85	6	1	27 26				
28	1	59	4 04	57	4	2	23 22	86	6	5	42 41				
29	2	3	19 18	58	4	6	38 37	87	6	9	57 55				

TABLE XCIV-B

TIME-EQUIVALENTS

DECIMALS OF TITHI-INDEX UNITS

First 3 decimals	M	S	First 3 decimals.	M	S.	First 3 decimals	M	S	3rd and 4th decimals	S	3rd and 4th decimals	S	3rd and 4th decimals.	S
·01	0	2 55	34	1	28·75	67	2	50·95	·0001	0·03	·0034	0 87	·0067	1 71
02	0	5 10	35	1	29 30	·68	2	53 50	·0002	0 05	·0035	0 89	0068	1·73
·03	0	7 65	36	1	31 85	69	2	56 05	0003	0·03	·0036	0 92	·0069	1·76
·04	0	10 21	37	1	34 40	·70	2	58 60	0004	0 10	0037	0·94	0070	1·79
05	0	12·76	38	1	36·95	71	3	1·15	0005	0·13	0038	0·97	·0071	1·81
·06	0	15 31	39	1	39 51	·72	3	3·70	0006	0 15	0039	1·00	·0072	1·84
·07	0	17·86	40	1	42·06	73	3	6 28	·0007	0 18	·0040	1·02	·0073	1 86
·08	0	20 41	41	1	44 61	·74	3	8 81	0008	0 20	·0041	1 05	0074	1 89
09	0	22·96	42	1	47 16	·75	3	11 36	·0009	0 23	0042	1 07	0075	1·91
10	0	25 51	43	1	49·71	·76	3	13·91	0010	0 26	0043	1 10	·0076	1·94
11	0	28 07	44	1	52 28	·77	3	16 46	0011	0 28	0044	1 12	0077	1·96
12	0	30 62	45	1	54 81	·78	3	19 01	0012	0 31	0045	1 15	·0078	1·99
·13	0	33 17	46	1	57 37	·79	3	21 56	·0013	0 33	·0046	1 17	·0079	2 02
14	0	35·72	47	1	59·92	80	3	24 12	0014	0 36	0047	1 20	·0080	2·04
15	0	38 27	48	2	2 47	81	3	26 67	0015	0 38	·0048	1 22	·0081	2·07
·16	0	40 82	49	2	5·02	82	3	29 22	·0016	0 41	0049	1·25	0082	2·09
17	0	43 37	50	2	7 57	83	3	31·78	0017	0 43	·0050	1 28	·0083	2 12
·18	0	45·93	51	2	10·12	84	3	34 32	0018	0 46	·0051	1 30	·0084	2 14
·19	0	48 48	52	2	12·68	85	3	36 87	0019	0 48	0052	1 33	·0085	2 17
20	0	51·03	53	2	15 23	86	3	39 42	·0020	0·51	·0053	1·35	·0086	2 19
·21	0	53 58	54	2	17·78	·87	3	41·98	0021	0 54	0054	1 38	·0087	2 22
22	0	56 13	55	2	20 33	·88	3	44 53	·0022	0 56	0055	1 40	0088	2 25
23	0	58 68	56	2	22 88	89	3	47 08	0023	0 59	0056	1 43	0089	2 27
24	0	61 23	57	2	25 43	·90	3	49·63	·0024	0 61	0057	1 45	0090	2 30
25	1	3·79	58	2	27·98	·91	3	52 18	0025	0 64	0058	1 48	·0091	2 32
·26	1	6 34	59	2	30·54	·92	3	54·73	0026	0 66	0059	1 51	0092	2 35
27	1	9 89	60	2	33 09	·93	3	57 28	0027	0 69	·0060	1 53	0093	2 37
28	1	11 44	61	2	35 64	94	3	59 84	0028	0 71	0061	1 56	0094	2 40
·29	1	13·99	62	2	38 19	·95	4	2 39	0029	0 74	0062	1 58	0095	2 42
·30	1	16 54	·63	2	40·74	·96	4	4·94	0030	0 77	0063	1 61	0096	2 45
·31	1	19·09	64	2	43 29	·97	4	7 49	0031	0·79	0064	1 63	0097	2 47
·32	1	21·65	·65	2	45 84	·98	4	10 04	0032	0 82	0065	1 66	·0098	2 50
33	1	24 20	·66	2	48 40	·99	4	12 59	0033	0 84	0066	1 68	0099	2 52

TABLE XCIV-C.

TIME-EQUIVALENTS

NAKSHATRA-INDEX UNITS

Arg.	H	M	S	Arg.	H	M	S	Arg.	H	M	S	Arg.	H	M	S
1	0	3	50 06	31	2	1	57 84	61	3	59	59 01	91	5	58	1 39
2	0	7	52 12	32	2	5	53 90	62	4	3	55 07	92	6	1	57 45
3	0	11	48 18	33	2	9	49 95	63	4	7	51 73	93	6	5	53 51
4	0	15	44 24	34	2	13	46 01	64	4	11	47 79	94	6	9	49 57
5	0	19	40 30	35	2	17	42 07	65	4	15	43 85	95	6	13	45 63
6	0	23	36 36	36	2	21	38 13	66	4	19	39 91	96	6	17	41 69
7	0	27	32 41	37	2	25	34 19	67	4	23	35 97	97	6	21	37 75
8	0	31	28 47	38	2	29	30 25	68	4	27	32 03	98	6	25	33 80
9	0	35	24 53	39	2	33	26 31	69	4	31	28 09	99	6	29	29 86
10	0	39	20 59	40	2	37	22 37	70	4	35	24 15	100	6	33	25 92
11	0	43	16 65	41	2	41	18 43	71	4	39	20 21	200	13	6	51 85
12	0	47	12 71	42	2	45	14 49	72	4	43	16 26	300	19	40	17 78
13	0	51	8 77	43	2	49	10 55	73	4	47	12 32				
14	0	55	4 83	44	2	53	6 61	74	4	51	8 38				
15	0	59	0 89	45	2	57	2 67	75	4	55	4 44				
16	1	2	56 95	46	3	0	58 72	76	4	59	0 50				
17	1	6	53 01	47	3	4	54 78	77	5	2	56 56				
18	1	10	49 07	48	3	8	50 84	78	5	6	52 02				
19	1	14	45 13	49	3	12	46 90	79	5	10	48 08				
20	1	18	41 18	50	3	16	42 96	80	5	14	44 74				
21	1	22	37 24	51	3	20	39 02	81	5	18	40 80				
22	1	26	33 30	52	3	24	35 08	82	5	22	36 86				
23	1	30	29 36	53	3	28	31 14	83	5	26	32 92				
24	1	34	25 42	54	3	32	27 20	84	5	30	28 98				
25	1	38	21 48	55	3	36	23 26	85	5	34	25 03				
26	1	42	17 54	56	3	40	19 32	86	5	38	21 09				
27	1	46	13 60	57	3	44	15 38	87	5	42	17 15				
28	1	50	9 06	58	3	48	11 44	88	5	46	13 21				
29	1	54	5 72	59	3	52	7 49	89	5	50	9 27				
30	1	58	1 78	60	3	56	3 55	90	5	54	5 33				

TABLE XCIV-D.

TIME-EQUIVALENTS,

DECIMALS OF NAFSHATEA-INDEX UNITS.

First 2 decimals	M	S	First 2 decimals	M	S	First 2 decimals	M	S
01	0	200	34	1	20-20	67	2	35 16
02	0	472	35	1	22-62	68	2	40 52
03	0	705	36	1	24-28	69	2	42 88
04	0	1 141	37	1	27 24	70	2	45 24
05	0	11 51	38	1	29-70	71	2	47 60
06	0	14 16	39	1	32-06	72	2	49-96
07	0	17 32	40	1	34 32	73	2	52 32
08	0	19 58	41	1	36 78	74	2	54 68
09	0	21 25	42	1	39 14	75	2	57 04
10	0	23 51	43	1	41 51	76	2	59 40
11	0	25 76	44	1	43 87	77	3	1 77
12	0	28 53	45	1	46 23	78	3	4 13
13	0	31 55	46	1	49 59	79	3	6 49
14	0	34 05	47	1	50-55	80	3	8 85
15	0	37 41	48	1	53-31	81	3	11 21
16	0	40 77	49	1	55-57	82	3	13 57
17	0	43 17	50	1	58 03	83	3	15 93
18	0	45 47	51	2	0 29	84	3	18 29
19	0	48 57	52	2	2 75	85	3	20 65
20	0	47 51	53	2	5 11	86	3	23 01
21	0	49 57	54	2	7 47	87	3	25 37
22	0	51 57	55	2	9 57	88	3	27 73
23	0	53 57	56	2	12 10	89	3	30 09
24	0	55 57	57	2	14 25	90	3	32 45
25	0	57 57	58	2	16 51	91	3	34 81
26	0	59 57	59	2	19 27	92	3	37 17
27	0	61 57	60	2	21 54	93	3	39 54
28	0	63 57	61	2	24 20	94	3	41 50
29	0	65 57	62	2	26 57	95	3	44 27
30	0	67 57	63	2	29 23	96	3	46 52
31	0	69 57	64	2	31 50	97	3	49 28
32	0	71 57	65	2	34 16	98	3	51 54
33	0	73 57	66	2	36 42	99	3	54 20
34	0	75 57	67	2	39 08	00	3	56 46
35	0	77 57	68	2	41 34	01	3	59 02
36	0	79 57	69	2	43 59	02	3	61 18
37	0	81 57	70	2	46 25	03	3	63 34
38	0	83 57	71	2	48 50	04	3	65 50
39	0	85 57	72	2	51 16	05	3	68 06
40	0	87 57	73	2	53 41	06	3	70 22
41	0	89 57	74	2	56 07	07	3	72 38
42	0	91 57	75	2	58 32	08	3	74 54
43	0	93 57	76	2	60 58	09	3	77 10
44	0	95 57	77	2	63 23	10	3	79 26
45	0	97 57	78	2	65 49	11	3	81 42
46	0	99 57	79	2	68 14	12	3	83 58
47	0	00 57	80	2	70 40	13	3	86 14
48	0	02 57	81	2	73 05	14	3	88 30
49	0	04 57	82	2	75 31	15	3	90 46
50	0	06 57	83	2	77 56	16	3	93 02
51	0	08 57	84	2	80 22	17	3	95 18
52	0	10 57	85	2	82 47	18	3	97 34
53	0	12 57	86	2	85 13	19	3	99 50
54	0	14 57	87	2	87 38	20	3	01 06
55	0	16 57	88	2	89 64	21	3	03 22
56	0	18 57	89	2	91 89	22	3	05 38
57	0	20 57	90	2	94 15	23	3	07 54
58	0	22 57	91	2	96 40	24	3	10 10
59	0	24 57	92	2	99 06	25	3	12 26
60	0	26 57	93	2	101 31	26	3	14 42
61	0	28 57	94	2	103 57	27	3	16 58
62	0	30 57	95	2	106 22	28	3	19 14
63	0	32 57	96	2	108 48	29	3	21 30
64	0	34 57	97	2	111 13	30	3	23 46
65	0	36 57	98	2	113 39	31	3	26 02
66	0	38 57	99	2	116 04	32	3	28 18
67	0	40 57	00	2	118 30	33	3	30 34
68	0	42 57	01	2	120 55	34	3	32 50
69	0	44 57	02	2	123 21	35	3	35 06
70	0	46 57	03	2	125 46	36	3	37 22
71	0	48 57	04	2	128 12	37	3	39 38
72	0	50 57	05	2	130 37	38	3	41 54
73	0	52 57	06	2	132 63	39	3	44 10
74	0	54 57	07	2	134 88	40	3	46 26
75	0	56 57	08	2	137 13	41	3	48 42
76	0	58 57	09	2	139 39	42	3	50 58
77	0	60 57	10	2	141 64	43	3	53 14
78	0	62 57	11	2	143 89	44	3	55 30
79	0	64 57	12	2	146 15	45	3	57 46
80	0	66 57	13	2	148 40	46	3	59 62
81	0	68 57	14	2	150 66	47	3	61 78
82	0	70 57	15	2	152 91	48	3	63 94
83	0	72 57	16	2	155 17	49	3	66 10
84	0	74 57	17	2	157 42	50	3	68 26
85	0	76 57	18	2	159 68	51	3	70 42
86	0	78 57	19	2	161 93	52	3	72 58
87	0	80 57	20	2	164 19	53	3	75 14
88	0	82 57	21	2	166 44	54	3	77 30
89	0	84 57	22	2	168 70	55	3	79 46
90	0	86 57	23	2	170 95	56	3	81 62
91	0	88 57	24	2	173 21	57	3	83 78
92	0	90 57	25	2	175 46	58	3	85 94
93	0	92 57	26	2	177 72	59	3	88 10
94	0	94 57	27	2	180 00	60	3	90 26
95	0	96 57	28	2	182 25	61	3	92 42
96	0	98 57	29	2	184 51	62	3	94 58
97	0	00 57	30	2	187 16	63	3	97 14
98	0	02 57	31	2	189 42	64	3	99 30
99	0	04 57	32	2	191 67	65	3	01 46
00	0	06 57	33	2	193 93	66	3	03 62

3rd and 4th decimals	S	3rd and 4th decimals	S	3rd and 4th decimals	S.
0001	0-02	0034	0 80	0067	1 58
0002	0 05	0035	0 83	0068	1 61
0003	0 07	0036	0 85	0069	1 63
0004	0 09	0037	0 87	0070	1 65
0005	0 12	0038	0 90	0071	1 68
0006	0 14	0039	0 92	0072	1 70
0007	0-17	0040	0 94	0073	1 72
0008	0-19	0041	0 97	0074	1 75
0009	0 21	0042	0 99	0075	1 77
0010	0 24	0043	1 02	0076	1 79
0011	0 26	0044	1 04	0077	1 82
0012	0 28	0045	1 06	0078	1 84
0013	0 31	0046	1 09	0079	1 86
0014	0 33	0047	1 11	0080	1 89
0015	0 35	0048	1 13	0081	1 91
0016	0 38	0049	1 16	0082	1 94
0017	0 40	0050	1 18	0083	1 96
0018	0 42	0051	1 20	0084	1 98
0019	0 45	0052	1 23	0085	2 01
0020	0 47	0053	1 25	0086	2 03
0021	0 50	0054	1 27	0087	2 05
0022	0 52	0055	1 30	0088	2 08
0023	0 54	0056	1 32	0089	2 10
0024	0 57	0057	1 35	0090	2 12
0025	0 59	0058	1 37	0091	2 15
0026	0 61	0059	1 39	0092	2 17
0027	0 64	0060	1 42	0093	2 20
0028	0 66	0061	1 44	0094	2 22
0029	0 68	0062	1 46	0095	2 24
0030	0 71	0063	1 49	0096	2 27
0031	0 73	0064	1 51	0097	2 29
0032	0 75	0065	1 53	0098	2 31
0033	0 77	0066	1 55	0099	2 34

TABLE XCIV-E.

TIME-EQUIVALENTS.

YOGA-INDEX UNITS.

Arg	H. M. S	Arg	H M S	Arg	H M. S	Arg	H. M S.
1	0 8 39.68	31	1 53 28.55	61	3 43 17.47	91	5 33 6.39
2	0 7 19.26	32	1 57 8.18	62	3 46 57.10	92	5 36 46.02
3	0 10 58.89	33	2 0 47.81	63	3 50 36.73	93	5 40 25.65
4	0 14 38.52	34	2 4 27.44	64	3 54 16.36	94	5 44 5.29
5	0 18 18.15	35	2 8 7.07	65	3 57 56.00	95	5 47 44.92
6	0 21 57.78	36	2 11 46.71	66	4 1 35.63	96	5 51 24.55
7	0 25 37.41	37	2 15 26.34	67	4 5 15.26	97	5 55 4.18
8	0 29 17.05	38	2 19 5.97	68	4 8 54.89	98	5 58 43.81
9	0 32 56.68	39	2 22 45.60	69	4 12 34.52	99	6 2 23.44
10	0 36 36.31	40	2 26 25.23	70	4 16 14.15	100	6 6 3.07
11	0 40 15.04	41	2 30 4.86	71	4 19 53.78	200	12 12 6.14
12	0 43 55.57	42	2 33 44.49	72	4 23 33.41	300	18 18 9.21
13	0 47 35.20	43	2 37 24.12	73	4 27 13.04		
14	0 51 14.83	44	2 41 3.75	74	4 30 52.67		
15	0 54 54.46	45	2 44 43.38	75	4 34 32.30		
16	0 58 34.09	46	2 48 23.01	76	4 38 11.93		
17	1 2 13.72	47	2 52 2.64	77	4 41 51.56		
18	1 5 53.35	48	2 55 42.27	78	4 45 31.19		
19	1 9 32.98	49	2 59 21.90	79	4 49 10.82		
20	1 13 12.61	50	3 3 1.53	80	4 52 50.45		
21	1 16 52.24	51	3 6 41.17	81	4 56 30.09		
22	1 20 31.88	52	3 10 20.80	82	5 0 9.72		
23	1 24 11.51	53	3 14 0.43	83	5 3 49.35		
24	1 27 51.14	54	3 17 40.06	84	5 7 28.98		
25	1 31 30.77	55	3 21 19.69	85	5 11 8.61		
26	1 35 10.40	56	3 24 59.32	86	5 14 48.24		
27	1 38 50.03	57	3 28 38.95	87	5 18 27.87		
28	1 42 29.66	58	3 32 18.58	88	5 22 7.50		
29	1 46 9.29	59	3 35 58.21	89	5 25 47.13		
30	1 49 48.92	60	3 39 37.84	90	5 29 26.76		

TABLE XCIV-F

TIME-EQUIVALENTS

DECIMALS OF YOGA-INDEX UNITS

First 2 decimals	M.	S.	First 2 decimals	M.	S.	First 2 decimals	M.	S.
01	0	2 20	34	1	14 67	67	2	27 15
02	0	4 39	35	1	16 87	68	2	29 35
03	0	6 59	36	1	19 07	69	2	31 55
04	0	8 79	37	1	21 26	70	2	33 74
05	0	10 98	38	1	23 46	71	2	35 94
06	0	13 18	39	1	25 66	72	2	38 13
07	0	15 37	40	1	27 85	73	2	40 33
08	0	17 57	41	1	30 05	74	2	42 53
09	0	19 77	42	1	32 24	75	2	44 72
10	0	21 96	43	1	34 44	76	2	46 92
11	0	24 16	44	1	36 64	77	2	49 12
12	0	26 36	45	1	38 83	78	2	51 31
13	0	28 55	46	1	41 03	79	2	53 51
14	0	30 75	47	1	43 23	80	2	55 70
15	0	32 94	48	1	45 42	81	2	57 90
16	0	35 14	49	1	47 62	82	3	0 10
17	0	37 34	50	1	49 82	83	3	2 29
18	0	39 53	51	1	52 01	84	3	4 49
19	0	41 73	52	1	54 21	85	3	6 69
20	0	43 93	53	1	56 40	86	3	8 88
21	0	46 12	54	1	58 60	87	3	11 08
22	0	48 32	55	2	0 80	88	3	13 28
23	0	50 52	56	2	2 99	89	3	15 47
24	0	52 71	57	2	5 19	90	3	17 67
25	0	54 91	58	2	7 39	91	3	19 86
26	0	57 10	59	2	9 58	92	3	22 06
27	0	59 30	60	2	11 78	93	3	24 26
28	1	1 50	61	2	13 97	94	3	26 45
29	1	3 69	62	2	16 17	95	3	28 65
30	1	5 89	63	2	18 37	96	3	30 85
31	1	8 09	64	2	20 56	97	3	33 04
32	1	10 28	65	2	22 76	98	3	35 24
33	1	12 48	66	2	24 96	99	3	37 43

3rd and 4th decimals	S.	3rd and 4th decimals	S.	3rd and 4 decimals	S.
0001	0-02	0034	0 75	0057	1 17
0002	0-04	0035	0 77	0058	1 19
0003	0-07	0036	0 79	0059	1 22
0004	0-09	0037	0 81	0070	1 24
0005	0 11	0038	0 83	0071	1 26
0006	0 13	0039	0 85	0072	1 29
0007	0 15	0040	0 88	0073	1 30
0008	0 18	0041	0 90	0074	1 33
0009	0 20	0042	0 92	0075	1 35
0010	0 22	0043	0 94	0076	1 37
0011	0 24	0044	0 97	0077	1 39
0012	0 26	0045	0 99	0078	1 41
0013	0 29	0046	1 01	0079	1 44
0014	0 31	0047	1 03	0090	1 46
0015	0 33	0048	1 05	0051	1 48
0016	0 35	0049	1 08	0052	1 50
0017	0 37	0050	1 10	0053	1 52
0018	0 40	0051	1 12	0054	1 54
0019	0 42	0052	1 14	0055	1 57
0020	0 44	0053	1 16	0056	1 59
0021	0 46	0054	1 19	0057	1 91
0022	0 48	0055	1 21	0058	1 93
0023	0 51	0056	1 23	0059	1 95
0024	0 53	0057	1 25	0090	1 98
0025	0 55	0058	1 27	0091	2 00
0026	0 57	0059	1 30	0092	2 02
0027	0 59	0060	1 32	0093	2 04
0028	0 61	0061	1 34	0094	2 06
0029	0 64	0062	1 36	0095	2 09
0030	0 66	0063	1 38	0096	2 11
0031	0 68	0064	1 41	0097	2 13
0032	0 70	0065	1 43	0098	2 15
0033	0 72	0066	1 45	0099	2 17

No 16.—VELVIKUDI GRANT OF NĒDUNJADAIYAN. THE THIRD YEAR
OF REIGN

By H KRISHNA SASTRI, B.A., OOTACAMUND.

Sixteen years ago, when Mr Venkayya in his Epigraphical Report for 1908 (pp 50 ff) discussed with great ability the contents of the fourth of the early Pāndya copper-plates discovered till then, he remarked "The originals of these plates have not been traced The following account of them is based on a preliminary study of two excellent impressions belonging probably to Sir Walter Elliot's collections kindly placed at my disposal by Dr Fleet in 1893" These duplicate impressions of the grant now in the editor's possession, are marked by Dr Fleet "I-n-11" and must have been originally intended for publication in the *Indian Antiquary* Mr Venkayya, however, could not at once prepare an article on them, as the early Pandya chronology was then obscure About the end of 1915, Dr L D Barnett of the British Museum, London, sent me impressions of a copper-plate inscription preserved in that institution and wished to know if it had been published and what its contents were Curiously enough, it happened that these were the very same impressions of which Mr Venkayya was unable to trace the originals I wrote back to Dr Barnett informing that the plates contained on them an important Pāndya grant which had been already noticed in the Epigraphical Report for 1908 and asked for certain details about them He says briefly "There is no seal on the grant the plates are held by a thin copper-ring, which has been cut" The detailed measurement of the plates and their number, consequently, remain to be what has been described by Mr Venkayya, viz, these are ten copper-plates, of which the first seven are numbered on the left margin on their inner sides and the impressions measure $10\frac{1}{2}$ " by $3\frac{1}{2}$ ", the first and the last plates being written only on their inner sides

The writing on the plates is both in the Grantha and Vatteluttu characters, the first being used in Sanskrit passages (ll 1 to 30 and ll 142 to 150) and in all Sanskrit words that occur in the Tamil portion of the inscription The Grantha characters and orthography do not call for any special remarks except that in almost all conjunct consonants, where they are written one below the other, the upper or the first member of the compound letter is marked by the *virāma*, following evidently the Tamil method of writing The same influence is also observed in the pronunciation and spelling of Sanskrit words, e g, *pārakan* and *purōkan* (l 99), *kratūpatānan* (l 100) and *kaṇḍakanishluran* (l 100 f) In one particular case, the purely Tamil word *antānar* (l 61) is written partly in Grantha and partly in Tamil The use of *tsha* for *ksha* (l 144), *uma* for *tma*, *dma* for *lma* and *ri* for *ri* or *ru*, in compound letters, also shows the same influence Consonants coming after *r* are always doubled except in "ṛṣṭ" in line 14 and "ṛṣṭ" in line 17 The *upadhmaniya* and *jshvāmūliya* symbols are used throughout in their proper places The *anusvāra* used in *-varggam-yudhi* (l 14) and in *samyati* (l 28) is worth noticing. It denotes the *anunāsika* forms of *yu* and *ya* and is shaped in the form of a crescent with a dot in it placed over the heads of these letters. In his commentary on Pānini VIII-4-59 Bhaṭṭōy-Dikshita remarks that the *anusvāra* in such cases changes itself optionally into the nasal form of *ya*

The Vatteluttu character so called, is an oblique form of Tamil (excepting certain letters) with a few angularities which on careful scrutiny could be easily accounted for The only four letters in the alphabet whose form cannot be explained with reference to Tamil are the vowel letters : (ṛ) (see *irakki*° in line 40), *a*, (ṛ) (see *ampadiṇvar* in line 135) and the more frequently occurring *na* (ṛ) and *po* (ṛ) In the matter of the Vatteluttu palæography of this inscription it might be noted (1) that the *pulli* is correctly inserted throughout the inscription except in a few cases, e g, *vōliti*= (l 31), *ottirattum*= (l 47 f), *arṛam* (*śbid*), *-avarṛku* (l. 46) and *vōliti*° (l 37), (2) that it is unnecessarily inserted over the vocalic *e* and *o* and even

over the initial vowel letter *o*, as in *mepnum*, *chchor*, (l 34), *koṛkai*, *koṛraṇ*, *honda* (l 35), *dēy* (l. 38), *goh* (l 43), *neppun* (l 45), *rrennan* (l 46), *kkolar*, *chcheliyan* (l 50), *olgāda* (l 108 f.), *oḍōda* (l. 109), *polil* (l. 65), *pporu* (l 63), *poruttāga* (l 71), and (3) that it is omitted in a few cases. The shaping of the long *ū*-sign in *rū* (l 119), *nū* (l 107) and *lū* (l 76) and the use of the Tamil *aḷabedar* (Skt. *pluta*) in *kkoliya* in line 97 for the purpose of completing the metrical quantity are worthy of notice. Thus *alabedar* according to the Tamil grammarians is to be used in (1) selling articles, (ii) calling people at a distance and (iii) in filling up the metrical quantity in a verse. Pāṇini omits (1) and (iii). While in Sanskrit only vowels have *pluta*, in Tamil the consonants (nasals and sibilants) are also thus lengthened.

The orthographical peculiarities such as the insertion of *y* after consonants with the *e*-sign (ll 94, 97f), the substitution of the vowel *i* for *y* (ll 66, 115, 118, 140), the non-observance of euphonic rules in adding the suffixes *um* (l. 93), *ul* (l 59), *in* (l. 93) and *oḍu* (l 46 f), the want of distinction between the long and the short *i* (except in the single instance *nīrōd=att* in line 117) and between the long and the short *o*, are noteworthy. *Puli-ūr* (l. 58), *°maiy-iruppar* (l 121 f), *chey-idar* (l 122), *mani-umar* (l 81), *kkali-araiṣaṇ* (l. 90), *kurai-uru* and *nurai-uru* (l 102) are also cases of the omission of *sandhi*. *Paramēṣṭarapār-Vēlvikud* (l 110) for *°nāl Vēlvikud* and *velipattu* for *velippattu* (ll 41, 49, 52, 88) are evidently wrong forms, *śekḷun* (l 120) for *śeykkun* and *aṁpadinvar* (l 135) for *aṁpadinmar* may be regarded as colloquial usages similar also may be the use of *kudu* (l 125) for *koḍu*. The form *iyḍu* (l. 152) for *idu* through the intermediate form *iḍu* probably gives us the clue for the correct pronunciation of the Tamil *āydam*-sign which is now pronounced as the *jihāmūliya* and the *upadhmanīya* forms of the *visarga*. The metre used in the Tamil portion of the inscription is the *Agaval* while in the Sanskrit portion the metres employed are *Vamīastha* (vv 1, 12), *Anuṣṭubh* (vv 2, 17, 20 and 23), *Vasantatilakā* (vv. 3, 9 and 19), *Sārdūlavikrīḍita* (vv. 4, 5, 6 and 10), *Mālabhā-rinī* (vv. 7, 8, 15 and 16), *Upēndravajrā* (vv 11, 14), *Drutavilambita* (v 13) and *Āryā* (v 18).

Palæographically, the Grantha characters of the Vēlvikudī grant differ from those of the Madras Museum plates of Jaṭlavarman,² although for reasons stated in the sequel, both of these have to be attributed to the period of the same king Neduñjaḍaiyan. The difference is distinctly observed in the formation of the *serif* which in the first case is a plain horizontal line, whereas in the second, it makes a loop with the letter. The bottoms of letters like *ma* and *ba* and the top of the vowel *i* are bent at the base line in the Vēlvikudī grant, whereas in the Madras Museum plates they either form one uniform curve, or are straight, the *upadhmanīya* and the *jihāmūliya* signs are not used at all in the Madras Museum plates. The punctuation marks at the end of verses in the Vēlvikudī grant are the *pillaiyār śūh* (२) whereas in the Madras Museum plates they are denoted by the so-called *ōm* symbol (३)³, *anusāras* are more frequent in the Madras Museum plates than nasal conjuncts. The Vēlvikudī grant, in numbering the plates, uses the Grantha letter-symbols, whereas the Madras Museum plates use the usual Tamil numerals. In the Vaṭṭeḷuttu alphabet employed, however, the two grants do not seem to differ much, except in the case of the letter *ya* which in the Vēlvikudī grant as in the Āṇaimalai inscription,⁴ is unseptate, while in the Madras Museum plates it is bipartite. This single difference in the characters of the Tamil portion which is the earlier, and perhaps constitutes the grant proper in both, need not show that the two grants must belong to different periods. The

¹ The scheme of this verse as given in the *Ckhandōmañjarī* is —

त्रिषणे ससना यदा गुरु चेत् समरा दिन तु सालभाविषीयम् ॥

² *Ind Ant*, Vol. XXII, with Plate, pp. 57 ff.

³ The latest interpretation of this symbol is *siddhi*, 'success.'

⁴ Above, Vol. VIII, p. 317 ff.

insertion of the Grantha portion in the Vēlvikuḍi grant might have been somewhat earlier than that in the Madras Museum plates.

The Sanskrit portion of the record commences with an invocation to Śiva (verse 1) and goes on to refer in general terms to the Pāṇḍya kings and their race, of which the family priest was the sage Agastya¹ (vv. 2 and 3) At the end of the previous *Kalpa*, it is stated, there was a powerful king named Pāṇḍya who was ruling at the entrance into the sea (i.e., on the coast of a gulf) and that the very same king at the beginning of the current *Kalpa* was born as Budha, the son of the Moon (v. 4) His son was Purūravas, and in his family, whose crest was a pair of fish, which shared with Indra, the lord of gods, half of his throne and his necklace and was a party in the purāṇic churning of the milk ocean, was born king Māṇavarman, a patron of the learned (vv. 6 and 8) His son was Bṛhadhira (v. 9) and his son Māṇavarman II Rājasimha (vv. 10 and 11) at whose presence the king P. Ilavamilla ran away from the battle-field (v. 12). Thus king Rājasimha married a Malava princess and by her begot king Jatila (v. 14), who was also called Parāntaka (v. 17) Thus ends the short Sanskrit eulogy (*prasasti*) which was composed by the *Sarīakratuyājīn* Varōdaya-Bhatṭa (l. 30).

We may now pass on to what the bigger and the more important part of the record, the Tamil *prasasti*, has to say, with the remark that the Sanskrit portion, by its brief notice and the very meagre historical material which it supplies in the form of a general introduction, could not have been contemporaneous with the Tamil portion. It was evidently added only later to give a dignified appearance to the grant proper which is in Tamil. This Tamil portion begins with the mention of a past event, namely, that the *kṣīri*-Brahmans² of Pāṇḍūr-Kūṛṅgam seeing that one of their own community, named Naṅkoṛṅṅaṅ, the headman of Koṛkaḷ, who had contemplated the performance of a Vēdic sacrifice, with the help of the ruling Pāṇḍya king (*ādhirāja*) Paḷyāgamudukudumi Peruvaḷuḍi, placed his petition before the king and themselves standing in front of the sacrificial hall, blessed that spot to be thenceforth (?) called Vēlvikuḍi³. The king granted the village to Naṅkoṛṅṅaṅ and it was thus that the village came to be enjoyed by the latter for a long time. After this, a powerful Kālī king, named Kaḷabhiraṅ, conquering many *ādhirājas*, brought under subjection the whole Pāṇḍya country including, of course the village Vēlvikuḍi which was then resumed. Some time elapsed and after this sprang forth a powerful Pāṇḍya, named Kaḍuṅḅōṅ, who reconquered the whole land from his enemies. His son was Avanichūḷamani Māṇavarman. His son was Śōḷiyāṅ Vāṇavaṅ Śēndan and his son, Arakēsaṅ Asamasamaṅ Māṇavarman, who won a battle at Pāḷi against his enemies, defeated a certain Vīlvēli at Nolvēli; destroyed the Paravas and the people of Kuru-nēḍu; won a victory at Śēppilam, conquered the Kēraḷa several times at the strongly fortified town of Paliyūr; made many gifts and protected the Brāhmanas and the invalids. His son was Śaḍaiyaṅ, the lord of the Kōnga country (Kōṅgarkōmāṅ), who was possessed of the titles Tanna-Vāṇavaṅ, Śēmbiyaṅ, Śōḷaṅ and Madura-Karunāṭakan,⁴ won a battle at Mārudūr,

¹ Agastya is also supposed to have been the founder of the Tamil language and the author of the Tamil grammar *Agastiyam* mentioned in Tamil literature. He is referred to as the family priest of the Pāṇḍyas also in Kāṇḍasa's *Raghuvamśa*, VI. 61, and in the commentary on *Iṅṅayanār Agapporuḷ*.

² *Kṣīri-andaṅḅālar* may also mean 'learned Brāhmanas'. But *kṣīri* seems to be used here in a technical sense. In inscriptions we find the word applied to a class of administrative officers whose business was to carry the applications of petitioners to the 'hearing' of the king. See also *Ep. Ind.*, Vol. III, p. 69, foot-note 7.

³ I.e., the village of the sacrifice. In the Tamil portion in l. 108 f. it is stated that the village had the name Vēlvikuḍi given to it by king Mudukudumi.

⁴ The significance of this title is not apparent. Could it be that like Śēmbiyaṅ and Śōḷaṅ he could have acquired it by conquering the Western Chālukyas who were known as Karnāṭakas? But we know that these were too far away from the reach of the Pāṇḍyas. Another possible explanation is that the Pāṇḍyas might have intermarried with the Chālukyas and the issue of such an intermarriage might well be called 'the Sweet Karnāṭaka'! Agastya's identification of the Kaḷabhira with Karnāṭa by Mr. Venkayya (see below p. 295) seems to gain in significance in considering the propriety of the title Madura-Karunāṭakan held by king Śaḍaiyaṅ.

defeated Āyavēl in battles at Śengodī and Puḍānkōḍu, destroyed the Mahārathas at the big town (*Mahānagara*) of Mṅgalapuram and stamped the symbols of the bow, the tiger and the fish on the big mountain, *viz*, the Himalayas This shows his supreme authority over the Chēra, Chōla and Pāndya countries, whose symbols were the bow, the tiger and the fish, respectively His son was Tēr-Māraṅ who routed his enemies at Neduvayal, Kuṟumadaḷ, Maṅṅi-Kuṟichchi, Tirumangai, Pūvalūr and Kodumbālūr, defeated the Pallava king and captured his elephants and horses in the battle of Kuḷumbūr, crushed his enemies at Periyālūr crossed the Kāviri (*i e*, the river Kāvērī), subdued (the country of) Māḷa-Kongam, reached Pāndi-kKodumidi, worshipped Paśupati (*i e*, Śiva), contracted marriage relations with Gangarāja² and renewed the fortifications of Kūḍal, Vañji and Kōḷi His son was Perāntaka Neduñjadaiyan, who drove the Kāḍava (*i e*, the Pallava) into the forest, after defeating him in the battle of Pennāgadam on the southern bank of the river Kāviri and won a battle at Nāttukkuṟumbu driving away the Āyavēl and the Kuṟumbas to the forest This king possessed a long list of *birudas* such as Śrīvaran, Śina-chChōlan, Puna-pPūḷyan, etc, enumerated in ll 98 ff

In the third year of the reign of this last mentioned king, a man having arrived at Kūḍal with a loud complaint, the king himself enquired into the matter with kind words and hearing from him how his village Vēlvikudī in Pāganūr-kūṟam, originally granted under that name by his ancestor, the great king (*Paramēśvaran*) Palyāgamndukudumi Peruvaḷudī, was resumed by the Kalabhra and had since then remained so even after the resumption of Government by the Pāndyas, he ordered the applicant to produce the necessary evidence before the *nāḍu* to prove that the village was his from early times and thus to get it back The complainant proved his claim accordingly and the king renewed the grant to the applicant Kāmakkāni Naṟchingan, the headman of Koṟkai The *ānatti* of the grant was Madavikalan Māraṅgāri *alias* Mūvēndamangala-Ppēraraiyan, the crest-jewel of the Vaidyakas and a native of Karavandapura, and a favourite of the king of kings (*i e*, the Pāndya king Neduñjadaiyan). It is stated of this Māraṅgāri that he fought bravely in the fight that ensued between the kings of the Eastern country (*Pūrva-rājar*) and Vallabha on the occasion when the daughter of Gangarāja (the Ganga king) was procured for Kongar-kōn

Ll 134 to 141 repeat that the owner of this *brahmadēya* (*viz*, Vēlvikudī) was Kāmakkāni Śuvaran-Śingan, the headman of Koṟkai, by which perhaps the Naṟchingan, just mentioned, must be referred to The composer of the Tamil *praśasti* was the *Sēnāpati* Eṇādi *alias* Śāttan Śāttan. This brings us to the end of the Tamil portion. The next Sanskrit verse speaking of the *ājñapti* of the grant says that he was Mangalarāja Madhurātara, a Vaidyaka and a master of the *Śāstras*, a poet and an orator Then follow four imprecatory verses which are expressly stated to be quoted from the Vaishnava-Dharma. A Tamil prose passage coming after this says that the king himself ordered the engraving of this copper-plate grant and that the engraver was a certain Yuddhakēsari Perumbanaikkāran.

In noticing these plates in his *Annual Report on Epigraphy for 1908*, pp 50 ff, Mr Venkayya has already made it clear how *Kalpa-kshayāt* in v 4 has to be understood with reference to the traditional account of the deluge³ or tidal wave in the Pāndya country and to the survival of a king of the old Pāndya line "of the race of the Moon and in all respects corresponding," under the name Budha Similarly also, the mythical boast of the Pāndya kings to have engraved their crest on the top of the Himalayas and to have shared one-half of Indra's throne and worn the garland of the king of the gods, has been shown to occur frequently in the later Pāndya inscriptions Palyāgamndukudumi-Peruvaḷudī is a historically famous Pāndya king in whose honour

¹ The name of this Pallava king, which begins with Śe, is hopelessly damaged on the impression

² Evidently the same mentioned in connection with the next king, his son Neduñjadaiyan.

³ Old Madura is supposed to have been washed away by the sea see commentary on *Agapporuḷ*, p 4.

five poems are known to have been sung by three famous Śaṅgam¹ poets and included in the Tamil anthology called *Puṛaṇāṅṅuru*. In one of these he is stated to have captured the extensive forts of his enemies and to have destroyed and ploughed their streets with a team of white-mouthed asses. This way of dealing with the conquered countries seems to be a very old one. Dr. S. Konow points out that there is a reference to it in the Hathigumpha inscription of Khāravela.² It is mentioned also in some inscriptions of the later Pāṇḍya king Mājavarman Sundarapāṇḍya I. The Kalabhra occupation of the Madura country and the consequent interregnum are also noted by Mr Venkayya with the remark that the Kalabhra may be the Karnāṭa. After the interregnum came Kaḍuṅḅōn with whom the first academy (Śaṅgam) of Tamil poets is supposed to have come to an end. The list of the kings that followed Kaḍuṅḅōn to the donor Neduñjadaiyan is given in a genealogical table on p 54 of the *Annual Report on Epigraphy* for 1908, together with further information supplied about them by two other sets of Pāṇḍya copper-plates³ secured from Śippamaṅḅōr. Mr. Venkayya thinks that Neduñjadaiyan of the Vēlvikuḍi grant must be different from Neduñjadaiyan of the Madras Museum plates published by him in the *Indian Antiquary*, not only on the strength of certain palaeographical differences already noted above but also on account of the different engravers who in the one case was Yuddhakēśari Pāṇḍya-Pperumbaṅkaikūraṅ and in the other, Pāṇḍi-Pperumbaṅkaikūraṅ alias Arikkēśari. He further identifies Neduñjadaiyan of the Vēlvikuḍi plates with Māṅaṅjadaiyan of the Ānaimalai cave inscription, for, between these two there is not only palaeographical similarity, but also it happens that the *ājñapti* of the former is the prime minister mentioned in the latter, both being called Māraṅgāri. Mūvēndamangalappēraraiyan, members of the Vaidya (or Vaidyaka) family and natives of Karaṅ andapura with the attributes *Maduratara* and *Kavi*. Consequently, the two kings Neduñjadaiyan and Māṅaṅjadaiyan, who both bore the same surname Parāntaka, must be identical and the date of the Vēlvikuḍi grant must be about A. D. 762-70 which is the date of the Ānaimalai inscription.

About the military achievements of Neduñjadaiyan we learn from this inscription that he defeated the Kādava king at Pennaṅḅadam on the southern bank of the Kāvēri river and drove the Āyavēl and the Kuṛumbas in a battle fought at Nāṭṭukkuḅumbu. Again, a statement made about the *ājñapti* of the grant in lines 126-129, adds that Māraṅgāri rendered valuable service to his master Neduñjadaiyan by defeating a certain Vallabha at Venbai, on the occasion when the eastern kings secured the hand of the Gaṅga princess in marriage for Kongarkōṅ. Here Kongarkōṅ in order to suit the context, must be taken to be a surname of the Pāṇḍya king Neduñjadaiyan himself. This is not improbable, inasmuch as his grandfather Śadaiyan is also called in the inscription (Text, l. 70), Kongarkōmāṅ, and his father Tēr-māṅḅaṅ is stated to have contracted relationship with the Gaṅga king (Text, l. 84). This latter event perhaps refers to the occasion when Māraṅgāri achieved the success mentioned above.

In spite of what Mr. Venkayya thinks about the identity of the kings mentioned in the Vēlvikuḍi plates and the Madras Museum plates there are strong reasons to believe that both refer to the same king. For, the ruling king Parāntaka, Neduñjadaiyan and his *birudas* Paṅḍi-tavatsala, Virapurōga and Vikramapāruga occur in both. Further, the surname Śrīvaramangala given to the granted village Vēlanguḍi in the Madras Museum plates makes it clear that the king must have also had the *biruda* 'Śrīvara' which we find actually given to him in the Vēlvikuḍi plates.⁴ The special mention of Mūrti Eyiṅḅaṅ in l. 136 of the Vēlvikuḍi plates as

¹ According to tradition there were three Śaṅgams or old academies of Tamil Poets. The date of the last of these has been widely discussed. The latest pronouncement on the subject is that it must have come into existence some time after the 5th Century A. D.

² *Acta Orientalia*, Vol I, Part I, p. 23f.

³ These plates are under publication by me in the *Epigraphia Indica*.

⁴ Mr K. V. Subrahmanya Ayyar also supposes it to be so, vide his *Sketches of Ancient Dehkan*, pp 103 ff.

one of the fifty Brāhmana sub-doneses marks him out as an important personage. From the *Ānaimalai* inscriptions, we know that Eyaṇṇ was an epithet or surname held by Māraṇ Eyaṇṇ, the younger brother of Māraṅgāri himself. Perhaps Māraṇ Eyaṇṇ and Mūrti Eyaṇṇ were both younger brothers of Māraṅgāri. The *āṅṅapti* of the Madras Museum plates was Dhīrataran Mūrti Eyaṇṇ, who was one of the *mahā sāmantas* of the king. There is little doubt that Mūrti Eyaṇṇ of our plates and Dhīrataran Mūrti Eyaṇṇ of the Madras Museum plates are identical and that thus also the king Neduṅṅadaiyaṇ mentioned in both these sets of plates is one and the same. If this identification is accepted the two allied plates together supply the full list of the military exploits of Neduṅṅadaiyaṇ. By the third year of his reign (the date of the present grant) Neduṅṅadaiyaṇ must have subdued the Āyavēl and the Kuṅṅbar and defeated the Pallavas south of the Kāviri; but before his 17th year (the date of the Madras Museum plates) he had carried his conquests right into the heart of the Kongu country and taken possession of it by defeating its king Adiyaṇ and his allies the Pallavas and the Kēralas. The conquest of the Kongu country and the desire to possess it seem to have been very strong with the Pāṅṅya kings. For, Śadaiyaṇ, the grandfather of Neduṅṅadaiyaṇ, held the title 'Lord of the Kongas' and his father Tēr-Māraṇ actually crossed the Kāviri, subjugated Maja-Kongam and had invaded that country even as far as Pāṅṅdi-kKodumudī. Neduṅṅadaiyaṇ seems only to have followed in the footsteps of his ancestors in subduing the Kongabhūmi, as far as the land of the Gangas. The information that a Ganga princess was married into the Pāṅṅya family is not mentioned in any of the Gaṅga records of this period which falls into the reign of Śivamāra I (755 to 765 A D). The Vallabha or the Western Chalukya king who was defeated on this marriage occasion was probably Kīrtivarman II who succeeded to the Chalukya throne in A D 746 or 747 and whose army is stated in his records to have defeated the army of the Kēralas, the Chōlas and the Pāṅṅyas.

From what is stated of the countries of Kongu and Kērala in these inscriptions of Neduṅṅadaiyaṇ, it is not difficult to see that the former was bounded on the east and perhaps also on the north by the land of the Gangas—the Gangavādī 96,000 of the Western Gangas of Talakād and that on the south it extended far beyond Kodumudī, as even to cover the northern portion of the later Rājasaṅga-Valanādu of the Chōlas which included in it the present Musiri and the Trichinopoly talukas. Coimbatore was in the western division of the Kongu-mandalam. The king of the Northern (*vaṅṅa*) Kongu was Adiyaṇ¹—the Adigaṅṅāri or Adiyamāṅ of later inscriptions whose capital was at Dharmapuri, the ancient Tagadūr, in the Salem district. The Kērala country was situated on the west coast beyond the Sahyādri mountains and may have included also the southernmost portions of the present Coimbatore district. In the 8th century, therefore, it looks as if the Kongu king allied himself with the Pallavas in the north and the Kēralas in the south and tried to oppose the invasion of the Pāṅṅya Neduṅṅadaiyaṇ. The Vallabha was defeated by the Pāṅṅya general and a Ganga princess was married into the Pāṅṅya family perhaps as a political measure. It is stated that Pūrvarājar put to flight Vallabha. Māraṅgāri also fought on the same occasion. Perhaps the Pūrvarājar were the chiefs of Gangavādī subordinate to the Western Ganga king who contracted marriage relations with the Pāṅṅyas.

Mr. Venkayya observes again in his Epigraphical Report that the title Arikēsari occurring in text-line 62, was borne by a certain Neṅṅ-Māraṅ who is mentioned in the commentary of Nakkīrar on *Iṅṅaiyaṅār-Agapporul*. This latter work, as tradition says, was made available for the public by Nilakandaṅār of Musiri eight generations, i.e., about two hundred years, after the actual date of Nakkīrar. Mr. Venkayya seems to have gone wrong in identifying Neduṅṅadaiyaṇ of literature with Tēr-Māraṅ of the Vēlvikudī plates where, however, the characteristic title Arikēsari is not given to him. The other titles, too, are not applied to him and the

¹ See remarks on his Namakkal inscription in the Madras Epigraphical Report for 1903, p. 75 f

battles fought by him as described in the commentary under reference, are not found in the eulogy of Tēr-Māraṇ given in the Velvikudi plates. On the other hand, Māṇavarman, the great grandfather of the donor Nedunjadaiyan is not only called Arikkēṣari but is also stated to have fought victorious battle at Pāḷi, Śenṇilam and Nelvēḷi which same are mentioned of him in the commentary on the *śaṅṅi* *śūḷi*. This mention, therefore, of the very same battles both in the plates and in the commentary, sufficiently warrants our identifying Nedumāraṇ of the commentary with Māṇavarman, the great grandfather of Nedunjadaiyan and not with Tēr-Māraṇ. Nalḷirai has sung also of Nedunjadaiyan in *Puṇamīpāṇṇu*, and it is not impossible that this Nedunjadaiyan is identical with Śivaya, the father of Arikkēṣari Māṇavarman.

Of the six ancestors of Nedunjadaiyan mentioned in the Tamil portion of the inscription and the three immediate ancestors mentioned in the Sanskrit portion, we learn nothing more than that the first king Kāṇṇarōḍi who came to rule after the Kalabhra interregnum was a Pāṇḍy-ādhirāja,¹ that the next Maravarman bore the title Avamechūlāmaṇi and that the third Śrīndan, also called Śivaya and Nāṇayan, was probably identical, as stated above, with Nedunjadaiyan of the *Puṇamīpāṇṇu* fame. The fourth king, whose military achievements are given in detail, was Śri-Mṛitavarman Arikkēṣari Asamasaman, who in addition to the victorious battles mentioned already destroyed the Paravas and the people of Kuṇṇu-nādu. The fifth Śaṅṅaiyan also called Rivalūthar, was the lord of the Kongas, fought battles against the Āyavil at Marudūr and with the Mahārathas at Mangalapūta; and the sixth, Tēr-Māraṇ or Rajasimha, defeated Pallavamalla, perhaps at Kuḷumbūr, and fought battles at Neduvayal, Kuṇṇumadai, Maraiṅkūchechi, Tirumangai, Pūvalūr, Kodumbālūr and Periyālūr and subjugated the country of Mala-Koṅṅam as far as Pāṇḍi-kkodumidi. He contracted relationship with Gaṅṅarāja, marrying the daughter of the Ganga prince to his son Nedunjadaiyan, himself having married the daughter of the king of the Malavas.² The fact that he defeated Pallavamalla shows that Tēr-Māraṇ must have been a contemporary of that king and lived about A D 710-760.³

As regards the territorial terms and village names that occur in the inscription, Pāganūr-kūṇṇam is identical with the division of that name in which the village Śōlavandāṇ near Madura was included.⁴ Maḷava is identical with Maḷa-nādu.⁵ Kuṇṇu-nādu, and the granted village Velvikudi, and the villages Nagarūr, Korraṇputtūr and Pāyal mentioned in the description of the boundaries of the latter cannot be identified. Koḷḷai is the well-known seaport of that name in the Tinnevely District. Of the villages Nelvēḷi, Śenṇilam, Pūlyūr (in Kēraḷa), Marudūr, Mangalapūta, Neduvayal, Kuṇṇumadai, Maṇṇikūchechi, Tirumangai, Pūvalūr, Śengudi, Pūḍāṅḅōdu, Kodumbālūr, Kuḷumbūr, Periyālūr, Pāṇḍikkoḍumidi, Kūḍal Vaṅṅi, Kōḷi, Pennāṅḅadam, Nūttukkuṇṇumbu, Kaṇṇavandapūtam and Venbai,—Nelvēḷi is Tinnevely;

¹ *Ibid.*, pp 129 ff

² Describing the several grades of rulers, the *Kāṁilāṅgama* states that an *ādhirāja*—*ādhiḷāya* is the form which the inscription uses throughout the Tamil portion—holds the second rank among kings —

अश्वमेधसुप्रथमं पृथिवीं य. प्रपालयेत्।
चक्रवर्ती सनाच्यातः समराज्य प्रपालयेत् ॥
अधिराजस्यमाख्यात.

(*Hindu Iconography*, Vol I, Part I, p 29 n)

³ Maḷava is identical with the old Mala nādu or Kūṅṅarāja Vaṅṅanādu (see *S. I I*, Vol II, Introduction, p. 24, and *Historical Sketches of Ancient Dehkan*, p 129)

⁴ Udayachandra, the general of Nandivarman Pallavamalla, also claims in the Udayāṅḅiram grant to have defeated the Pāṇḍya at Maṇṇaikudi (*S I I*, Vol II, p 308, Text, l. 60 f). Perhaps we may have to identify Maṇṇaikudi with Maṇṇikūchechi which is mentioned in the Tamil portion (Text, l. 73 f) as one of the places where Tēr-Māraṇ was victorious

⁵ No 127 of the Madras Epigraphical Collection for 1910.

⁶ See above note 3.

Marudū is perhaps Tiruppudaimarudūr near Ambāsamudram, Mangalapuram of the Mahārāthas might be Mangalore; Kodumbālū is in the Pudukkōttai State, Pāndikkodumudī is the village Kodumudī near Karūr a station on the South-Indian Railway, Kūdal is Madura; Vañji is Karūr¹, Kōḷi is Worayūr near Trincomopoly, Pennāgadam is in the Tanjore District, and Karavandapuram is the modern Kalakkād in the Tinnevely District.

TEXT.²

First Plate.

Svasti³ [||*]

- 1 Śrīyañ=chiram vaś=śisu-ūmsu-śīkhaiaś=Śiva[h*] śrit-ārti-pratibandha-kāranam [1*]
tanōtu sauvarna-kapa-
- 2 rdda-sundarah=kudarppa-Kandarppa-mada-pramarddanah २ [1*] Viśvambharā-
bhara-śrānta-śēsha-viśrama-kāranam [1*] ā-
- 3 kalp-āntam=bhuvī sthēyād-anvayah=Pāndya-bhābhritām २ [2*] Astambhayat=
kshiti-dharam-pravṛṣṭimbhamānam=ambha-
- 4 s=samastam=apibaj=jaladhīś=cha yas=sah [1*] Kumbh-ōdbhavō bhavati yasya
munih=purodhās=sa śrī-nidhi-
- 5 r=ṅayati Pāndya-narīndra-vamśah २ [3*] Aśchād=apratima-prabhāva-mahitah=
Pāndy-ābhīdhānō nidhē-
- 6 r=vvārādhvārī⁴ mahīpatīs=tribhuvanē lin̄=pi kalpa-kshayāt [1*] Dhātrā śrīṣhta-
vatā punas=sa
- 7 jagatām rakshārtham=abhyarthitas=tējasvi tanayatvam=ētya śāsīnō nāmnā Budh=
ākhyō=bhavat २ [4*]

Second Plate, first side

- 8 Putras=tasya Purūravā bhujā-bala-pradhvasta-daityah=prabhus=tad-vamśē Śikhariṅ-
dra-mastaka-śi-
- 9 lā-vinyasta-matsya-dvayō [1*] Śakr-śiddh-āsana-hāra-bhāṃ śaranē viśvasya viś-
vambharā-gṛha-
- 10 svāmīni śāsvatē yudhi p̄t-āśēsh-āmar-āri-prabhau २ [5*] Dātībhūta-divōkasi⁵
kshītīdhara-kshu-
- 11 bdh-ābhīsamk̄sbōbhita-kshir-ōdanvati Kumbha-sambhava-kara-prāpt-ābhūhēka-kriyē
[1*] śhṭ-ārtth-ērp̄pana-
- 12 tarppit-ārtthi-janat-āpūrṇa-kshamā-mandalē janm=āvāpa jagat⁶-tray-ārchchita-guna[h*]
śrī-Śīrēvarmmā nri-

¹ Pandit Bāghara Aiyangar of Remnad has proved from copious references to literature that the earliest Vañji is Karūr. But an inscription at Dhārāp̄nam mentions the town Kongu-Vañji, suggesting thus, another Vañji which was perhaps the earlier and the capital of Chōla.

² From two excellent impressions supplied by Dr. Fleet to Mr. Venkayya in 1892 and another supplied by Dr. L. D. Barnett to me in 1915.

³ These two syllables are written on the left margin of the plate.

⁴ Read *rī-ārān=arāri,

⁵ Read -divōkasi.

⁶ Read jagat⁶.

Handwritten Tamil script on a dark background, lines 2-6. The text is densely packed and appears to be a legal or historical document.

||

Handwritten Tamil script on a dark background, lines 8-14. The text continues the narrative or legal proceedings.

||

Handwritten Tamil script on a dark background, lines 16-20. The text is written in a clear, consistent hand.

||

Handwritten Tamil script on a dark background, lines 22-28. The text is well-preserved and legible.

||

Handwritten Tamil script on a dark background, lines 30-36. The text concludes the visible portion of the document.

38
40
42
44
46

37
40
42
44
40

Handwritten text in an ancient script, likely Tamil, on a dark background. The text is arranged in horizontal lines, with some characters appearing to be in a different script or dialect. The lines are numbered on both the left and right sides.

u h

48
50
52
54
56

48
50
52
54
56

Handwritten text in an ancient script, likely Tamil, on a dark background. The text is arranged in horizontal lines, with some characters appearing to be in a different script or dialect. The lines are numbered on both the left and right sides.

u a

58
60
62
64
66

58
60
62
64
66

Handwritten text in an ancient script, likely Tamil, on a dark background. The text is arranged in horizontal lines, with some characters appearing to be in a different script or dialect. The lines are numbered on both the left and right sides.

u b

68
70
72
74
76

68
70
72
74
76

Handwritten text in an ancient script, likely Tamil, on a dark background. The text is arranged in horizontal lines, with some characters appearing to be in a different script or dialect. The lines are numbered on both the left and right sides.

u a

78
80
82
84
86

78
80
82
84
86

Handwritten text in an ancient script, likely Tamil, on a dark background. The text is arranged in horizontal lines, with some characters appearing to be in a different script or dialect. The lines are numbered on both the left and right sides.

- 13 Pat २ [6*] Dharani-valayam samastam=etan=niya-dōrdanda-mah-ōrag¹na
bibhrat¹ [1*] aharat-sa bhū-
- 14 jngam-adhibhartuś=chura-kāl-ōdvahana-klaman=dharāyāh २ [7*] Adhiruhya
tulām=a-mitra-varggam-judhi ji-

Second Plate, second side

- 15 tv-Āmṛita-gaibbhatō jantvā [1*] sudhuyām=adhīpas=suvarnna-rāsīm vidhivat=sa
prat-pādayām-babhūva [२] [8*] Tasyā-
- 16 ²nmayas-taruna-bhūskara-tulya-tōjā rājā babhūva Ranadhira iti pratitah [1*]
ḡō Hlay=aiya bhuvana-
- 17 sya babhāra bhāram hāram yath=āsya guravas=suranāyakasya २ [9*] Putras=
tasya Purandara-pratikṛitir=bhū-
- 18 sundari-vallabhō namr-śśśha-narēndra-vēshana-mani-viāt-āvṛit-āmghri-dvayah [1*]
āsit=batya-sakhaḥ=pa-
- 19 rākrama-dhanaḥ=²patmāsanaḡyāḥ=patir=vvīdy-āchāra-vibhūshana[h*] śruta-[dha]ra[h*]
śri-Māravarm=ābhūdhah २ [10*] Sa Rāja-
- 20 śimbas=sarasiruh-ākshō bhayam bhuvī prāna-bhṛitām=apāsya [1*] raraksha
dakshah kshapit-āri-paksha-
- 21 ³ji=kābamātalam kshamū-patir=akshat-ājñah २ [11*] Narō nu Rakshō nu Harō-
nu Pūrushah=parō nu Sakrō nu

Third Plate, first side

- 22 sarōsham-āgatah [1*] iti [sma] matvā yudhi yam=bhay-ā[rddi]taḥ=[pn]lāyatō
[Pallava]malla-bhūpa-
- 23 tih २ [12*] Kanaka-gaibbha-kṛita-prasavaḥ=punas=samadhīruhya tulām=atulām=
apī [1*] akura[t=ā]-
- 24 rītham=apākṛita-kalmashō dvija-daridra-sur-āyatanō=shu yah २ [13*] Māhā⁵-
kulinām=Mājav-ēndra-[ka]-
- 25 nyām sa Māravarmnā sadraśm⁶=uvāha [1*] ajāyat=āsyaḡm Hara-sūnu-kalpō
jagad-dhūtērtthañ=Jati-
- 26 l-ābhūdhānah २ [14*] Aśishat=sa dharām=ahina-sārah=kshitipah=kshālita-⁷
kalmash-ānushamgam [1*] nata-rā-
- 27 jaka-mauli-ranna⁸-raśmi-prakar-ēbhyarohchuta-pāda-patma⁹ piḡhah २ [15*] Khalayō
sa gunān=adāt=Kṛitasya
- 28 sva-bhujēbhyām sura-pādapa-svabhūvam [1*] abhayam śaranāgata-prajābhyas=sa
divaḡ samyati śa-

¹ Read *bibhrat*

⁴ Read *pakshah kshamā*
Read *kshitipah kshā*

² Read *°tmaja*^o

⁵ Read *Mahā*.
⁶ Read *ratna*.

⁵ Read *°padmā*^o

⁶ Read *sadrśim*.
⁷ Read *padma*.

Third Plate, second side.

- 29 tru-pārtthivcbhyah \ominus . [16*] Rājatēm sa mahipāla-kirit-ārppita-śśāsanah [1*]
Rājasimha-suto rā-
- 30 jā churam=urvyām=Parāntakah ||||— [17*] I-prafasti Sarvvakratu-yāji śgiya
Varōdaya-Bhattanēṛ-che-
- 31 yyappattadu ||||— Kol-yānai-palay=ōṭṭi-kkūḍā-mannar-kulān=tavi-
- 32 rttā Palyāga-Mudukudumi=pPeruvaḷudū ennum Pāṇḍyādhiraṅga-
- 33 nāga-mā-malar-chchōlai-nalir-śinaimūśai-vand-alambum Pāganūr-
- 34 kkūrṛam¹=ennum paḷaṅga-kkūḍakkai-nir-nāṭṭu=chchoṅkannālar-fo-
- 35 lappatta śrutumārggam-pūḷayāda Koṅkai-kūḷā-Narṅkoṅṅaṅ ko-
- 36 da vēḷvi muṅṅuvikka kēḷvi-andaṅālar munbu kēṭṭka eṅṅ=edut-

Fourth Plate, first side

- 37 t-urattu vēḷvīśālai-munbu niṅṅu Vēḷvikudū eṅṅ=a-ppadyai=chchī-
- 38 rōḍū tiru-valara=chcheyḍār [||*] Vēndaṅ=appoḷudēy niroḍ=atti-kkoduttamai-
- 39 yā=pidu-bhukti ²tuttapinṅ[||*]=Alav-ariya ādhiraṅgarai agala nikki agal-idattai=
- 40 kKalabhraṅga=ennum=Kali-araiśaṅga kaikkōḍ=adaṅgai iyakkiyapin[||*] Padu-kadaṅ-mulai
- 41 tta parudī-pōla Pāṇḍyādhiraṅga velirpattu vidu-kadir-avir-oli vilaga viṅṅi-
- 42 rundu vēlai-sūḷinda-viyal-idattu=kkōḍvun=kuṅṅumbum pāvudaṅga murukki=chche-
- 43 nkōl=ōchchī ven-kudai-mūḷaṅ-gaṅ-oh-niṅṅaṅda Tarami-maṅṅaiyai=ppirar-
- 44 pāl=urimai tiravidi=nikki=ttanpāl=urimai nappanāṅga=amaitta māṅṅam-pē-
- 45 rttā-tānai-vēndaṅga=odunṅā-mannar-oh-nagar-aḷitta Kaduṅṅōṅga=ennum=kadi-
- 46 r-vēṅṅ-Bennan [||*] Maṅṅa=avaṅṅu magan-āgi mahitalam podu-nikki Malar-maṅṅai[y*]-o-

Fourth Plate ; second side

- 47 ḍu maṅṅaṅ=ayannda aram-il-aḍar-vēṅṅ-ṅānai-Ādhiraṅga Avāṅṅicūḷāmaṅṅi etti-
- 48 rattum=igal-aḷikku=matta-yānai Māravarman [||*] Maṅṅa=avaṅṅu maruv=niṅṅa
oru-magan-ā-
- 49 gi Maṅṅa-magalai maṅṅa=kkadindu vikramattin velirpattu vilāṅgal-vēḷ-po-
- 50 pi-vēndaṅga-vēndaṅga śilai-ttāḍa-kkai=kkolai-kkalirru=chChalṅṅayan Vāṅṅavap
- 51 śenkōṅ-Chēndaṅ [||*] Maṅṅa=avaṅṅu=ppaḷipp-inṅṅa vali-ttōṅṅa Udayagiri-madhyama-
- 52 tt-uru-śudar-pōla=ttēṅṅ-eṅṅu diśai nadunṅa maṅṅa=avaṅṅa velirpattu=chchū-
- 53 ḷi-yānai śalav=undi=pPāḷivāy=amar-kadandu Vilvēḷi-kkadar-ṅāṅṅaiyai
- 54 Kēḷvēḷi-chcheru veṅṅum viravi-vand=adaiyāda Paravarai=ppāl-padut-
- 55 tum=arukāl-iṅṅam pudai tilakkun=Kuṅṅuṅṅattavar-kulan=keḍuttu-
- 56 ā-kai-nnaletta-kalṅṅ-undi=chChennulattu-chcheru veṅṅum pār-ślavun=

¹ The *ṅ* is marked over *ṅ*.² Read *tuytta*.

Velvikudi Grant of Nedunjadaiyan . the 3rd year

v: b

88
90
92
94
96

88
90
92
94
96

vii a

98
100
102

98
100
102

vii b

104
106
108
110
112

104
106
108
110
112

viii a

114
116
118
120
122

114
116
118
120
122

viii b

124
126
128
130

124
126
128
130

Handwritten text in an ancient script, likely Tamil, covering the first section of the manuscript. The text is densely packed and spans approximately 10 lines.

172
173
176
178
140

Handwritten text in an ancient script, likely Tamil, covering the second section of the manuscript. The text is densely packed and spans approximately 10 lines.

142
144
146
148

Handwritten text in an ancient script, likely Tamil, covering the third section of the manuscript. The text is densely packed and spans approximately 10 lines.

120
122
124

Fifth Plate ; first side.

- 57 [ta]ni-ohchenkōr-Kēraḷaṇṇai=ppala-mu[raiyum-urimai]-ohohuḅḅam[ōḍ=avar-yā]ṇai-
 58 [y*]um puriṣai-mmadiṛ-Pull[y*]ūr=ppaga-nāḷigai iṛa[ṽ]amai iḡa[l-ā]-
 59 ḷi[y*]ul veṅṛu kondam vōl-āḷi[y*]um viyaṅ-paraḅbum=elāmai ſen-
 60 r=erind=alittum Hiranyagarbhamun=Tulābhāramun=daraṇimīṣai=ppala ſey[du]
 61 antaṇarkkum aṣaktarkkum vand=apaḡa eṇṛ=itt=alitta makarikai-aṇi-maṇi-
 62 neḍu-muḍi-Arikēsarai Aṣamasaman ſri-Māravarmman [[i*] Maṛṛ=avaṅku maḡaṅ-
 āḡi=kkorṛa-vō-
 63 ḷi valaṅ-ēndi=pporud=ūrun-kadaṛ-ṛāṇaiyai Marudūrun māṇb=alitt-Āyavō-
 64 ḷai ngappiḍa ey=enṇāmai eṛind=alittu=chChengodai[y*]um Pudēṇ[kō]t-
 65 tuṅ=cheru veṅṛ=avar-ſiṇaṅ=tavirttu=kkong-alarun-naṛum-poḷilvēy=kku-
 66 [y*]i[lo]du ma[y*]iḷ=agavu=Mangalaṣpuram=enṇum mahā-nagarun Mahāratharai e-

Fifth Plate , second side

- 67 ṛind=alitt-aḡai-kadal-valāgam podu-moḷi aḡaṛi=chchilai[y*]um puli[y*]um
 68 kayaluṅ=chenṛu nilaiy-amai-nedu-varai-Idava[y*]iṛ=kidēy maṇṇ=inṇid-ḷiḍa
 69 taṇṇ=ali-chchenkōr-Bēṇṇa=Vāṇavaṅ ſēmbiyāṅ ſōḷaṅ maṇṇar-maṇṇa[p*] madu-
 70 ra-Karunēḍaḡaṅ koṅ-ṇaviṅṛa neḍuṅ-ehudāṛ-vēṛ-Kongar-kōmāṇ kō=chChadaṣyaṅ
 [[i*]
 71 Maṛṛ=avaṅku putraṇāy Maṅ-magaladu poruṭṭāḡa matta-yāṇai ſelav=undi māḡa-
 72 vōl valaṅ-ēndi=kkadu-viṣaiyāḷ=edirndavarai Neduvayalvāy niḡar=alī-
 73 ttu=kkaruv=ndaṇda maṇattavarai=kKurumaḍaiṽy=kkūrpp=alittu Ma-
 74 nnikurichōḷi[y*]un=Tirumaṅgai[y*]u=munṇiṇṇavar muraṅ=alittu mōvalō-
 75 r-kadaṛ-ṛāṇai[y*]ōḍ=ēṛṛ=edirēy vandavarai=pPūvalūr=ppuṛaṅ-ḡaṇḍun=
 76 kodum-puriṣai=nneḍun-kidāḡiṛ-Kodumbāḷūr=kkūḍār-kadum-pari-

Sixth Plate , first side

- 77 [y*]un=karun-kalḷun=kadīṛ-vōḷiṛ=kaikkonḍuṅ-Chēva [kū]dāda Pallavaṇai=k
 78 Kulumbūruṭ=ṭōṣ=alīya eṇṇ-ṛanda māḷ-kalḷum=ivu[ḷiḡa]ḷum pala kavarn-
 79 dum tarīyalarāy=ttaxittavarai=pPeriyalūr=ppid=alittum pāṽiri[y*]u-
 80 m-poḷiṛ-chōḷai=kKṣviriṽai=kkadāṇḍitt=alēḡ=amaṇḍa vār-ſilai[y*]iṇ Māḷa-Ko-
 81 ṅam=adippaduttu miṇḍ=ohya-maṇi=imaikkum=ehḷ=amaṇḍa neḍum-pu-
 82 riṣai=pPāṇḍikkōḍumidi ſeṅṛ=eydi=pPaṣupatiyāḍu paṇma-pādam paṇṇind=ē-
 83 ttu=kkanaka-rāṣi[y*]un=kadīṛ-maṇi[y*]um mana-maḡuḷa¹=kkuduttatṭun=konga-
 84 r=van-naṛuā-kannu=kKēṅḡa²-rāḷaṇḍu sambandhaṅ=chēyḍum eṇṇṛandaṇa ḷō-
 85 sahasramum Hiranyagarbhamun=Tulābhāramum maṇṇiṇṇimīṣai=ppala ſeydu ma-
 86 ṛai-nāṽiṇḍōṛ kuṛai-tirttun=Kūḍal Vaṅji Kōḷi eṇṇu=māḍa-mē-madi-

Sixth Plate , second side

- 87 ḷi pudukki[y*]um=aḡai-kadal-valāgan=kuṛaiyāḍ=āṇḍa maṇṇar-maṇṇa[p*]-Bēṇṇavar-
 maruḡa-

¹ Read *maḡuḷa*.

² Read *kKēṅḡa*

- 120 tt[e]n ellai Kulandaiyan-Kū|vandai-še[y*]kkun=Kalandai-kkulattl=ēlukk[u]
 121 vadakkum maṟṟ-idaṟku mēl-ellai aṟṟam-illā=kKoṟṟapputtū(r)Odumaiy-i-
 122 ruppai-chehey-idaī mōṟṟalai-ppēruppiṟku=kkūlakku maṟṟ-idaṟku vadapā-

Eighth Plate, second side

- 123 l-el[lai kāya]lut=kamalam malarum Pāyalul vadapālai=pperuppiṟku=t-
 124 teṟkum ivv=iyait[ta*] peru-nāṅg-ellaiyṟ-patṭa pūmi kārūnmai miyāṭchi
 125 nll-adanga mēl-en-guravaiāṟ=kudnkkappaṭṭa paṟṟēy emmālnn=[ko]ḍuk-
 126 kappatṭadu [||*] Maṟṟ-idaṟk-ānattī kuṟṟam-ṟṟṟi=kkūṟunkēlai=kkongar-van-na-
 127 ṟṟṟ-kann-¹kGingarājanūdu kanyā-ratnam Kongarkōṟku=kkunandu koduppa āṟp-
 128 p-aṟū-adaṟ-rānai-pPūrvvarājar pugaṟ=elundu vil-viṟavun=kadaṟ-rānai-[Va]llabhanai
 129 Venbaivāy āl-amarull=cūṟind-ōda vāl-amarul=udan-vavviya ēna-ppor²
 130 igal-amarul=idi-urum-ēṟa valaṟ-ēnda [malai]tta-tūnai-Madavikalai³ mannar-kō-
 131 ṟ-arulṟ=peṟṟun-kol-valakkum-vēṟ-rānai-ppal-valai-kkōn kunara-

Ninth Plate, first side

- 132 ppaṭṭ(u=ppōr-vandavar-madan=tavirkkun=Karavandapurattavar-ku[la-t]tōṟṟal māv=ēn-
 133 dun = kadaṟ - rānai - Mūvēndamaṅgalappērarai[ya]ṟ = āḡiya Vaidyaka-śikhēman⁴
 Māraṅgā-
 134 ri [||*] I-ppiramaḍyam-udaiya Koṟkai-kilān Kāmakkāni Suvaraṅ-Jiṅgaṟ 1-
 135 danul mūṟṟil-onṟun=tanakku vaitt=irandu-kūṟum aṟṟpadinvar Brāhma-
 136 naṟkku nīrōd=at[=kkoduttāp [||*] Idapul Mūrtti Eyanan śavaī[y*]ōd=o
 137 ttadu nāṅg-arai-ppadāḡāram-udaiyana [||*] Idapaṭ=ṭanakku vaitta oru-kūṟṟilu-
 138 n=tambimūṟkku nāṅgun=taṅ=chṟṟappapār-makkalukku āṟum sa-
 139 bhai[y*]ōd=otta paḍāḡāran=koduttān [||*] I-ppraśasti pādina Sēnēpa.
 140 tā Ēnādi ā[y*]iṅa Śāttai-Ohēttaraku mūṟṟu kūṟṟārum-āy=t-
 141 tangalōd=otta nāṅgu paḍāḡāran=koduttār ||⁴

Ninth Plate, second side

- 142 Āstī⁵-Mangalarāḷō Madhuratarah śāstravit=kavir=vvāgmī[||*] āḡṅaptir=asya
 Vaidyah Karavandapur-ā-
 143 dhivāstavyah 2 [18*] ⁶Ratshān=narah parakritau vidadhita vidvān=pādā hi
 Dharmma yasasah para-
 144 masya labdhā[h*] [||*] Dhātr=aiva ⁷śraṣtam=akṟilam ⁸bhuvanān=tath=āpi
 ratshāntri⁹ punyatatayah ¹⁰prathivīn=narēndrā[h] || [19*] ||⁴
 145 Na hi bhūmi-pradānād=vai dānam=anyad=viśiṣhyatē [||*] na ch=āpi bhūmi-harauāt
 pāpa-
 146 m=anyad=vidhiyatē 2 [20*] Dātā daś=ānugrahnātī¹¹ yō harēd=daśa han¹
 oha [||*] atit-ānāgatā-

¹ Read *kKanga*^o

² These two syllables are written over an erasure

³ For the ornamental form of the punctuation, see Plate

⁴ On the use of *tsha* for *ksha*, see above, p 1.

⁵ Read *bhuvanān*.

¹⁰ Read *prī*.

⁶ Read *vikalan*

⁷ Read *śān*=

⁸ Read *śriśham*.

⁹ Read *nī*.

¹¹ Read *grī*.

(V. 8). He, the patron of the learned, conquered enemy crowds in battles and ascended the scales; came out of the nectar womb (*of the cow*); and according to rule, gave away heaps of gold¹.

(V 9) His son was the king called Ranadhira, whose prowess was equal to that of the youthful sun and who bore the burden of the earth as sportively as his ancestors wore the necklace of (Indra), the chief of the gods.

(V. 10). His son was the glorious king named Maravarman, a counterpart of Purandara (Indra); the dear lord of the beautiful lady, earth, whose pair of feet was surrounded by the collection of gems in the crowns of all kings bowing in obeisance, whose friend was truth, whose wealth was prowess, the lord of the goddess of prosperity (Padmāsana), who was an ornament of learning and good conduct and a depository of sacred knowledge

(V 11) That lotus-eyed Rājasimha, the king of the whole earth, driving away the fear of created beings on earth, ably protected the earth unopposed (*after*) destroying the allied enemies

(V 12). "Is he Nara (*i e*, Arjuna), is he a giant, is he Hara (*i e*, Śiva), is he the Primeval Man (Vishnu), is he Śakra (Indra) come with anger?" thus thinking of him, in the battle-field, the frightened king Pallavamalla runs away (*from him*)

(V 13). Who being made to be born of the womb of the golden (*cow*) and having again ascended the matchless scales, was freed of (*his*) sins and showered freely (*his*) wealth on Brahmans, beggars and temples

(V 14) Thus (*king*) Māravarman suitably married the daughter of the Maḷaya king of high birth, and from her was born, for the good of the world, (*the king*) named Jaṭila almost equal to Skanda the son of Śiva

(V 15). That king of great strength ruled the earth clearing it of (*all*) associations of corruption; the footstool of his lotus feet was worshipped by the great lustre proceeding from the gems on the crowns of prostrating kings

(V 16) I imagine that he lent (*his*) virtues to the Kṛita (golden age), (he lent) to the celestial tree its nature, from his hands; to the subjects who sought refuge (*in him*), his promise of protection; and to the enemy kings on the battle-field, heaven²

(V 17) May he be long glorious on earth, king Parāntaka, the son of Rājasimha, whose commands are borne on the crowns by rulers of earth

(L. 30) This *prastā* was composed by Varōdayabhaṭṭa who was a performer of all sacrifices (*Sarvakratuyājin*).

(L 31). Naṅkoṭṭam, the headman of Koṅkai, who never transgressed the path of the *Śrutis* as interpreted by the highly learned (*men*) of the division called Paganūr-kūṭṭam,—a well-watered land of extensive paddy fields, where the beetles buzzed on cool buds in groves blooming with the Nāga and the mango (*trees*),—being desirous of completing a (*Vedic*) sacrifice begun (*by him*), through (*the favour of*) the ādhirāja of the Pāndyas called Palyāgamudukudumi-Peruvaḷudi, who dispersed the crowd of the enemy kings by leading numbers of ferocious elephants (*against them*), the kēḷu-Brāhmanas, in presence (*of the king*) saying

¹ These are the gifts which kings are expected to make on their coronation or on obtaining conspicuous victory in battles. They were also expiatory in character. See below, v 18

² The nature of the celestial tree is to give whatever is wanted and the hands of the king were giving away gifts on a very liberal scale. To give enemy kings heaven means to kill them on the battle field and by so doing to send them to heaven.

"Please hear (O king)" explained the petition (of Narkoṭṭan), stood in front of the sacrificial hall and blessed that spot to grow in prosperity under the name Vēlvikudī.¹

(L 38) The king at once gave it with libations of water and it was since long (so) enjoyed

(L 39) Then a Kali² king named Kalabhraṇ took possession of the extensive earth driving away numberless great kings (*ādhirāja*) and resumed the (village mentioned) above

(L 40) After that, like the sun rising from the expansive ocean, the Pāṇḍyādhirāja, named Kadungōn, the lord of the South of sharp javelin who wore (the cloak of) dignity and was the leader of an army, sprang forth, occupied (the throne), spreading round him the brilliant splendour of (his) expanding rays (*prowees*), destroyed the kings of the extensive earth surrounded by the sea together with (their) strongholds and (their) fame, wielded the sceptre (*of justice*) and removed by his strength the evil destiny of the goddess of Earth whose splendour deserved to be under the shade of (his) white umbrella, by terminating by his strength³ the possession of her under others and establishing her in his own possession in the approved manner and destroyed the shining cities of kings who would not submit to him.

(L 46) Then came his son Avanichūlāmanī Kāravarman, who removed the common ownership of the earth (by making it his own), who was wedded to the goddess (born) of the flower (*i e.*, Lakshmi), the leader of a faultless army of fighting spearsmen, and the infuriated elephant who destroyed by all (possible) means the power (of enemy kings)

(L 48) Then came his son, a lovely one and incomparable, the just ruler, Śeṭṭiyaṇ Vānavan, Śēndan, the lord of the hill-chiefs who throw weapons (dexterously), who removed the spot⁴ from the goddess of the earth, who became well known by his prowess and who possessed long hands (holding) the bow, and furious elephants

(L 51) Then to him (was) born, a son,⁵ Arakēsan, Asamasaman śri-Māvarman, whose high jewelled crown was adorned with ornamental hangings, who, like the brilliant Sun from the middle of the eastern mountain, came out spreading his rays, causing the quarters to tremble, won the battle at Pāḷi by driving into the field of battle caparioned elephants, conquered the ocean-like army of Vilvēḷi⁶ in the battle of Nelvēḷi; destroyed the *Pararas* where crowds of beetles abounded on all sides, won a victory at the battle of Śēnnilam by driving into battle (a herd of) elephants of strong trunks, conquered many a time during the day, in the terrible battle-field of Pulyūr of strongly fortified walls, the Kērala (king) whose matchless sway (extended) over the whole earth together with (his) near relations and their elephants and captured them alive⁷, marched against, attacked and destroyed unopposed the sea of weapons, and the high mountains (of that country), performed many times on earth (the gifts called) *hiranya-garbha* and *tulābhāra*, and gave (the same) with pleasure to Brāhmanas and the infirm inviting them to come and assemble

¹ In blessing it, they actually suggested that the king might grant the village to the Brahman Narkoṭṭan under the name Vēlvikudī.

² Mr K V Lakshmana Rao, M A, has suggested in an article entitled 'The Kopperam Plates of Palakēṣin II, contributed to the *Annals of the Bhandarkar Institute*, Vol IV, Part I, pp 43 to 54, that *Kali-kula* occurring therein text-1 8 is possibly a reference to the *Kalabhra*. He seems to be right, for the phrase *Kalabhraṇ-enṇun=Kali arasaṇ* in l 40 of the Vēlvikudī Plates properly translated means 'a Kali king named Kalabhra'

³ *Tiravādin* is interpreted by Pandit R Raghava Aiyengar of Ramnad to mean 'by his strength'

⁴ As usual this 'spot' of the earth is her being in possession of kings other than himself

⁵ Dr Winslow gives under *vali*, the phrase *valittōṅgal* in the sense of 'a son'

⁶ Dr Krisnaswami Aiyengar holds the view that Vil-vēḷi means 'a hedge of bows,' but here it must refer to a name

⁷ The word *-ṛavāma:* is explained by Pandit Raghava Aiyengar of Ramnad to mean 'in a moment'

(L 62) Then (came) his son King Śadaiyan, the lord of Kongas, whose javelins were long, brilliant and destructive, who was (also called) Tennan Vānavan, Śembiyan, Śōlan,¹ king of kings, the beautiful Karunātakan, who with the victorious javelin in his right (hand), fought and destroyed the glory of the ocean-like army that came forth at Marudūr and capturing Āyavēl, attacked and destroyed him completely², gained victories in battles at Sengodī and Pudaṅkōdu³ and brought his (i.e., Āyavēl's) anger to an end, at the great city called Mangalapura, where the peacock danced with the cuckoo near tanks perfumed with opening flowers, attacked and destroyed the Mahārathas; removed the word "common property"⁴ (with reference to) the country (bordering) on the roaring sea, administered justice tempered with mercy and ruled the earth with love, having reached the slopes of the high and permanent mountain (Mēru) and cut on the broad face of it the bow, the tiger and the fish

(L 71) Then (came) his son Tēr-Māraṅ (i.e., Māraṅ of the horse-chariot) the king of kings, a member of the Pāndya (Tēṅṅavar) family, the proud possessor of the white parasol, who in order to acquire the goddess of the earth, carried in his right hand the awe-inspiring javelin and driving (forth) *many* elephants (into the battlefield), defeated straightway at Neṅuvayal his opponents, who had rushed in great haste (against him), suppressed the rage of those whose minds were filled with anger (against him), at Kuṟumadaḷ, destroyed the power of (the enemies) who confronted him at Mānṅikuṟiccheṅ and Tirumangai; saw the backs of the insubordinate (chiefs) who advanced towards him with an ocean-like army, at Pūvalūr; captured the fiery steeds, the black elephants and the sharp missiles of enemies at Kodumbālūr which had high ramparts and deep trenches (round it), deprived the splendour of the Pallava (king) . . . at Kulumbūr and took numberless huge elephants and horses, humbled at Periyalūr the greatness of those who had come to cut him asunder not bearing (to see his greatness), crossed the Kāviri (with its) groves (of trees) and tanks of budding flowers; subjugated Māḷa-Kongam with (the help of his) beautiful long bow; proceeded and reached Pāndikkodumidaḷ of high fortifications, beautiful with the lustre emanating from brilliant gems, prostrated at and worshipped the lotus feet of Paśupati (Śiva), gave away with great pleasure heaps of gold and lustrous gems, contracted relationship with Gaṅgarāja, who wore garlands of sweet-scented flowers, and performing on earth countless (gifts of) *Gōsahasra*, *hiranyagarbha* and *tulābhāra*, relieved the distress of (the Brāhmanas) who studied the Vēdas, renewed the palaces and the high ramparts (of the capital towns)⁵ named Kūdaḷ (i.e., Madura), Vaṅḷi (Kaṟḷi) and Kōḷi (Uṟaiyāḷ) and ruled the whole earth (bounded) by the roaring ocean

(L 88) Then (came) his son Nedunjadaiyan, the king of the Nēriyar (i.e., the Chōlas), who (wore) a high crown covered with flowers and gems, who kept (his) council secret, who was respected for his virtues (and possessed) an army of battalions (as extensive) as the rising noisy ocean, who was afraid of (committing) sins, who had no wants, who was the lover of the learned (Panditavatsala), death to his enemies (Parāntaka), a Pārtha (i.e., Arjuna) in (wielding) the bow, clever in his designs, cruel to the wicked, the enemy of the Kali (ago) (Kalippagai), the performer of noble deeds, the abode of mercy, a Kinnara in music, firm as mountain, the smasher of heroes, he who equalled Manu, whose commands were obeyed, who was strong as

¹ The king having conquered the Chēra and the Chōla, apparently appropriated their crests also, viz., the bow and the tiger and their titles *Vānavan*, *Śembiyan* and *Śōlan*

² The word *āyennāmai* is translated tentatively.

³ *Sen-godī* and *pudān-koffu* may have to be interpreted in the sense of 'brilliant flag' and 'brand new drum' (P), which perhaps were the boast of the Āyavēl

⁴ *I.e.* made it all his own

⁵ We must understand after *enṇum*, some word like *nagarangaḷin*. But it is also possible that *māda māmadai* is a recognised term (*rūḍha-nāma*) for a capital town with palaces and fortifications, of the term as it occurs in I, 104

wind, the foremost of the valiant, master of heroism, renowned for good behaviour, free from (all) blemish, Punappūhyan, Sinechchōlan, Śrivarā, the partner of Śrī (i.e., Lakṣmī), the Teṅṅān (i.e., Pāṇḍya) and Vāṇaven (i.e., Chēṅ) whose long hand holds the bow and whose one word (of command) was accepted by the earth (bounded by) the noisy sea, who appeared in the form of Vishnu with victory, twice told² protecting the earth under his cool white umbrella, well praised by the goddess of the forest (i.e., Lakṣmī), the goddess of the earth and the goddess of the tongue (i.e., Sarasvatī), who began his rule so brilliantly that the strength of the lord of Kali was weakened; who in the battle of Pennagaḍam (surrounded by) an expanse of water and flowery grove and (situated) on the southern bank of the Kāvēri of blooming flowers and well-watered paddy fields, defeated the Kēḍavu (king), who inconsiderately came and attacked (him) with his four-fold leg army spread on all sides of the extensive earth girt by the black ocean, and drove (him) into the forest; and who crushing and driving in a fierce battle the Āya-Vēl and the Kurumbas that came and attacked (him) in great numbers, advanced with heavy spears and gained a victory over them in a battle at Nāṭṭakkurumbu (i.e., Kurumbu-nādu) (so that they) sought shelter in forests for (their) fortifications

(L 103) While the third year of the reign of this (king) was current, one (particular) day a bystander of Kūdal (i.e., Madurā) (the city of) mansions and high ramparts, having cried out (by way of complaint)³, the king himself at once called him mildly and was pleased to ask him first "what is your complaint" The bystander submitted thus "Oh! Mighty king; of powerful army! Formerly without swerving from the pure (path) prescribed by law, (the village) called Vēlvikūdi included in Pāṅṅūr-kūrram, whose flowery groves touched the sky was designated Vēlvikūdi and was granted through the *Ṛṣi* (Brahman) by your ancestor, the great lord known as Palyāgamudukudumi-Peruvaḷudī, who protected (the earth) girt by the ocean with an army of spearsmen who never miss (their aim). It has (since) been resumed by the ignoble (yet) ocean-like army of the Kālabhras" The king gently smiled and said. "Very well, very well, prove your antiquity (of the gift) by (a reference to) the district (assembly) and receive (it back)" He (the supplicant) proved then and there, the antiquity of his (claim) by (a reference to) the district (assembly) Thereupon the powerful king, of long arms holding the bow, being overjoyed was pleased to declare "what was granted formerly by my ancestor according to rule, is also granted by Us," and so saying he, of (many) chariots and ocean-like army, gave (it) with libations of water to Kāmakkāni Naṅchingan, the headman of Korṅai

(L 118). The four big boundaries of this (village) given in full detail are —(The eastern boundary is) to the west of the boundary of Nagarūr surrounded on (all) sides by faultless flower-gardens The southern boundary of this (is) to the north of the field (called) Kūḷvaṇḍai-ṣṭy of Kulaṇḍēyaṅ and of the banyan tree in the Kaḷaṇḍai pond The western boundary of this (is) to the east of the mound (peruppu) on the western side of the field (called) Oḍṇmayiruppai-ṣṭy of the faultless Korṅapputtūr And the northern boundary of this (is) to the south of the mound on the northern side of (the village of) Pāyal where lotuses grow in canals

(L 124). The land included within the four big boundaries thus described is also given away by us, inclusive of *kārānmai* and *mīyāṭchi*, in the same manner as it had been given formerly by our ancestors

(L 126) The *ānatti* of this (grant) correctly described is Mādavikalap, Mārangari, the crest-jewel of the Vaidyaka family entitled Mūvēṇḍamaṅgalappēraṅaiyan who was favoured by the king of kings, whose army fought powerfully like a thunderbolt, in battles where

¹ See foot-note 1 on p. 807, above.

² *Qṣā śpṛṣṭvā śilāśāyidū* could not be satisfactorily interpreted.

³ I have taken *ākrōḍhika* to stand for *ākrōṭhika* from root *krō* with the prefix *ā*; see *Naiṣāḍāśāstra* h. I, v. 81, where *ā-krōṣyata* is explained 'cried out in order to expose a mistake committed'

machines shaped like wild hogs (*śnapporā*) killed (*the enemies*) in (*close*) fight with (*drawn*) swords when the kings of the east (*Pūrvarājar*) possessing clamorous battalions of fighting men rose up, and put to flight with (*great*) loss in an infantry attack at Venbai, the Vallabhā of a vast army of archers, on the occasion when the excellent daughter of Gangarāja who wore a garland of highly scented flowers (*dribbling*) honey was secured and offered to Kongarkōn (i.e., the Pāṇḍya king)¹, who was a prince of the race of Karavandapurattavar, who possessed a powerful and big army that crushed the pride of those who came to fight being (*thither*) brought together by (i.e., under the leadership of) kings wearing many bracelets and possessing an army of spearsmen who wielded deadly weapons

(L 134). Kāmakkāni Śuvaran Śingan, the headman of Korikai, who owns this *brahmadēya* reserving for himself one-third of this (*village*), gave the (*remaining*) two parts to fifty Brāhmanas with libations of water. In this are included the four and a half *paḍāgāras* (*of land*) of Mārta Eyin in approved by the (*village*) assembly. And in the part reserved for himself in this (*village*) he gave with the approval of the (*village*) assembly four *paḍāgāras* to his younger brothers and six *paḍāgāras* to his younger paternal uncle's children. And the owners of the three parts with their united approval gave four *paḍāgāras* (*of land*) to the general (*Senapati*) Eṇṇādi alias Śattan Śattan, who composed² this eulogy (*prasasti*)

(V 18) The *ājñapti* of this (document) was Mangalarāja, the very sweet (*madhuratara*) poet (*kavi*) and orator, well versed in the sciences, a Vaidya and a resident of Karavandapura.

(V 19) Oh! Dharma! A (*learned*) man must render protection to the deeds of others. Indeed (*these are*) the feet acquired by (i.e., on which stands) great fame. The world was all created by Dhātri (Brahman). Still kings desirous of merit protect the earth.

(V 20) No gift is greater than the gift of land, nor is there a greater sin enjoined (*on man*) than (*that of*) resuming land (*already given*)

(V. 21). Oh! Gladdener of your race! He that makes a gift on this earth blesses (*his*) ten generations past and future; and he that takes away (*that which has been given*) destroys ten generations past and future

(V 22) To him that robs land given by himself or by others, there is no expiation-anywhere except in the dreadful hell

(V. 23) Lands have been given away by many. Different kings are ruling (*them*). The fruit (*of protection*) belongs to him whose land it happens to be (*at the time*). These four are verses in the Vaishnava-Dharma

(L. 151) "The flower-like feet of those who protect this (*charity*) shall be on my crown" The king himself was thus pleased to say and caused a copper-plate grant to be executed at once.

(L 152.) Śuttakēśari-pPerumbānaikkēraṇ who engraved this (*document*), and to whom were allotted through the favour of the great men (*of the village*) one house site, two mā of (*wet*) field and one³ dry field received (*the above*). This is the signature of Yuddhakēśari-Perumbānaikka[ra]ṇ.

¹ See above, p 307. If we took Kongarkōn as referring to the king of the Kongas, the reason for Māraṅgār taking part with the Koṅga king will have to be explained. So far as we know, the Koṅga king was an enemy of the Pāṇḍya and was on several occasions defeated by him

² The word *paḍāras* clearly indicates that the composition was in verse.

³ Perhaps one ma.

the reading in the other document also, the sense being that as this king furnishes a living example people have to believe in the historical reality of the rulers like Prithu, Sagara, etc. The remaining two words, as is shown by this plate where they occur in line 35 and line 42, respectively, were correctly read by him.

The charter was issued by the devout worshipper of Sugata or Buddha, the *Paramēśvara-Paramahattāraka* and *Mahārājādhirāja*, the illustrious *Dēvapālādēva*, the son and successor of *Dharmapāla*, who is regarded to have been the most powerful of the Pāla kings of Bengal. As I have just stated, its introductory portion is identical with that of the other grant and gives the genealogy of the donor which has already been discussed by scholars. The formal part of the grant, which the inscription registers, is worth considering. The wording is the same as we find in the other document. The officials mentioned are also similar, including the "*Prāmātri*" and the "*Śarabhaṅga*", excepting the "*Prāntapāla*" who is left out, though the order in which they are named is different. Amongst the names of the counties mentioned in line 35 of the Mongir (Monghyr) plate, this inscription puts *Ūḍiā* in place of *Gauda* and omits *Lāṣa* altogether. Herein we are told that *Dēvapālādēva* at the request of the illustrious *Bālaputradēva* the ruler of *Suvarṇadvīpa*, made through an ambassador, granted five villages, four of which lay in the *Rājagriha* (*Rājgur*) and one in the *Gayā viśhaya* (district) of the *Śrī-Nagarabhukti* (*Palna Division*) for the increase of merit and fame of his parents and himself for the sake of income toward the blessed Lord Buddha, for various comforts of the revered *bhikṣhus* of the four quarters and for writing the *dharma-atnas* or Buddhist texts (i.e. for the three jewels) and for the upkeep of the monastery built at *Nālandā* at the instance of the said king of *Suvarṇadvīpa*. The endowment, being entirely Buddhist, forms a distinctive feature of the grant and amply justifies the epithet of *parama-Saugata* applied to the donor. The four villages granted in the *Rājagriha viśhaya* were *Nandivanāka*, *Manivātaka*, *Natikā* and *Hastagrāma* and the one in the *Gayā viśhaya* was called *Pālāmaka*. As is usually the case in such grants, this part of the document ends with the date of the endowment which is the 21st day of *Kārtika* of the (regnal) year 39 and is written after the orders of the royal donor demanding regular payment of all the revenues due for the purposes noted above.

The second side of the plate first gives the well-known imprecatory and benedictory verses and, thereafter, introduces *Balavarman* who acted as the *dūtaka* in this 'meritorious undertaking' and whom it describes as the 'overlord of *Vyāghratātī-mandala*, ever ready to fight his foes independently'. Evidently he was the official of the King of *Magadha* entrusted with all arrangements to be made in connection with the grant. Then the inscription supplies, though unfortunately too meagre, an account of *Bālaputradēva*, the king of *Suvarṇadvīpa* at whose instance the endowment was made giving, also, some information regarding his ancestry. It is mainly in this connection that this document is specially interesting and possesses considerable international value. We learn that the dynasty to which *Bālaputra* belonged was that of the *Śailēndras*, who were Buddhists and held the island of *Java* under their sway about the eighth century of the Christian era or the *Śuka* year 700. The latter fact about the *Śailēndras* is already known from the *Kalāsan* inscription which has been published by Dr. (now Sir) R. G. Bhandarkar¹ and Dr. J. L. A. Brandes². But this *Nālandā* copper-plate introduces to history for the first time *śrī-Bālaputradēva*, the *Śailēndra* King of *Suvarṇadvīpa* together with some of his relations, as well as the *dūtaka* (of the grant), namely, *Balavarman*.

The illustrious *Mahārāja Bālaputradēva*, our inscription tells us, was the overlord of *Suvarṇadvīpa*. His mother was *Tārā*, the daughter of a King *Dharmasētu* of the lunar race and

¹ *Journals of the Bombay Branch of the Royal Asiatic Society*, Vol. XVII, Part II, for 1887, Art. I.

² *The Tijdschrift voor de Taal-, Landen- en Volkenkunde van Nederlandsch Indië*, XXXI (1886), p. 240 sq.

the queen consort of the mighty king who was the son of the renowned ruler of "Yavabhūmi." The latter, we are told, was the ornament of the Śailendra dynasty and 'his name was conformable to the illustrious crusher or tormentor of his brave enemies'. Though the epigraph gives high praises for all these rulers, yet it contains no other information regarding their identity. The name of the father of Bālaputrādēva is not given at all but the name of the grandfather is said to have been something like 'Śri-śtra-vairi-mathena', meaning 'the illustrious destroyer of heroic foes'. This would lead us to surmise that the name must have been one like Pararaddi-dēva, Śatrañjaya, Arimarddāna, Arindama, etc., but what it really was I am not in a position to find out. The Yavabhūmi and the Suvarṇnadvīpa are evidently identical with the Yavadvīpa and the Suvarṇnadvīpa islands spoken of in Sanskrit works like the *Rāmāyana*¹ or the *Kathāsāritsāgara*² and are unquestionably the modern Java and Sumatra. While speaking of Bālaputrādēva as the king of Suvarṇnadvīpa and his grandfather as the ruler of Yavabhūmi, the author of our inscription, apparently, took both the islands as one considering them practically united. As M. Duroiselle kindly tells me, the consensus of opinion, arrived at by scholars like Barth and Kern, is that Suvarṇnadvīpa and Yavadvīpa are the same, that is Java-Sumatra. The document goes to confirm the view that Yavadvīpa is Java proper and that Suvarṇnadvīpa is properly Sumatra. This Suvarṇnadvīpa, however, is different from the Suvarṇabhūmi, which, as M. Duroiselle has kindly informed me, in its most extended sense refers to Indo-China, but, particularly, to the country extending beyond the eastern and northern coasts of the Bay of Bengal or Rēmaññadēśa (i.e., lower Burma).

Now the question which would present itself for solution is, who were the Śailēndras mentioned in the plate? There are only two Javanese inscriptions in Nāgarī, known to me, which were issued by a king of the Śailendra dynasty. One of them, to which I have alluded above, commemorates the foundation of a temple of Tārā, the well-known Goddess of the Mahāyāna pantheon, the setting up of her image, and the building of a monastery in the year 700 of the Śāla era during the prosperous reign of a king of this dynasty³ whose name to our regret is not forthcoming. The other⁴ inscription is not yet published and the following information regarding it I owe to the courtesy of Dr Bosch, Director of Archaeology in Netherlands-India. It comes from Klurak, a site between the Prambanam and Sewu-temples in Central Java and belongs to the Śāka year 704, the object being to commemorate the erection of an image of Mañjuśrī, another noted divinity of the Mahāyāna pantheon. In one of the lines of this inscription Dr Bosch reads *rājñā dhritā dhritimatā dharanīndranūmnā* and finds the king's name to be Indra, though one could take it to be Dharaṇīndra (earthly Indra) as well. Yet another inscription I know of, which is connected with this evasive race of the Śailēndras, comes not from Java but from India and, like our Nālandā inscription, records the erection of a monastery and an endowment for it. It is engraved on twenty-one copper-plates now preserved in the Leyden Museum in Holland and belongs to the reign of the Chōla King Rājarāja-Rājakēśarivarmman (985-1013 A D). This highly interesting document tells us that the illustrious king Māravijayōttungavarmman of the Śailendra dynasty and the lord of Śrīvijaya⁵ caused to

¹ Canto IV, Chap XL, St. 30, and the *Tilaka* commentary on these verses. Here we find that Java in remote antiquity formed a large principality which comprised not less than seven minor states.

² *Tiruvāga*, 57, Strs 96, 134, 173, etc.

³ रावदे प्रवृत्तानि राज शैलेन्द्रवश तिलकस्य. Dr Bhandarkar read in the sixth line of this inscription *Śailēndravarmmanasūryajaya* and thought that *Śailēndravarmman* was the proper name of the father of the donor whose name he took to be Pañśūkaraya. The correct reading, however, as the late Dr J. L. A. Brandes has shown, must be *Śailēndravarmmatilakasya*.

⁴ Except these two inscriptions there exists a number of fragments of inscribed slabs, which according to Dr. Bosch, might be attributed to the Śailendra race but they are all too weather-worn to be deciphered.

⁵ Dr Hultzsch takes *Śrī-Vijaya* of Tamil inscriptions as the equivalent of Śrī-kishaya (above, Vol IX, p. 231).

be built a lofty and very beautiful monastery at Nāgapattana, the present port of Negapatam¹ and that it was endowed by the Chōla king Rājārāja, thus furnishing an exact parallel to the Nālandā monastery of our plate² This Śrīvijaya is the same as the San-to-tsai of the Chinese Annals and, according to M. George Coedes, must be identified with the kingdom of Śrīvijaya or Palembang, which is a residency of Sumatra³ The Leyden grant says that Māravijayōttūṅgavarman was the overlord (*adhipati*) of Śrīvijaya who, while extending the kingdom of Kātāha, caused that monastery to be built in the name of his father. Thus on the authority of this invaluable record it becomes clear that, about the end of the 10th century A. D., Sumatra was governed by the Śailēndra dynasty to which king Māravijayōttūṅgavarman or his father Chhīḍumanivarman belonged That both Sumatra and Java were under the sway of the Śailēndras about the ninth century we glean from the Nālandā copper-plate inscription That they were governed by the same dynasty in the seventh century of the Christian era we learn from the two inscriptions to which I have referred above. In one of the inscriptions⁴ engraved on the south wall of the well-known temple at Tanjore we find that Rājendra-Chōla caught a king of Kaḍāram, named Saṅgrāmavijayōttūṅgavarman, and took his vehicles as well as accumulated treasure. This king of Kaḍāram in the light of the Leyden grant was, probably, the successor of Māravijayōttūṅgavarman, the Śailēndra king of Śrīvijaya spoken of in it. If the Tanjore inscription is to be trusted—I do not think there is any reason why it should not be—we can say that Rājendra-Chōla, while capturing the king, succeeded in conquering the kingdom of Śrīvijaya or Palembang The Leyden plates tell us that he confirmed the grant made by his father Rājārāja for the monastery built by the Śailēndra king Māravijayōttūṅgavarman or the predecessor of the very ruler whom he caught and dispossessed of heaps of treasures. This would lead us to surmise that Saṅgrāmavijayōttūṅgavarman proved refractory and the Chōla King had to take the extreme step to bring him round. Here it may be remarked that in the documents, known at present, these Śailēndras or the rulers of Śrīvijaya are no where mentioned as the feudatories of the Chōlas or other Indian kings. Building convents or *vihāras* in one's territory does not necessarily indicate tutelage⁵ though it does show friendship or mutual regard. That the Śailēndras founded monasteries in India at Nālandā or elsewhere certainly signifies their being fervent Buddhists. These *vihāras*, like the one founded at Bodh Gayā by Mēghavarṇa of Ceylon during the Gupta epoch, gave shelter to their own people as well as others Dēvapālādēva was a staunch Buddhist. He endowed the monastery, which Bālaputrādēva, the Javanese King, founded at Nālandā, at the latter's express request, communicated to him through a *ditaka* or ambassador. But this fact alone cannot imply that the ruler of Java was a vassal of the King of Magadha. Though the capture of the King of Kaḍāram by Rājendra-Chōla in later days indicates submission no doubt, yet I think, to show that the Śailēndras were really the feudatories of the Chōlas, proof is still wanting. Under the existing circumstances what we can safely assume is that the relations of these Kings were rather based on trade and traffic and were of a peaceful nature.

¹ It was probably this structure, which, as the late Mr. Smith has said in his *Early History of India*, 3rd ed., p. 468, survived in a ruinous condition until 1867, when the remains of it were pulled down by the Jesuit fathers and utilised for the construction of Christian buildings.

² The splendid convent built by King Mēghavarṇa of Ceylon at Bodh-Gayā near the holy *Bōhīdruma* about the year A. D. 380 with the permission of Samudragupta, the Great, affords another instance of this kind. For a brief account of it see Smith's *Ancient History of India*, 3rd ed., p. 287.

³ Encyclopædia Britannica, XI ed., Vol. XXVI, p. 78. For mention of Śrīvijaya in an old Malay inscription probably of the 7th Century A. D., lately found in Palembang, see Ph. S. Yen Ronke's notice in the *Acta Orientalia*, Vol. II, Part I, p. 21

⁴ *South-Indian Inscriptions*, Vol. II, pp. 105 ff.

⁵ The late Mr. Venkayya (*A. S. E.*, 1911-12, p. 175), apparently, assumed that the Śailēndras were feudatory to the Chōla Kings.

connection with the Chēdi family¹ It is also noteworthy that sometimes their names end in *tarmman*² From the records noticed above we find that the names of the Śailēndras of Java-Sumatra or Śailijira ended in *tarmman*³ The name of the Śailēndra ruler given in the Nālaṅḍī plate on the other hand ends in *dēva* This looks rather strange The name Bālaputa itself, signifying 'young son' is curious. This ending of *dēva*, however, occurs only in the prose and formal portion but not in the other or metrical portion, which describes and eulogises these Śailēndras This would go to suggest that the suffix was left out because the metre did not require it, or possibly because it did not form an integral part of the name and would have been replaced by *tarmman*, a general suffix or surname of the ruling caste or the Kshatriyas The name, however, is pure Sanskrit as is the name of Tāiū the mother of Bālaputrādēva, or Dharmasētu, her father, and would point to emigration from India Had the names of the two ancestors of Bālaputrādēva, that is to say, his father and grandfather, been given we could be definite in the matter, for, if these names were un-Indian, as in the case of Kunlinga, his son Aśvayīman and grandson Mūlavayīman of Borneo, we could conclude that the Sanskrit names must have been taken after conversion to Hinduism, or rather Buddhism But in none of the names of the Śailēndras do we find any foreign sound at all, suggesting that they were the natives of the islands originally and came into the fold of Buddhism afterwards

The names of the Pāla kings and other personages mentioned in the introductory portion of this grant have been dealt with by Kielhorn or other scholars in connection with the contents of the Mungli copper-plate inscription So I need not notice them here But, besides them and the Śailēndras, our record speaks of two more persons and they require special mention One of them is Dharmasētu whom the inscription describes as a scion of the Lunar race and the father of Bālaputrādēva's mother, namely, Tāiū To our regret it does not supply any other particular regarding him and it is hardly possible to identify him or to say

¹ Mr. K. V. Sābrahmanya Ayyar, to whom I am indebted for this information, has kindly given me the following note on the Malayamāns —

"Ancient Tamil works mention the names of a number of Malayamān chiefs, who might be attributed to the 7th and 8th centuries A. D. Some of these are —(1) *Malayamān Tirumūḍikkāri*, (2) *Malayamān Śōḷya-Ēnādi Tirakannay*, (3) *Malādar-Kōmēṅ Meypporṅ-Nāyṅṅār* and *Narasīṅga-Munṅaiyār* of *Tirumūḍippādi*. Their capital was *Tirakollur*, the head quarters of a *taluk* in the South Arcot district and a railway-station in the *Kāṭṭipādi-Vēṅṅipuram* section of the South Indian Railway. It is said to have been situated within the Chēdi country.

The Malayamān chiefs appear to have been rendering help to one or the other of the principal powers of the South, viz., the Chēdi, Chōla, Pāndya and the Pallava. *Narasīṅgamunṅaiyār* was a contemporary of the Śaiva saint *Sundara-Mūrti-Nayanār* of the 8th century A. D. he is counted as one of the canonised 63 Śaiva devotees of the Tamil country. In the account given of No 8, in the Tamil hagiology, *Peiyarṅṅaṅam* figures a *Tattan*, whose name may be regarded as a variant of *Datta*. Besides, one of the poems of the Tamil anthology, *Pattuppāṅṅu* was composed in honour of a certain "Ārya king *Piragadattan* (*Bhṅga-Datta*)". It may be noted that the Malayamān chiefs belonged to the *Bhṅga* race as is evidenced by their inscriptions. Epigraphical reference to *Narasīṅhamunṅaiyār* is found in the Tanjore inscriptions of the Chōla King *Rājārāja I* (A. D. 985-1013). In an early stone record of *Kājukēriyāvarman* found at *Tiruvēṅṅāsvaram* near *Kumbakonam*, of about the 9th century A. D. mention is made of *Milādūṅṅaiyār-paṅṅi*.

It is interesting to note that the later members of the Malayamān family, who figure in numerous stone inscriptions, call themselves invariably *Chēdiyarāyas* (*Chēdiyarājas*) and they are mostly subordinates of the Chōlas of the 10th to the 13th centuries A. D. The appellation *Chēdiyarāyan*, assumed by almost all the chiefs, if it is not a mere accident, as it could not be, must indicate that they were the rulers of the Chēdi country. This fact taken with the names like *Datta* would make one infer a colonisation at some remote past of a branch of the line of Chēdi Kings, in the South Arcot district, where we find them."

² E. Hultzsch, *Ep. Ind.*, Vol. VII, pp. 185 and 145

³ Dr. Vogel in the aforesaid publication (page 194) remarks — "Considering that among the dynasties of India proper there is a great variety of such royal surnames, as *āditya*, *gupta*, *chandra*, *dēvapala*, *rāva*, *vardhana*, *śiṅha*, and *sēna*, the almost universal employment of names in *tarmman* in the Fir Kūṅṅa is certainly very remarkable." The instance of our Bālaputrādēva will furnish an exception

whether he was an Indian king or some ruler in the Far East. The name whether it is read as Dharma or Varma-śetu appears to be new. The other interesting name occurring in the document is that of Balavarman the ruler of Vyāghratatī-mandala, who acted as *dūtaka* on behalf of the Magadhan king. As to why he was selected or what special connection he had with the ruler of such a remote island as Sumatra or Java, and whether he had been there or known personally to that king our inscription makes no mention. Apparently, there was no direct political relationship between the two, for, we know from the Khalimpur¹ plate of Dharmapālādēva that the Vyāghratatī-mandala lay within the *bhukti* of Pundravardhana, which was under the sway of the Pāla king Dharmapāla and, evidently, of Dēvapālādēva after him. Pundravardhana is the same as Paundravardhana—Pundra and Paundra being synonymous—which is the modern Rājshāhi district of Bengal². The use of the word *adhipati* would indicate that in this instance at least the term *mandala* connotes a larger area than *viśaya*, which in the majority of cases seems to include a *maṅḍala*³. During the reign of Dēvapālādēva, Vyāghratatī was governed by a distinct ruler called Balavarman. The way in which he is praised in this epigraph, as the right arm of the Emperor, would show that he had a high rank even though he was one of the feudatories of Dēvapālādēva. As, however, our plate gives no genealogy or particulars about him his personality is very vague. A few homonymous⁴ rulers are known to have flourished about that time but they appear to be quite different personages and even their dates will not agree with that of this plate. It looks curious that though the charter mentions the *dūtaka* of the King of Magadha yet it leaves the ambassador or ambassadors of the Javanese King unnamed altogether.

The vague manner in which the inscription describes the rulers of the Far East or Sumatra-Java and their relative king of the lunar race would show that its author did not know much of them. He knew of Bālaputrādēva and his mother Tārā. The latter he compared to the goddess of that name. It is not improbable that the grant registered in the epigraph was made chiefly at her instance.

Our plate mentions several places calling for remarks. Out of these, I have already noticed three, namely, *Suvarunnadrīpa*, *Yavabhūmi*, and *Vyāghratatī*. Of the remaining ones Nālandā is the most important. The way, in which this record speaks of it, would show that it continued to be as important a centre of Buddhist lore as it was during the time of Hīnen Tsang's visit. The spelling of the name given in this document is Nālandā which is the correct way of writing it. The same spelling is given in a votive inscription on the image of

¹ *Ep. Ind.*, Vol. IV, pp 243 ff *J B E A. S.*, LXIII (1894), pp. 39 ff.

² Smith *Early History of India*, p. 378. As has already been stated by Cunningham (*A S E*, Vol. XV, pp. 112 ff.) Kāntāra is another name of Puṇḍra or Paundra, i.e., sugarcane, and the Mahākāntāra of the Allahabad inscription of Samudragupta, the Great, was probably an older name of this province which, about the middle of the fourth century of the Christian era, was governed by a King Vyāghra. Thus it does not appear to be improbable that the district of *Vyāghratatī* or the tiger's precipice—unless of course *vyāghra* is taken in the sense of castor oil in which case the word *Vyāghratatī* would be the slope marked or overgrown with castor plants,—was named after this tiger king.

³ This would rather show that no mistake was made in the text of the Khalimpur grant and that Kielhorn's statement in the *Ep. Ind.*, Vol. IV, p. 258, footnote 3 that it was, will be obviated.

⁴ For instance we know of a Balavarman, the lord of Prāgyōtisha (Gauhati or Assam) from the Nowgong copper-plate (Dr A. F. Hoernle, *J. B. A. S.* LXVI, pp 235 ff.) and another of Kārūsha or rather Bṛhadgrīha (Kielhorn, *Ind. Ant.* Vol. XX, pp 123 ff.). On palaeographic grounds the former of the two has been assigned to the last quarter of the 10th century or say nearly one century later than the date of Dēvapālādēva. The other is too little known to admit of identification. The third ruler of the name, who will synchronise with our document, was the father of Avantivarman II, who was the feudatory of Mahēndrapāla of Kannauj (cir. 590 A. D.). To think of identifying him with the Balavarman of the Nālandā plate will be altogether unreasonable, for he was the ruler of Kashiwar, or Baurbhāra and a feudatory of the formidable rival of the monarch of Bengal.

Sankarshana which was dug out of the same site¹ and the newly discovered statue of Tārā. It again occurs not only in some Jaina writings but such an old work as the *Uighanikāya*². However, it seems to be noteworthy that none of these works called Nālandā a university but only a prosperous town though Hsuen Tsang describes it as if it were a University. The way in which it is described in our plate would show that it was really a centre of Buddhist learning.

As to the remaining place-names mentioned in this document, I think, Śrīnagara or Śrīnagara-bhukti must be identified with modern Patna, which as a district, includes Rājagriha (Rājgir) and, as a division or commissionership, comprises the district of Gayā, even now. It is true that in the Khalimpur grant of Dharmapāladēva, which has been referred to above, the name given for the city is Pātaliputra and not Śrīnagara or Nagara, still, I think, there were two designations, the one, viz, Pātaliputra, which meant the whole town and the other, viz, Śrīnagara, the main part of it, like the Bankipore of to-day. Nagara means the chief town generally, but in this case it meant the town, the prefix Śrī implying prosperity or wealth of the town. In other words Pātaliputra was the *pattana*³ and the seat of Government, especially in earlier days during the supremacy of the Mauryas or the Imperial Guptas,⁴ lay there, and Śrīnagara was its principal portion where the office of the *bhukti* or division was situated. One was concerned with the whole government but the other only with eight hundred⁵ villages coming in its jurisdiction or *bhukti*. Thus Śrīnagara must have been a part of the whole which was termed Pātaliputra.⁶ That, apparently, is the reason why the latter and not the former appellation of the town is to be met with in literature.

That Rājagriha and Gayā are respectively the Rājgir and Gayā of to-day requires no demonstration. The latter is a district still, though the former has now dwindled into a ruined town of the Bihār subdivision of Patna.

Regarding the villages which formed the object of the grant or endowment registered in the charter, we are told that Nandivanāka and Maṇivātaka were situated in the Ajapura-*naya* subdivision, Natikā in the Pilpinkā, and Hastigrāma in the Achalā-*naya* or subdivision of the Rājagriha *vishaya* or district, and that Pālāmaka was situated in the Kumudasūtra *vithi*, a subdivision of the Gayā district. If similarity of sound can be depended on, I would propose the following identifications to which proximity of Nālandā will lend a great support. The Ajapura '*naya*' or subdivision of the inscription may possibly be represented by the Ajaipur⁷ village in the Ajai Hise Chahāram Mauzā in the Bihār Thānā and the two villages Nandivanāka and Maṇivātaka, granted in it, would be the Nedune or Naunven and Manianwan villages of these days, which are included in the Bihār Thānā. Pilpinkā I am inclined to identify with the Pilkhā or Pilkee Mauza and the Naṭikā village with the Nā Pokher of to-day, both lying in the Silāo Thānā. Though I am unable to offer any identification for the ancient Achalā yet, I fancy, the village Hasti or Hastigrāma of the grant might be the Bethoa Bighā village of the Bihār Thānā if not the Hathī Tojā of the Maner Police subdivision. The old village directory⁸ of the Gayā district available to me does not, apparently, give any name

¹ See my *Annual Report of the Central Circle, (Patna), for 1921, p. 5 and J. B. B. O. R. S., Vol. X, pp. 30 ff*

² Vol. I pp. 1 & 211-12

³ Cf. 'प्रधानभूत नगरम्', Bharata quoted in the *Śabdakalpadruma* under Nagara.

⁴ Cf. पल्लवं यत्न राजधानी स्थिता and नगरमष्टप्रतयात्मनश्च तद्व्यवहारस्थानम्, Yaśōdhara in his *Jayamaṅgalā* on the *Kāmasūtra* of Vātsyāyana (N. S. Edition), p. 44

⁵ Even in the Khalimpur grant the *śrīmujjagaskandhātāra*, or 'royal camp or headquarters' lay at Pātaliputra. For the meaning of this expression cf. V. Smith; *Early History of India*, p. 898 and footnote 2.

⁶ Similarly, I would identify the *nagara-bhukti* of the legend on the seal, which, Dr Spooner discovered during his explorations of the site (see his *A. P. R. (E. C.) for 1916-17, p. 48*) with the *Śrīnagara-bhukti* of this document

⁷ *Village Directory of the Presidency of Bengal, Vol. XXVI (Patna District).*

⁸ *Village Directory of the Presidency of Bengal, Vol. XXVII (Gaya District).*

resembling the Kumudasūtra (or sūtra) or the Pālāmaka of our record and I refrain from offering a conjecture regarding their identity

In connection with these place-names, it is interesting to note, that our document supplies one or two territorial terms, which appear to be new. The term *mandala*, as I have remarked above, is here used, as in the grant of Amma II,¹ in the sense of *dēśa*, of which *viśhaya* was a subdivision. The word '*vīthī*', which generally signifies a market, road-way or the like, appears to have been used, in this charter, in the sense of a division smaller than *viśhaya*. Similarly the term '*naya*' seems to imply a like division. The use of these terms would show that *bhukti* was divided into *mandalas* which were subdivided into *viśhayas*, the latter being again portioned into *vīthīs* or *nayas*.² It is noteworthy that our document employs the term *naya* in the case of Rājagriha *viśhaya* and *vīthī* in the case of Gayā *viśhaya*. The former occurs regularly after (1) Ajapura, (2) Pīlīpīnkā and (3) Achalā, which lay in the district or *viśhaya* of Rājagriha, while the latter term is to be found in connection with the district or *viśhaya* of Gayā only. This would indicate that in the two *viśhayas*, which were so contiguous to each other, there were, probably, different subdivisions made, apparently, for revenue purposes, Rājagriha being subdivided into *nayas* and Gayā into *vīthīs*. Thus, we can say that the villages Nandivānūka and Manivātaka lay in the subdivision or *naya* of Ajapura, Natikā in the *naya* of Achalā, all these falling within the Rājagriha *viśhaya*. The village of Pālāmaka, on the other hand, which belonged to the district or *viśhaya* of Gayā, lay in the subdivision of Kumudasūtra, i. e., Kumudasūtra-*vīthī*.³

TEXT.

Obverse

Metres used - *Śārdūlavikīrīditam* in vv 1, 7, 8, 13, 14, 30, 31, 32, 33, *Praharshinī* in vv. 2, 26; *Vamsastha* in v. 3, *Upajāti* in v 4, *Indravajrā* in v 5, *Aupachchhandastkam* in v 6, *Āryā* in vv. 9, 11, 22, 23, *Harinī* in v 10, *Kathōddhatā* in vv 12, 15, *Anushṭubh* in vv. 16, 17, 18, 19, 29, *Vasantulakā* in vv 20, 24, 25, 27, 28, *Pushpitāgrā* in v. 21, *Sragdharā* in v. 34.

1 श्रीं स्वस्ति । सिद्धार्यस्य परार्थसुस्थितमतेस्त्वन्मार्गम[भ्य]-

2 स्वत-

3 सिद्धिसिद्धिमनुत्तरां भगवतस्तस्य प्रजासु क्रिया-

4 त्[१*]

यस्त्रैधातुकसत्वसिद्धिपदवीरत्युग्रवीर्योदया-
जित्वा

5 निर्हतिमाससाद सुगतस्त्वर्वायभूमोश्वरः- [॥*१॥] सौभाग्यन्दध

दतुलं त्रियस्त्वपत्न्या

गोपालः पतिरभवद्वसुन्धरायाः [१*]

¹ *Ind Ant.*, Vol VII, p 16; cf Fleet, C I I, Vol 121, p 32, footnote 7

² It may be noted here that the term *vīthī* is also used in the sense of a division in the Ghughrabati plates of Samāchāradēva which have been edited by Mr R D Banerji, in the August 1910 number of the *Journal of the Asiatic Society of Bengal*. Mr Bhattasāl, who is re editing the grant for this journal, seems to take the word in its usual sense, but, in the light of this Nālandā document, his rendering cannot hold good

³ The reading can also be *stipā*

⁴ Expressed by a symbol.

⁵ Kiehn has "स्वर"

6

इ-

ष्टान्ते सति कृतिनां सुराग्नि यस्मिन् अहेयाः पृथुसगरादयोप्यभूवन् [॥२*॥]
विजित्य येना जलधेर्व्वसुन्धराभिवमोचिता

7

मोघपरिश्रहा इति ।

सवाप्यसुहाप्यविलोचनाग्न्युनर्वनेषु व(ब)भ्रून्दृशुर्मतङ्गजाः [॥३*॥] चलत्स्व-
नन्तेषु व(ब)लेषु यस्य विश्वभरा-

8

या निचितं रजोभिः ॥¹

पादप्रचारक्षममन्तरिचम्विहृष्टमानां सुचिरम्ब(म्ब)भूव [॥४*॥] शास्त्रार्थभाजा
चलतोनुशास्य वग्णार्णाप्रतिष्ठापय-

9

ता स्वधर्मैः[१*]

श्रीधर्मपालेन सुतेन सोभूत्स्वर्गस्थितानामनृणः पितृणाम्² [॥५*॥] अचक्षे-
रिव जङ्गमैर्यदोयैर्विचलङ्घिर्द्विरदैः कदर्यमाना ।

10

निरूपप्लवमम्ब(म्ब)रं प्रपेदे शरणं रेणुनिभेन भूतधात्रो [॥६*॥] वेदारे
विधिनोपयुक्तपयसां गंगासमेते³भ्रु(म्बु)धी ।⁴ गोकर्णदिषु चाप्यनुष्टि-

11

तवतान्तीर्थेषु धर्म्याः क्रियाः [१*]

भृत्यानां सुखमेव यस्य सकलानुदृत्य दुष्टानिमान्लोकान्साधयतो[५*]नुषङ्गजनिता
सिद्धिः परत्रा-

12

प्यभूत् [॥७*॥]

⁵तैस्त्रैर्दिविजयावसानसमये संप्रेषितानां परैः सत्कारैरपनीय खेदमखिलं स्वां
स्वां गतानां भुवम् [१*] कृत्यं भावयतां

13

यदीयसुचितं प्रीत्या नृपाणामभूत्

सोत्कण्ठं हृदयं दिवश्युतवतां जातिस्मरणामिव [॥८*॥] श्रीपरव(ब)सस्व
दुहितुः क्षितिपतिना रा-

14

द्वकूट⁶तिलकस्य ।

रणदेव्याः पाणिर्जगृहे गृहमेधिना तेन [॥९*॥] घृततनुरियं लक्ष्मोः
साक्षात्क्षितिनुं शरीरिणी ।⁷ किमवनिपतेः कौत्सिम्-

¹ Two strokes in place of one.

² Symbol for स् at the end of a pāda is peculiar.

³ Kielhorn has समिता⁰.

⁴ This danda could be left out.

⁵ Kielhorn has तैर् तैर् which cannot be correct.

⁶ The way of writing the letter ट is peculiar.

This danda could be left out.

resembling the Kumudasūtra (or śāstra) or the Pālāmaka of our record and I refrain from offering a conjecture regarding their identity.

In connection with these place-names, it is interesting to note, that our document supplies one or two territorial terms, which appear to be new. The term *mandala*, as I have remarked above, is here used, as in the grant of Amma II,¹ in the sense of *dēśa*, of which *viśhaya* was a subdivision. The word '*vīthī*', which generally signifies a market, road-way or the like, appears to have been used, in this charter, in the sense of a division smaller than *viśhaya*. Similarly the term '*naya*' seems to imply a like division. The use of these terms would show that *bhukti* was divided into *mandalas* which were subdivided into *viśhayas*, the latter being again portioned into *vīthīs* or *nayas*.² It is noteworthy that our document employs the term *naya* in the case of Rājagriha *viśhaya* and *vīthī* in the case of Gayā *viśhaya*. The former occurs regularly after (1) Ajapura, (2) Pīlīpīkā and (3) Achalā, which lay in the district or *viśhaya* of Rājagriha, while the latter term is to be found in connection with the district or *viśhaya* of Gayā only. This would indicate that in the two *viśhayas*, which were so contiguous to each other, there were, probably, different subdivisions made, apparently, for revenue purposes, Rājagriha being subdivided into *nayas* and Gayā into *vīthīs*. Thus, we can say that the villages Nandivanāka and Manivātaka lay in the subdivision or *naya* of Ajapura, Natikā in the *naya* of Achalā, all these falling within the Rājagriha *viśhaya*. The village of Pālāmaka, on the other hand, which belonged to the district or *viśhaya* of Gayā, lay in the subdivision of Kumudasūtra, i. e., Kumudasūtra-*vīthī*.³

TEXT.

Obverse

Metres used - *Śārdūlavikrīḍitam* in vv 1, 7, 8, 13, 14, 30, 31, 32, 33, *Praharehinī* in vv 2, 26, *Vāmsastha* in v 3, *Upajāti* in v 4, *Indravajrā* in v 5; *Aupachchhandasikam* in v 6; *Āryū* in vv 9, 11, 22, 23, *Harinī* in v 10; *Kathōddhatā* in vv 12, 15; *Anushtubh* in vv 16, 17, 18, 19, 29; *Vasantatilakā* in vv 20, 24, 25, 27, 28, *Pushpātāgrā* in v. 21, *Sragdharā* in v. 34.

1 श्रीं स्वस्ति । सिद्धार्थस्य परार्थसुस्थितमतेस्सन्मार्गम[भ्य]-

2 स्यत-

3 सिद्धिसिद्धिमनुत्तरां भगवतस्तस्य प्रजासु क्रिया-

4 त्[1*]

यस्त्रैधातुकसत्वसिद्धिपदनीरत्युग्रवीर्योदया-
ज्जित्वा

5 निर्हतिमाससाद् सुगतस्सर्वार्थभूमोज्जरः- [11* 11] सीमाग्यन्दध

दतुर्लभ्ययस्सपत्न्या

गोपालः पतिरभवद्दसुन्धरायाः [1*]

¹ *Ind Ant.*, Vol VII, p 16; cf Fleet, C I I., Vol LII, p 32, footnote 7.

² It may be noted here that the term *vīthī* is also used in the sense of a division in the Ghughrāhatī plates of Son āchāradēva which have been edited by Mr R D Banerji, in the August 1910 number of the *Journal of the Asiatic Society of Bengal*. Mr Bhattacharya, who is re-editing the grant for this journal, seems to take the word in its usual sense, but, in the light of this Nālandā document, his rendering cannot hold good.

³ The reading can also be *st* "

⁴ Expressed by a symbol

⁵ Sie'born has 'द्वि' "

6

द-

ष्टान्ते सति कृतिनां सुराणि यस्मिन् अज्ञेयाः पृथुसगरादयोप्यभूवन् ॥२*॥
विजित्य येना जलधेर्व्वसुन्धराभिवमोचिता

7

मोघपरिग्रहा इति ।

सवाप्यसुहाप्यविलोचनान्पुनर्वनेषु व(व)भ्यून्दृशुर्मतङ्गजाः ॥[३*] चलत्स-
नन्तेषु व(व)क्षिपु यस्य विश्वभरा-

8

या निचितं रजोभिः ॥¹

पादप्रचारक्षममन्तरिक्षम्वहृद्गमानां सुचिरम्ब(म्ब)भूव ॥[४*] शास्त्रार्थभाजा
चलतोनुशास्य वण्णाङ्गप्रतिष्ठापय-

9

ता स्वधर्मैः[१*]

श्रीधर्मपालेन सुतेन सोभूत्स्वर्गस्थितानामनृणः पितृणाम् ॥[५*] अचक्षै-
रिव जङ्गमैर्यदोयैर्विचलङ्गिर्द्विरदैः कदर्यमाना ।

10

निरुपप्लवमम्ब(म्ब)रं प्रपेदे शरणं रेणुनिमेन भूतधात्रो ॥[६*] वेदारे
विधिनोपयुक्तपयसां गंगासमेते²म्बु(म्बु)धौ ।³ गोकर्णादिषु चाप्यनुष्टि-

11

तवतान्तीर्थेषु धर्म्याः क्रियाः [१*]

भृत्यानां सुखमेव यस्य सकलानुदृत्य दुष्टानिमान्लोकान्साधयतो[१*]नुषङ्गजनिता
सिद्धिः परना-

12

प्यभूत् ॥[७*]

⁴तैस्त्रैर्द्विजयावसानसमये संप्रेषितानां परैः सत्कारैरपनीय खेदमखिलं स्त्रां
स्त्रां गतानां भुवम् [१*] कृत्यं भावयतां

13

यदीयसुचितं प्रीत्या मृपाणामभूत्

सोत्कण्ठं हृदय दिवश्युतवतां जातिस्मराणामिव ॥[८*] श्रीपरव(व)लस्य
दुहितुः क्षितिपतिना रा-

14

द्रकूट⁵तिलकस्य ।

रणणादेव्याः पाणिर्जगृहे गृहमेधिना तेन ॥[९*] दृत्ततनुरियं लक्ष्मीः
साक्षात्क्षितिनुं शरीरिणी ।⁶ किमवनिपतेः कौर्त्तिर्म⁷-

¹ Two strokes in place of one.

² Symbol for स् at the end of a *pāda* is peculiar.

³ Kielhorn has सुमेता⁰.

⁴ Thus *danda* could be left out.

⁵ Kielhorn has तैर् तैर् which cannot be correct.

⁶ The way of writing the letter ट is peculiar.

This *danda* could be left out.

- 15 सर्वाश्वा गृह्णतेवता[1*]
इति विदधती शुच्याचा[रा*] वितर्कवतीः प्रजाः प्रकृतिगुरुभिर्या शुद्धान्त-
ङ्गुणैरकरोदधः ॥[१०॥*] श्लाघ्या प्र(प)तिव्रतासौ सु-
- 16 क्तारत्नं समुद्रशक्तिरिव ।
श्रीदेवपालदेवम्प्रसन्नवक्त्रं सुतमसूत ॥[११॥*] निर्मूलो मनसि वाचि
संगतः ।¹ कायकर्मनि(णि)च यः स्थितः शुची[1*]
- 17 राज्यमाप निरुपप्लवस्मितुर्धो(वी)धिसत्व इव सीगतं पदम् ॥[१२॥*]
भ्राम्यद्भिर्विजयक्रमेण ।² करिभिस्तामेव विन्ध्याटवीमुद्दामप्रवमानवा(वा)प्यपय-
- 18 [मो] दृष्टाः पुनर्त्रै(र्त्रै)³ न्यवः[1*]
कम्बो(म्बो)जेषु च यस्य वाजियु[व*]भिर्ध्वस्तान्यराजौजसो हेपामित्रतहारि-
हेषितरवाः कान्ताश्चिरप्रीणिताः⁴ ॥[१३॥*] यः पूर्व व(व)लि-
- 19 ना कृतः कृतयुगे येनागमद्गर्गव-
स्त्रेतायां प्रहृतः प्रियप्रणयिना कर्णगेन यो हापरे । विच्छिन्नः कलिना
शकद्विपि गते कालेन लोकान्त-
- 20 रम्
येन त्यागपयस्स एव हि पुनर्विस्मष्टमुन्मीलितः ॥[१४॥*] आ गङ्गागम-
महितात्सपत्न्यून्यामासेतु(तोः)⁵ प्रधितदशास्यकेतुकीर्त्तं[1*] उर्वीमा वरुण-
- 21 निकेतनाच्च सिन्धो-
रा लक्ष्मीकुलभवनाच्च यो वु(वु)भोज ॥[१५॥*]
स खलु भागीरथोपयप्रवर्त्तमाननानाविधनौवाटकसंपादितसेतुव(व)न्धनिहित[शै]-
- 22 लशिखरश्रेणिविभ्रमात्⁶ निरतिशयघनघनाघनघटा(टा)श्यामायमानवासरलक्ष्मी-
सभारब्ध(ब्ध)संततजलदसमयसन्देहात्⁷ उदीचीनानेक-
- 23 नरपतिप्राश्रुतीकृताप्रमेयहयवाहिनी-
खरखुरोत्खातधूलीधूसरितदिगन्तरालात् परमेश्वरसेवासमायाताशेषजंबू(बू)द्वी-
- 24 पभूपाल-
पादातभरनमदवनेः श्रीमुद्गगिरिसमावासि श्रीमञ्जयस्कन्धावारात् परमसीगत-
परमेश्वरपरमभटा(टा)रकम-

¹ This danda could well be omitted.

² This danda is unnecessary.

³ Kielhorn gave वासवाः

⁴ Kielhorn has चिर वीक्षिताः

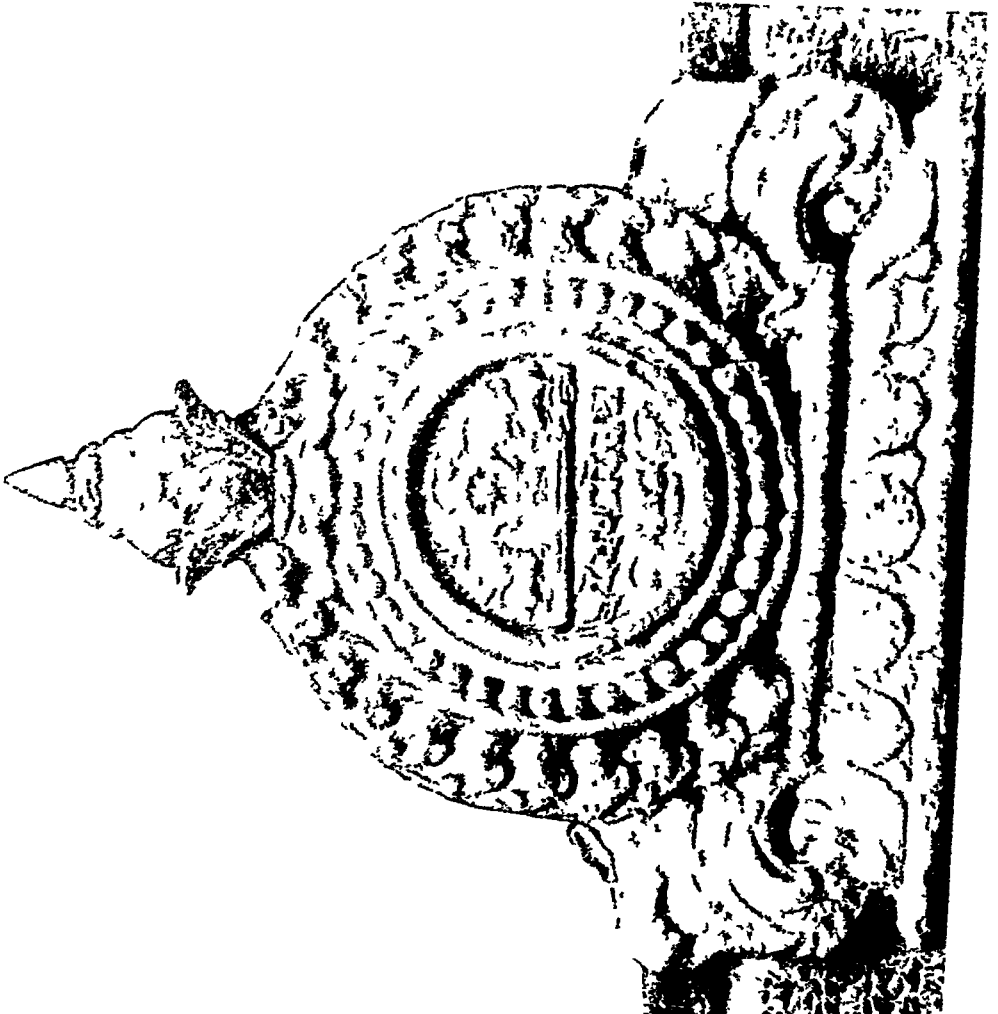
⁵ Kielhorn read सेतो; and remarked that the lithograph he used gave setu (or bhetu). This inscription removes the possibility of bhētu. The reading must be सेतोः

⁶ Read "माहिर्".

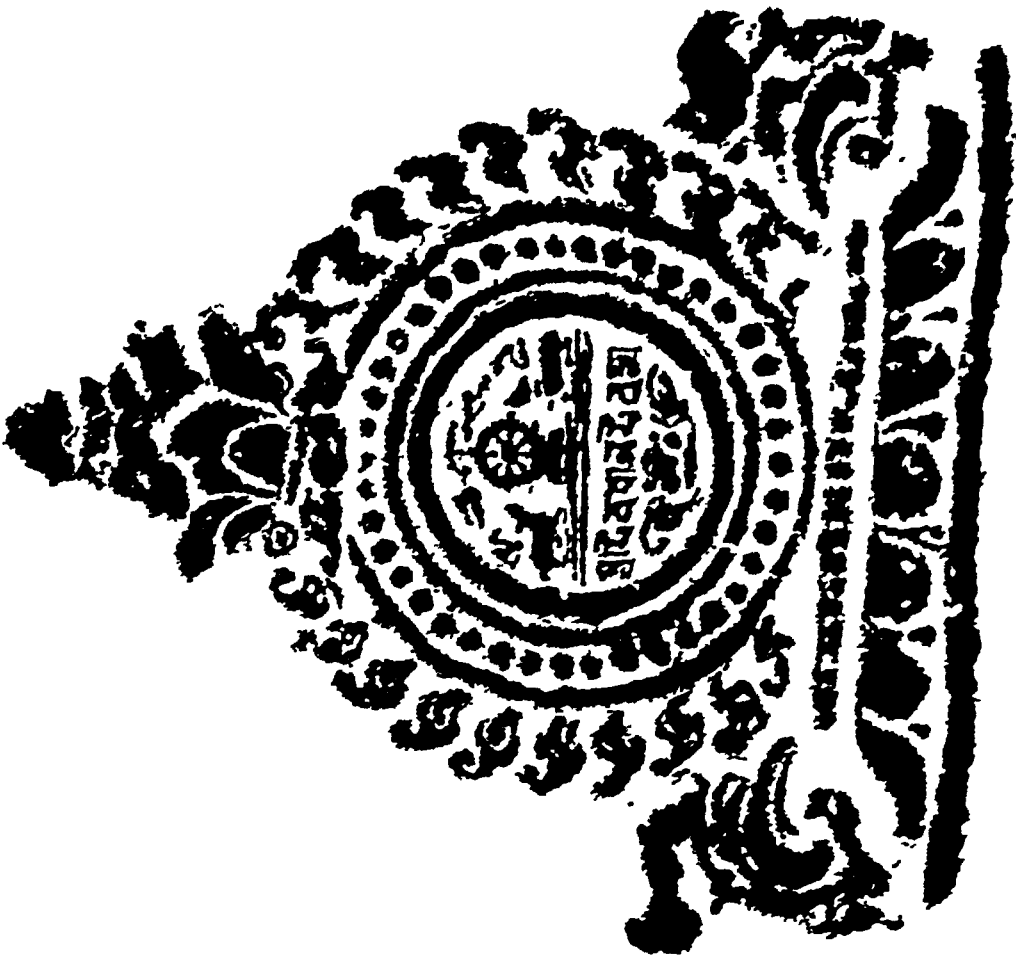
⁷ Read "द्वीद्वीद्वी".

SEAL

(FROM PHOTO)



(FROM IMPRESSION)



हाराजाधिराजश्रीधर्मपालदेवपादानुध्यातः

- 25 परमसौगतः परमेश्वरः परमभटा(ष्टा)रको महाराजाधिराजः श्रीमान्देवपा-
लदेवः
- 26 कुशली । श्रीनगरभुक्तौ राजगृहविषयान्तःपाति अजपुरनयप्रतिव(ब)द्ध-
स्वसम्ब(स्व)द्वाविच्छिन्नतलोपेत । नन्दिवनाक । मणि -
- 27 वाटक । पिलिपिणकानयप्रतिव(ब) नटिका । अ-
चलानयप्रतिव(ब)द्ध ह[स्ति]ग्राम । गयाविषयान्तःपातिकुमुदसू^१ त्रवीथी-
प्रतिव(ब)द्ध पालाम-
- 28 कग्रामेषु । ससुपगताम्(न्) सर्वानिव राज-
राणक । राजपुत्र । राजामात्य । महाकार्तिकातिक । महादण्डनायक ।
महाप्रतीहार । महा-
- 29 सामन्त ।
- 30 महादौःसाधसाधनिक । महाकुमारा[मा*]त्य [1*] प्रमाट । शरभङ्ग[1*]
राजस्थानी । योपरिक^२ । विषयपति [1*] दाशापराधिक । चौरोद्धर-
णिक । दाण्डि-
क [1*] दाण्डपात्रिक [1*] शौल्लिक [1*] [गौ]रिमक । चेत्रपाल [1*] कोटपाल ।
खण्डरच [1*] तदायुक्तक । विनियुक्तक । हस्त्यश्वोद्गनौव(ब)लव्यापृ-
तक[1*]
- 31 किशोरवडवागोमहिष्यधिकृत । दूतप्रै[प्र]णिक । गमागमिक । अभित्व-
रमाणक । तरिक । तरपतिक । ओद्र(द्र)-मालव-खश-कुलिक । कर्णा-
ट [ह]ण ।
- 32 चाटभ[ट*]सेवकादीनन्याश्याकीर्त्तितान् स्वपादपद्मोपजोविनः प्रतिवासि-
नश्च ब्राम्ह(ब्राह्म)णोत्तरान् महत्तमकुटुम्बि(म्ब)पुरोगमेदान्-
क । चण्डाल-
- 33 पर्यन्तान् समान्नापयति विदितमस्तु भवताम् यथोपरिलिखितस्वसम्ब(स्व)-
द्वाविच्छिन्नतलोपेत नन्दिवनाकग्राम । मणिवाट-
- 34 कग्राम ।
नटिकाग्राम । हस्तिग्राम । पालामकग्रामाः स्वसीमावृणयूतिगोचरपर्यन्ताः
सतलाः सोद्देशाः साम्नमधुकाः सजलस्थ-
- 35 लाः
सोपरिकराः सदशापराधाः सचौरोद्धरणाः परिहृतसर्व्व(पीडाः) अचाटभटप्रवेशा
अकिंचित्प्रथा[ह्य]राजकुलीय-

^१ The symbol which has been read as न may be नु

^२ The danda between नौ and यो was meant to be put after य to separate the word from the following उपरिक.

- 36 समस्तप्रत्यायममेता भूमिच्छि-
द्वन्वायेनाचन्द्रार्कचितिसमकालम् पूर्वदत्तभुक्तभुज्यमानदेववृ(त्र)ह्मदेयवर्जिताः
मया
- 37 मातापित्रोरात्मन[श्च] पुण्ययशोभिवृद्धये ॥
सुव[र्ण]होपाधिपम[हा]राजश्रीवा(वा)लपुत्रदेवेन दूतकमुखेन वयस्त्रिजा-
पिताः यथा मया
- 38 श्रीनालन्दायाम्बिहारः कारितम्भुत्र
भगवतो बु(बु)द्धभट्टारकस्य प्रज्ञापारमितादिसकलधर्मनेत्रीस्थानस्यायार्थं तांश्रु(त्रि)-
39 कवो(वो) घिसत्वगणस्याष्टमहापुरुषपुद्गलस्य
चातुर्दशार्थभिच्छुसङ्घस्य व(व)लिचरुसत्रचोवरपिण्डपातशयनासनग्लानप्रत्ययभे-
40 पन्थाद्यर्थं धर्म-
रत्नस्य लेखनाद्यर्थं विहारस्य च खण्डस्फुटितसमाधानार्थं शासनीकृत्य
प्रतिपादित[1*]: यतो भवद्भिः सर्वैरेव
- 41 भूमेर्दानपाल[न*]गौरवादपहरणे
च महानरकपातादिभयाद्दानमिदमभ्यनुमीद्य पालनीयं प्रतिवासिभिरप्याज्ञाश्र-
42 वणविधेयै-
भूत्वा यथाकालं समुचितभागभोगकरहिरण्यादिप्रत्यायोपनयः कार्यं इति ॥
सम्बत् ३८ क(का)र्तिक दिने २१

Reverse.

- 43 तथाच धर्मानुश¹ न्ननश्लोकाः
व(व)हुभिर्वसुधा दत्ता राजभिः
- 44 सगरादिभि [1*]
यस्य यस्य यदा भूमिस्तस्य तस्य तदा फलम् ॥[१६॥]
- 45 स्वदत्ताम्परदत्ताम्वा [यो] ह[रि]त वसुन्धरा ।
स विष्टायां कृमिर्भूत्वा पितृभिः
- 46 सह पच्यते ॥[१७*॥]
षष्ठिस्वर्षसह[स्रा]णि स्वर्गे मोदति भूमिदः । आवेष्टा चानुमन्ता च
तान्येव
- 47 नरके वसेत् ॥[१८*॥]
अन्यदत्तां त्रिजातिभ्यो यत्नाद्दत्त युधिष्ठिर । महीं महीश्रुतां श्रेष्ठ दा-

¹ Kielhorn gave धर्मानुशासन and suggested धर्मानुशासन Perhaps शसिन, is the reading intended.

- 48 नाच्छ्रेयो नु पालनम् ॥[१८*॥]
 अस्मत्कुलक्रममुदारमुदा[ह]रङ्गिरन्वैद्य दानमिदमभ्यनुमोदनीयं । लक्ष्म्यास्त-
 डित्सलिलवुद्बु(बुद्बु)द[चं]-
- 49 चलाया
 दानं फलं परयशःपरिपालनं च ॥[२०*॥] इति कमलदलाम्बु(म्बु)वि(वि)-
 न्दुलीलां श्रियमनुचिन्त्य मनुष्यजीवितं च [1*] सकलमि-
- 50 दमुदाहृतं च बु(बु)[ध्वा]
 न हि पुरुषैः परकीर्तयो विलोप्याः ॥[२१*॥] दक्षिणभुज इव रात्रः
 परव(व)लदलने सहायनिरपेक्षः ।[1*]
- 51 द्रव्यं श्रीव(व)लवर्मा विदधे धर्माधिकारेऽस्मिन् ॥[२२*॥]
 अस्मिन् धर्मारम्भे द्रव्यं श्रीदेवपालदेवस्य । विदधे श्रीव(व)लवर्मा
 व्याघ्रतटीमण्डलाधिपतिः ॥[२३*॥]
- 52 आसीदशेषनरपालविलोलमौलि-
 मालामण्डितिविवो(वो)धितपादपद्मः । शैलेन्द्रवशतिलको यवभूमिपालः
 श्रीवीरवैरिमथना-
- 53 नुगताभिधानः ॥[२४*॥]
 हर्म्यस्थलेषु कुमुदेषु सृणालिनीषु शङ्खेन्दुकुन्दतुहिनेषु पदन्दधाना । निःशेष-
 दिङ्मुखनिरन्तरलब्ध(व्य)गीतिः
- 54 मूर्त्तैव यस्य भुवनानि जगाम कीर्तिः ॥[२५*॥]
 मूर्भङ्गे भवति नृपा^१स्य यस्य कोपान्नि[भि]न्नाः सह हृदयैर्हिषां
 श्रियोपि । वक्राणामि-
- 55 ह हि परोपघातदक्षा
 जायन्ते जगति भृष^२ङ्गतिप्रकाराः ॥[२६*॥] तस्याभवन्नयपराक्रमशोलशाली
 रालेन्द्रमौलिशतदुर्लभिताङ्गि-
- 56 युग्मः ।
 सूनुर्युधिष्ठिरपराशरभीमसेनकर्णाङ्गुनार्ज्जितयशाः समराश्रवीरः^३ ।[२७*॥]
 उहूतम^४म्ब(म्ब)रतलाघ(द्यु)धि सञ्चरन्त्या यत्सेनयावनिरजःप-
- 57 टल पदोत्थम् ।
 कर्णानिलेन करिणां शनकास्वितीर्णगण्डस्थलीमदजलैः शमयाम्ब(म्ब)-
 भूष ॥[२८*॥] अकृष्णपद्मेवेदमभूङ्गवनमण्डलं ।

¹ The use of *avagraha* may be marked.

² This *danda* is unnecessary

³ Read भृष^३ Symbol for *sh* is used for that of *ś*,

⁴ Or °धीरः.

⁵ It is better to read सात्व^२

- 58 कुलन्दैत्याधिपस्येव यद्यशोभिरनारतम् ॥[२६*]
 पौलोमोद सुराधिपस्य विदिता सङ्कल्पयोनिरिव [प्रीतिः]^१ शैलसुतेव मन्मथरि-
 59 पोक्तच्छीर्मुंराररिव ।
 राज्ञः सोमकुलान्वयस्य महतः श्रीधर्मसेतोः^२ सुता तस्याभूदवनौशुजोऽ^३ग्रमहिषी
 तारेव ताराह्वया ॥[३०*]॥ माया-
 60 यामिव कामदेवविजयो शुद्धोदनस्यात्मजः
 स्कन्दो नन्दितदेवहृन्दहृदयः शम्भोरुमायामिव । तस्यान्तस्य नरेन्द्रहृन्दवि-
 नमत्पादारवि-
 61 न्दासनः
 सर्वोर्वोपतिगर्व्वगर्व्वणचणः श्रीवा(वा)लपुत्रोऽभवत्^४ ॥[३१*]॥ नालन्दागुण-
 हृन्दलुब्ध(ब्ध)मनसा भक्त्या च श्रीहोदनेर्वु(र्वु)ध्वा शैलसरित्तरंगतरलां
 62 लक्ष्मीमिमां क्षोभनाम् ।
 यस्तेनोन्नतसौधधामधवलः सङ्गार्थमित्रत्रियया नानासङ्गुणभिद्युसङ्घवसतिस्तस्या-
 म्विहारः कृतः ॥[३२*]॥ भक्त्या
 63 तत्र समस्तशत्रुवनितावैधव्यदोक्षागुरुं
 कृत्वा शासनमाहितादरतया यःप्रार्थं दूतैरसौ । ग्रामान् पञ्च विपश्चितोपरि-
 यथोद्देशा-
 64 निमानात्मनः
 पित्रो[र्त्वि]कहितोदयाय च ददौ श्रीदेवपालं नृपं ॥[३३*]॥ यावत्सिन्धोः
 प्रव(व)न्धः पृथुलहरजटाक्षोभिताङ्गा च गङ्गा गुर्वी^५
 65 धत्ते फणीन्द्रः प्रतिदिनमचलो हेलया यावदुर्वी^६ ।
 यावत्सस्तीदयाद्री रवितुरगसुरोदृष्टचूडामणी स्तस्त्वावत्सक्तीर्त्तिरेषा प्रभव-
 66 तु जगताम्सत्क्रिया रोपयन्ती ॥[३४*]॥

TRANSLATION

Lines 1-25 are translated in the Mungir grant edited by Kuelhorn in *Indian Antiquary*, Vol. XXI, pp 257-258

Ll 26-33 In the Śrinagara-bhukti, at the villages falling within the district (*vishaya*) of Rājagṛha, namely, Nandivanāka and Manivātaka, which come within the territorial subdivision (*naya*) of Ajapura, together with the undivided lands connected therewith, Nāṭikā which comes within the subdivision (*naya*) of Pihpipkā and Hastigrāma which comes within the

^१ Both these letters are doubtful. Sankalpajūm, s. e. Kāmadōra has four wives, as stated in the *Vishnudharm-
 sutariga*, III, 73, 21, namely, Rati, Priti, Sakti and Madasakti. Either of the two names *Priti* and *Sakti* will fit
 in, but the former seems preferable.

^२ May be read as *वर्द्धसेतो* also.

^३ The use of the *aragṛha* may be marked.

^४ Ditto.

subdivision (*naya*) of Achalā and the village of Pālāmaka which comes under the subdivision (*vithi*) of Kumudasūtra (or Kumudasānu), that falls within the limits of the district (*vishaya*) of Gaṅgā—Dēvapalādēva, being in good health, issues commands to all the persons who have assembled here,—the *Rājarānaka*¹, the *Rājaputraka*, the *Rājāmātya*, the *Mahākārttikākritika*, the *Mahādandanāyaka*, the *Mahāpratihāra*, the *Mahāsāmānta*, the *Mahādauhsādhasādhanika*, the *Mahākumārāmātya*, the *Pramātra*, the *Śarabhanga*, the *Rājasthānīya*, the *Uparika*, the *Vishayapati*, the *Dāśāparādhika*, the *Ohaurōddharanika*, the *Dāṇḍika*, the *Dāṇḍapāsika*, the *Saulkika*, the *Gaulmika*, the *Kshētrapāla*, the *Kōṭapāla*, the *Khaṇḍaraksha*, the *Tadāyuktaka*, the *Viniyuktaka*, the *Hastyasiṅghtranaubalavyāpṛitaka*, the *Kṣōra-vaḍavā-gō-mahīshydhikṛita*, the *Dātapraishanika*, the *Gamāgamika*, the *Abhitvaramānaka*, the *Tarika*, the *Tarapatika*, the *Ōḍras* (men from Orissa), the *Mālavas*, the *Khaṣas*, the *Kulikas*, the *Karmātas*, the *Hūṇas*, the *Ohāṭas* (or village officers), the *Bhaṭas*, the servants and others, dependent on his lotus-feet, who are not named here, and the residents, the Brahmanōttaras, the village-elders, householders, the *purōgas*, the *Mēdas*, the *Andhrakas* down to the *Ohāṇḍālas*—

Li 33-37 Be it known to you that the above-mentioned villages, namely, the village of Nandivanāka, the village of Manivāṭaka, the village of Naṭikā, the village of Hasta, (or Hastigrāma) and the village of Pālāmaka, together with the undivided lands attached to them, unbroken up to their boundaries, grass and pasture-lands,² with their grounds, places, mango and *madhūka* (*Bassia Latifolia*) trees, with their water and dry lands, *uparikaras*, *daśāparādhas*, *chaurōddharanas*, free from all troubles, exempt from the entry of the *chāṭas* (village officers), and *bhaṭas*, with all taxes due to the king's family or court, with nothing of these to be recovered, according to the maxim of *bhūmichchhidra*, to last as long as the moon and the sun and the earth shall endure, excluding the gifts to gods, and the Brahmins, which were granted before and were enjoyed or are being enjoyed—

Li 37-42 are granted by us for the increase of the spiritual merit and glory of my parents and of myself.—We being requested by the illustrious Mahārāja Bālaputrādēva, the King of Suvarṇpādṛipa through a messenger "I have caused to be built a monastery at Nālanda" granted by this edict toward the income for the blessed Lord Buddha, the abode of all the leading virtues like the *pra jāpāramitā*, for the offerings, oblations, shelter, garments, alms beds, the requisites of the sick like medicines, etc., of the assembly of the venerable *bhikṣhus* of the four quarters (*comprising*) the Bodhisattvas well versed in the *tantras*, and the eight great holy personages (i e the *arya-puggalas*), for writing the *dharma-ratnas* or Buddhist texts and for the upkeep and repair of the monastery (when) damaged; therefore, this grant should be approved and preserved by all of you⁴ out of regard for the merit of protecting gifts of land and because in the confiscation of the same there is a fear of falling into the great hell and the like. The residents also should be obedient to the order on hearing it and

¹ Many of these designations hardly admit of translation. They all occur in several grants and have already been noticed by scholars. So they are left untranslated here.

² *सृष्टयुक्तिचर* is usually so translated and *युति* is practically left untranslated.

³ Dr. Thomas is of opinion that the term *Bōdhisattva* is used here to indicate the monks and would read *śātraka* in place of *tāntraka*. He further thinks that *Buddhadharmāraṅgasya* depends on *sthānasya*. The term *dharmaśāstrā* occurs in the *Saddharmapundarīka*, I, 10, 79; II, 102, XI, 5, 7. Burnouf translates it "la règle de la loi," i e the rule of the Law." For *aśṭa pudgalasya* see Childers, Pāli Dictionary under *ariyapuggalo* and *puggalo*.

⁴ Dr. Krōm of Leiden also thinks that the message sent by Bālaputra to Dēvapāla is only contained in the words "*Śrī-Nālandāyām vihāraṁ Kārtitaṁ*"; for, if we assume that the message includes the whole passage as far as it (l. 42) it is not clear who are meant by the words *bhavadbhiḥ sarvasiṅgava* (l. 40). These words cannot be applied to King Dēvapāla. Evidently they refer to that king's officials mentioned previously. These remarks appear to be justified but then we would require it after *kārtitas*.

should bring to the donees at the proper time the due revenues such as *bhāgabdhōgakara*, gold, etc." *Samvat* (year) 39, *Kārtika*, day 21.

Ll 43-50. In pursuance thereof are the (following) verses (nos 16-21) announcing duties (regarding grants)¹.

V. 22 The illustrious Balavarmman who was the right hand of the king, as it were, and who never depended on (others') help for crushing hostile forces, acted as messenger in this religious function

V 23 In this religious undertaking Balavarmman, the illustrious ruler of the *Vyāghratatī*-mandala, acted as a messenger of the illustrious (Emperor) *Dēvapāladēva*

V 24 There was a King of *Yavabhūmi* (or Java), who was the ornament of the *Śailēndra* dynasty, whose lotus-feet bloomed by the lustre of the jewels in the row of trembling diadems on the heads of all the princes, and whose name was conformable to the illustrious tormentor of brave foes (*vīra-vairi-mathana*)

V 25 His fame, incarnate, as it were, by setting its foot on the regions of (white) palaces, in white water-lilies, in lotus plants, conches, moon, jasmine and snow and, being incessantly sung in all the quarters, pervaded the whole universe

V 26 At the time when that king frowned in anger, the fortunes of the enemies also broke down simultaneously with their hearts. Indeed the crooked ones in the world have got ways of moving which are very ingenious in striking others²

V 27 He had a son, who possessed prudence, prowess, and good conduct, whose two feet fondled too much with hundreds of diadems of mighty kings (bowing down). He was the foremost warrior in battle-fields and his fame was equal to that earned by *Yudhsthura*, *Parāśara*, *Bhīmasēna*, *Karṇa* and *Arjuna*

V 28. The multitude of the dust of the earth, raised by the feet of his army, moving in the field of battle, was first blown up to the sky by the wind, produced by the (moving) ears of the elephants, and, then slowly settled down on the earth (again) by the ichor, poured forth from the cheeks of the elephants

V 29. By the continuous existence of whose fame the world was altogether without the dark fortnight, just like the family of the lord of the *dāityas* (demons) was without the partisanship of *Kṛṣṇa*³.

V. 30 As *Paulōmī* was known to be (the wife of) the lord of the *Suras*, (i.e. *Indra*) *Ratī*⁴ the wife of the mind-born (*Cupid*), the daughter of the mountain (*Pārvatī*), of the enemy of *Cupid* (i.e. *Śiva*) and *Lakṣmī* of the enemy of *Mura* (i.e. *Vishnu*) so *Tārā* was the queen consort of that king, and was the daughter of the great ruler *Dharmasētu*⁵ of the lunar race and resembled *Tārā* (the Buddhist goddess of this name) herself

V 31 As the son of *Śuddhōdana*, (i.e. the Buddha) the conqueror of *Kāmadēva*, was born of *Māyā* and *Skanda*, who delighted the heart of the host of gods, was born of *Umā* by *Śiva*, so was born of her by that king, the illustrious *Bālaputra*, who was expert in crushing the pride

¹ Here come six imprecatory and benedictory stanzas, too well-known to be translated. The stanza *सर्वानिदान् सावित्रं पादिवेन्दुान्* which is given in the *Mungir* grant is here left out

² The eyebrows become crooked in frowning and the poet by way of *arthāntara-nyāsa* draws a general inference from it

³ Pun on the words *Kṛṣṇa* and *pakṣa*. Fame is white or bright cf *सावित्रं ज्योतिषि पापे यमसि च वल्लरा वपयन्ते हास्योपर्यो* *Sāhityadarpana*, VII-23.

⁴ The exact word which certainly has only two letters is not distinct. It may be either *Prīti* or *Śakti* as noted above, f n., p. 324. That *Ratī* is meant is absolutely clear from the context.

⁵ This name can be read as *Varmasētu* also.

of all the rulers of the world, and before whose foot-stool (the seat where his lotus-feet rested) the groups of princes bowed

V 32. With the mind attracted by the manifold excellences of Nālandā and through devotion to the son of Śuddhōdana (the Buddha) and having realised that riches was fickle like the waves of a mountain stream, he whose fame was like that of Sanghārthamitra¹, built there (at Nālandā) a monastery which was the abode of the assembly of monks of various good qualities and was white with the series of stuccoed and lofty dwellings.

V 33 Having requested, King Dēvapāladēva, who was the preceptor for initiating into widowhood the wives of all the enemies, through envoys, very respectfully and out of devotion and issuing a charter, (he) granted these five villages, whose purpose has been noticed above for the welfare of himself, his parents and the world

V. 34. As long as there is the continuance of the ocean, or the Ganges has her limbs (the currents of water) agitated by the extensive plaited hair of Hara (Śiva), as long as the immovable king of snakes (Śēsha) lightly bears the heavy and extensive earth every day and as long as the (Udaya) Eastern and (Asta) Western mountains have their crest jewels scratched by the hoofs of the horses of the Sun so long may this meritorious act, setting up virtues over the world, endure

No 18—MATTEPAD PLATES OF DAMODARAVARMAN.

By PROFESSOR E HULTZSCH, PH.D., HALLE (SAALE)

This inscription is engraved on five very thin copper-plates, which were found in the village of Mattepād in the Ongole Taluk of the Gunṭūr District and forwarded to Rao Bahadur H Krishna Sastri by the Tahsildar of Nellore. The plates measure $6\frac{3}{8}$ inches in breadth and $1\frac{1}{2}$ inches in height. There are eight inscribed faces, the outer faces of the first and last plates having been left blank. Each inscribed face bears only two lines of writing. The margins of the plates are not raised into rims, but the writing is in fair preservation. The five copper-plates are strung on a ring of the same metal, passing through a hole of about $\frac{3}{4}$ " in diameter on the left side of the writing. The two ends of the ring, which is about $2\frac{1}{2}$ " in diameter, are fixed in the base of an oval seal, which is much worn; it seems to bear, in relief, the figure of a seated bull, facing the proper right. The weight of the plates, with ring and seal, is $30\frac{1}{2}$ tolas.

The alphabet is of an early Southern type. The *Jihvāmūlīya* occurs in line 7, and the *Upadhmanīya* in line 16, final forms of *t* and *m* in lines 1, 7, and 15, 16 (twice), respectively. As in the case of the plates of Ghṛudēvi (above, Vol VIII, No. 12) and of Vijaya-Dēvavarman (Vol IX, No 7), the eight inscribed faces are numbered consecutively, like the pages of a modern book, with the numerical symbols 2, [3], 4, 5, 6, 7, 8 on the left margin; the first plate seems to bear, just as that of Dēvavarman,² the sacred syllable *ōm* in the place of the figure 1. The symbol 2 occurs also in the date (l. 14), and the symbol 1 repeatedly in lines 8-13.

The language of the plates is Sanskrit mixed with Prākṛit. Lines 1-14 are in prose, and the two last lines in verse. In the Sanskrit portion consonants following *r* are doubled, with the exception of *t* in *hartum*— and of *h* in *arhanti* (l. 6). The Sandhi is neglected after *purāt* (l. 1), *īasya* and *-sagōtrasya* (l. 2), *-grāmēyakāh* (l. 4), *-grāmaḥ* (l. 5), and *bhāmīḥ* (l. 15).

¹ This might possibly mean that his wealth befriended the cause of the *Saṅgha*,

² See above, Vol IX, p. 57.

In lines 8-13 the proper names of the donees and most of the names of their *gōtras*¹ are given in Prākṛit, and in line 14 the Prākṛit form *-samāraheliḥaram* occurs. The only other declensional forms are the nominative singular *amśo* (for which we would have expected *amśo*) and the genitive singular *-ajjossa* (= *-āryasya* in Sanskrit) in lines 8-13. The vowel *au* has become *o* in *Koṇḍinna* (= *Kaundinya*, ll 8-11). Sanskrit *p* and *b* have been changed to *v* in *Kassava* (= *Kāśyapa*, l 11 f) and *Satarajja* (= *Sabarārya*, l 10). Consonant groups are assimilated, but *sri* is represented by *siri* in *Sirijja* (l 9). This name, as well as *Nandijja*² (= *Nandyārya*, ll 8, 13), *Aggijja* (= *Agnyārya*, ll 9, 11), *Āgasti* (= *Agastya*, l 13), and *Venujja* (for which we would have expected *Venujja*³ = *Vishmārya*, l 12), are instances of *Samprasāraṇa* (*i* = *ya*, and *u* = *va*).

The inscription records that, in the 2nd year of his reign (l 14), the Mahārāja Dāmōdaravarman (l 3) granted the village of Kangūra to a number of Brāhmanas. He was a worshipper of 'the truly and perfectly Enlightened one' (*Samyak-sambuddha*, l 1), i.e. of the Buddha. At the same time he boasts of having performed certain Brāhmanical rites, viz. *Gōsahasra* and *Hiranyagarbha* (l 2 f). These are the names of the second and fifth of the sixteen so-called 'great gifts' (*mahādāna*) of the Purānas⁴. A similar feat is ascribed to king Attivarman in another copper-plate grant from the Guntūr District, where I translate the epithet *apramēya-Hiranyagarbha-prasavēna*⁵ by 'who is a producer of (i.e. who has performed) innumerable *Hiranyagarbhas*'. That this Attivarman (whose name seems to be a Prākṛitic or Dravidian form of *Harshvarman*) belonged to the same dynasty as Dāmōdaravarman, is evident from the fact that his family is stated to be 'descended from the lineage of the great sage Ānanda' (ibid., text l 1) while Dāmōdaravarman claims to have belonged to the *gōtra* of Ānanda (below, text l 2). Moreover, Dāmōdaravarman resided at a city called Kandarapura (below, text l 1), which must have received its name from that prince Kandarā who is mentioned as an ancestor of Attivarman⁶. The characters of the copper-plate grant of this king are decidedly more developed than those of the subjoined grant, which, besides, is partially in Prākṛit, while the former is all in Sanskrit. Consequently, Dāmōdaravarman must have been one of the predecessors of Attivarman.

When editing the Gōraṅṭla plates of Attivarman, my late lamented friend Fleet believed this king to have been a Pallava,⁷—chiefly because he interpreted the epithet *apramēya-Hiranyagarbha-prasavēna* by 'who is of the posterity of the inscrutable (god) Hiranyagarbha.' As I have shown above, this rendering is inadmissible in the light of the corresponding epithet used in the fresh plates, and Fleet himself had since withdrawn his original opinion in his *Dynasties of the Kanarese Districts*, second edition, p. 334. Henceforth Kandarā, Dāmōdaravarman, and Attivarman (*Harshvarman*) may be designated as 'kings of the family of Ānanda.'

The two localities mentioned in the subjoined inscription—Kandarapura (l 1) and Kangūra (l 4 f)—I am unable to identify. But the first of the two villages referred to in the grant of Attivarman—*Tāṅṅikonṅa*⁸—is probably identical with Tādikonda, 10 miles north of Guntūr⁹ and south of the Krīṣṇā river, and the second village—*Āntukkūra*¹⁰—with Ganī-Ātukūru, west

¹ In line 13 the names of the *gōtras* are in Sanskrit.

² Cf. *Nandijja* and *Gonandijja*, above, Vol. I, p. 6, text l. 21, and Vol. VI, p. 87, text l. 9.

³ Cf. *Eudavennajja*, above, Vol. VI, p. 317, text l. 16.

⁴ See Hēnādri's *Dānakhaṇḍa*, chapter E, and cf. also *Ep. Ind.*, Vol. I, p. 368, verses 18 and note 58.

⁵ *Ind. Ant.*, Vol. IX, p. 102, text l. 3.

⁶ Loc. cit., text l. 2. These coincidences were first pointed out in the Madras Epigraphical Report for 1920, p. 95.

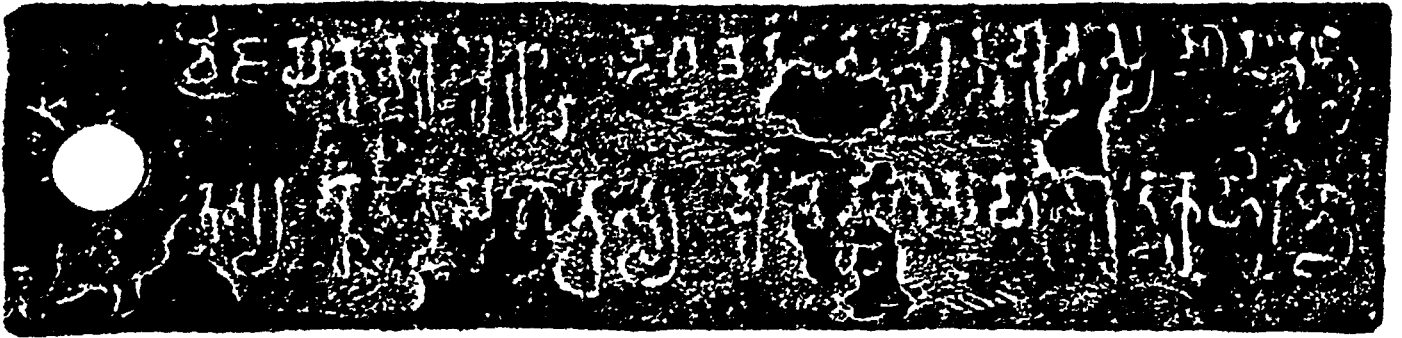
⁷ See *Ind. Ant.*, Vol. IX, p. 102.

⁸ See Mr. E. Sewell's *List*, Vol. I, p. 76.

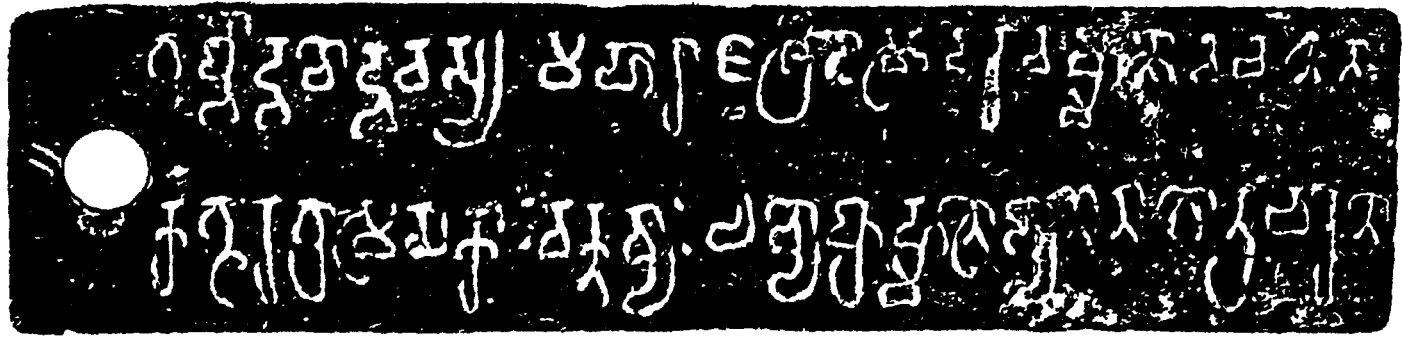
⁹ *Ind. Ant.*, Vol. IX, p. 103, text l. 3.

¹⁰ *Ind. Ant.*, Vol. IX, p. 103, text l. 7. —Fleet read *Tāṅṅikonṅa*.

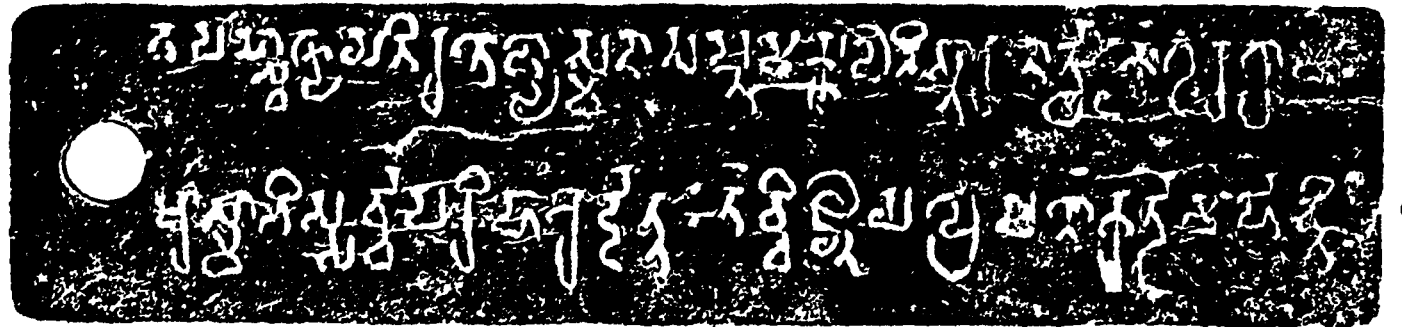
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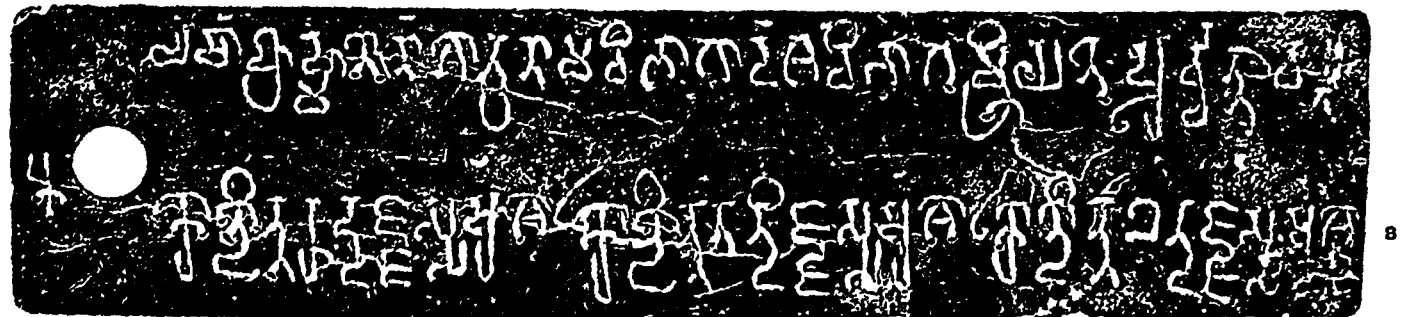
11 a



11 b



111 a



of Bezvāda¹ Gōrantla, where the plates of Atṭivarman were obtained,² is 4 miles north of Guṇṭūr³ Finally, Venkayya's Report for 1900, pp 5, 35, notes a much defaced Sanskrit inscription mentioning the daughter of king Kandara of the Ānanda gōtra, at Chēzarla, west of Guṇṭūr.

TEXT *

First Plate ; Second Side

- 1 विजयकण्ठरपुरस्तु [श]गवतः सत्यक्संबुद्धस्य पादानुष्वा-
- 2 तस्य आ[न]न्दसगोत्रस्य अ[वन्ध्य]गोसह[स्रानि]कहिरण्य-

Second Plate, First Side

- 3 गर्भोद्भवोद्भवस्य महाराजश्रीदामोदरवर्भणो वचनेन
- 4 कंगूरग्रामेयकाः(ः) वक्तव्याः [1*] एभ्यो ब्राह्मणे[भ्यो] नानागोत्रचरण-

Second Plate, Second Side

- 5 तपस्वाध्यायनिरतेभ्योसदासप्तमकुलनिस्तारण[1*]र्त्य कंगूरग्रामः
- 6 अस्माभिस्सर्वपरिहारैर्दत्तः [1] तंस्विधाय⁵ प्रे[ष]णं कर्तुमर्हन्ति [1]

Third Plate, First Side.

- 7 एषां ब्राह्मणानां गोत्रनामविभागादंशविभागद्वियते [1*] पूर्वन्तावत्
- 8 कोण्डिन्नखण्डजस्य अंशो १ कोण्डिन्ननन्दिजस्य अंशो १ कोण्डिन्नखण्डजस्य
अंशो

Third Plate ; Second Side.

- 9 कोण्डिन्नभवजस्य अंशो १ कोण्डिन्नअग्निजस्य अंशो १ कोण्डिन्नसिरि-
जस्य अंशो
- 10 पुनः कोण्डिन्नभवजस्य अंशो १ कोण्डिन्नखण्डजस्य अंशो १ कोण्डिन्न-
सवरजस्य अंशो

Fourth Plate ; First Side.

- 11 कोण्डिन्नअग्निजस्य अंशो १ कोण्डिन्नवीरजस्य अंशो १ कस्यवदामजस्य
[अंशो]
- 12 कस्यधनुमारजस्य अंशो १ कस्यववैणुजस्य अंशो १ कस्य[वदे]जस्य
अंशो

¹ See above, Vol. VIII, p 10.

² *Ind Ant*, Vol IX, p 102.

³ Mr Sowell's *Lists*, Vol. I, p. 74.

⁴ From ink-impressions supplied by Rao Bahadur H. Krishna Sastri.

⁵ Read तद्विधाय.

Fourth Plate, Second Side

- 13 काश्यपनन्दिज्जस्य अग्रे १ वत्सदोणज्जस्य अग्रे आगस्तिभट्टज्जस्य
अग्रे १^१ [1*]
14 विजयसवच्छर २ वार्त्तिकशुक्लपत्रस्य त्रयोदश्यां पट्टिका दत्ता [1*]

Fifth Plate, First Side

- 15 बहुभिर्बसुधा दत्ता बहुभिधानुपानिता [1*] यस्य यस्य यदा भूमिः^२
तस्य तस्य तदा फलम् ॥
16 स्रदत्ता परदत्तां वा यो हरेत्तु वसुन्वराम् [1] गवां ^३गतसहस्रस्य
हन्तुः पिवति दुष्कृतम् ॥

TRANSLATION

(Line 1) From Kandarapura, (the city) of victory, the villagers of Kangūra have to be addressed (as follows) by the word of the glorious Mahārāja Dāmōdaravarman, who meditates on the feet of the blessed Samyak-sambuddha; who belongs to the *gōtra* of Ānanda; (and) who is the origin of the production (i.e. who has caused the performance) of many *Hiraṇyagarbhas*⁴ and of (gifts of) thousands of pregnant cows

(L 4.) 'For the saka of Our salvation as far as the seventh generation, the village of Krīgūra has been given by Us, with all exemptions, to the following Brāhmanas of various *gōtras* and *charanas*, and practising austerities and recital of their sacred texts. Knowing this (the villagers) should render service (to them).'

(L 7) The allotment of shares is (now) made to these Brāhmanas, with specification of (their) *gōtras* and names. First then, to the Kondinna Ruddajja (Rudrārya) 1 share; to the Kondinna Nandijja (Nandyārya) 1 share, to the Kondinna Khandajja (Skandārya) (1) share; to the Kondinna Bhavajja (Bhavārya) 1 share, to the Kondinna Aggijja (Agyārya) 1 share; to the Kondinna Srijja (Śryārya) (1) share, again to the Kondinna Bhavajja 1 share, to the Kondinna Khandajja 1 share, to the Kondinna Savarajja (Śabarārya) (1) share; to the Kondinna Aggijja 1 share, to the Kondinna Virajja (Virārya) 1 share, to the Kassava Dāmajja (Dāmārya) (1) share, to the Kassava Kumārajja (Kumārārya) 1 share, to the Kassava Veṇujja (Viṣṇvārya) 1 share; to the Kassava Devajja (Dōvārya) (1) share, to the Kāśyapa Nandijja 1 share, to the Vatsa Doṇajja (Drōnārya) 1 share, to the Āgasti Bhaddajja (Bhadrārya) 1 share.

(L 14) (In) the year of victory 2, on the thirteenth (tithi) of the bright fortnight of Kārttika, (this) set of plates⁵ has been given (to the donees)

[Line 15 f contain two of the customary ślokas]

No 19 —URLAM PLATES OF HASTIVARMAN, THE YEAR 80.

By PROFESSOR E. HULTZSCH, PH D, HALLE (SAALE)

This is a set of three copper-plates, measuring $7\frac{1}{2}$ inches in breadth and $2\frac{1}{2}$ inches in height. The outer face of the first plate has been left blank, while the second and third plates

¹ अग्रे १ is entered below the line.

² Read स्रत्

³ *paṭṭikā* is used in the same sense in other copper-plate grants. See above, Vol. I, p. 7, text l. 51; Vol. VI,

⁴ Read भूमिः.

⁵ See the introductory remarks.

p. 14 text l. 18, p. 88, text l. 28, p. 818, text l. 40, Vol. VIII, p. 240, text l. 40.

tion of a Gānga grant in Vol XIII, p 216 As I have shown in Vol VII, p 107, note 4, *akhaśāli*, the person to whom the engraving of copper-plate grants is entrusted, means 'a goldsmith,' and must not be confounded with *śhapatalika*, 'a keeper of records'

Of the localities mentioned in this inscription, Kalingānagara (l 1) is the present Mukhalīngam,² and Urāmalla, where the donee resided (l 12), is Uralm³ where the copper-plates were obtained In the absence of local maps, I am unable to identify the village granted, Hoṇḍevaka (l 8), and another village, Hattaravanna, which seems to be referred to in the description of the boundaries of the former (l 16) The district of Krōṣhṭuka-vartanī (l 8) occurs also in the Chicacole plates of Dēvēndravarmān⁴

TEXT.⁵*First Plate, Second Side*

- 1 श्रीं स्वस्ति [1*] सर्व्वर्त्तुसुखरमणीयाद्विजयकलिङ्गनगरात्सकलभुवननिर्माणीक-
- 2 सूत्रधारस्य भगवतो 'गोकर्णस्वामिनश्चरणकमलयुगलप्रणामादपगत-
- 3 कलिकलङ्गी विनयनयसम्पदामाधारः स्वामिधारापरिष्कन्दाधिग-
- 4 तसकलकालिङ्गाधिराज्यस्यतुसुदधितरङ्गमेखलावनितलप्रवि-
- 5 ततामलयशाः) अनेकसमरसंघोभजनितजयशब्दो⁶ गाङ्गा-
- 6 मल्लशुभप्रतिष्ठः प्रतापासिद्धानामितससस्तसामन्तचूडा-

Second Plate, First Side

- 7 मणिप्रभामञ्जरीपुञ्जरञ्जितचरणो मातापितृपादानुद्धातः परम-
- 8 माहेस्वरः श्रीमहाराजो हस्तिवर्मा (I) क्रोष्टुकवर्त्तन्यां होष्टेवकग्रामे स-
- 9 र्व्वसमेतान्कुटुम्बिनस्साम्राज्ञापयति [1*] विदितमस्तु वो यथाम्नाभिः[7]
- 10 अग्निग्रामेग्रहारिदासकाशात्क्रीत्वा हार्हहलस्य भूखेदीकृत्याचन्द्रार्क-
- 11 प्रतिष्ठस्यहारश्रुत्वा सर्व्वकरैः परिहृत्य मातापित्रोरात्मनस्य पुण्याभिवृद्धये⁸
- 12 उरामहनिवासिने वत्ससगोत्राय वाजसनेयसब्रह्मचारिणे ज[य]-

Second Plate; Second Side.

- 13 शर्मणे कार्त्तिकालाष्टम्यासुदकपूर्व्व संप्रप्ता [1*] तद्विदित्वा स्वभूमिमनुपाल-
- 14 यतां न केनचित्परिवाधा¹¹ दार्य्येति । सीमालिङ्गानि चात्र [1*]
पूर्व्वेण वस्तीकस्ततः

¹ Cf. 'agasāli, agasālavādu or agasālevādu, a goldsmith,' in Brown's *Telugu-English Dictionary*.

² See above, Vol. IV, p 187 ff

³ This identification was suggested in the Madras Epigraphical Report for 1920, p 96.

⁴ Above, Vol. III, p 131

⁵ From ink-impressions supplied by Rao Bahadur H Krishna Sastry,

⁶ Expressed by a symbol,

⁷ Read श्रीकपर्णः

⁸ Read °संघोभ°

⁹ Read °वृद्धये°

¹⁰ Read यथाम्नाभिरभिः

¹¹ Read °वाधा,

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11 a.

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11 b

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20 ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥
 ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥
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24

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22
24

28 ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥
 ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥

28

28

- 15 क्षेत्रपाली ततो घोषणवाप्या[:*] पश्चिमपाली ततः पुनरपि क्षेत्र-
पाली [1*]
16 दक्षिणेन इत्तरवन्नसीमान्तिका एव¹ [1*] पश्चिमेन क्षेत्रपाली ततो
वल्लीकः²
17 ततः कृतमा³ पाषाणपङ्क्तिः [1*] उत्तरेणापि क्षेत्रपाली ततो वल्लीकः
पुनर्वल्लीकः²
18 ततो⁴ पूर्ववल्लीकमनुप्राप्तेति । भविष्यद्राजभिश्चायन्दानधर्मोनुपालनीयः [1*]

Third Plate, First Side.

- 19 तथा च व्यासगीताः [1*] बहुभिर्वसुधा दत्ता बहुभिश्चानुपालिता [1*]
यस्य यस्य
20 यदा भूमिस्तस्य तस्य तदा फलं [॥ १*] स्वदत्ताभ्यरदत्ता वा यदाद्रष्ट
युधिष्ठिर [1*] मही⁵
21 महिमतां श्रेष्ठ दानाच्छ्रेयोनुपालनं [॥ २*] षष्टिं वर्षेषुहस्ताणि मोदते दिवि
22 भूमिदः [1*] जाक्षेता चानुमन्ता च तान्येव नरवो वसेदिति । [३*]
प्रवर्धमानविजय-
23 राज्यसंवत्सरा अशीतिः ८० वार्त्तिकदिन ८ ॥ इदं विनयचन्द्रेण भानु-
24 चन्द्रस्य सूनुना [1*] शासनं राजसिंहस्य⁶ सिखितं स्वसुखायवा ॥ [४*]

Third Plate, Second Side.

- 25 मण्डलायायनिष्येदनिष्यिष्टारतिसङ्घतेः⁷ [1*]
26 अमतोप्रतिघातस्य रणभीतस्य शासनम् ॥

TRANSLATION,

(Line 1.) Om. Hail! From Kalīnganagara, (the city) of victory, which is pleasant (on account of the simultaneous presence) of the comforts of all seasons, the glorious Mahārāja Hastivarman, a fervent worshipper of Mahēśvara, who meditates on the feet of (his) mother and father,⁸ commands (as follows) the ryots, accompanied by all (others), at the village of Hondevaka in (the district of) Krōshtuka-vartanī.

(L 9.) 'Be it known to you that We have purchased two and a half ploughs (*hala*) of land in this village from the *Agrahārikas*,⁹ have constituted (this land a separate) section.

¹ Read सीमान्तिकेय.

² Read वल्लीकस्त.

³ Read कृतिमा.

⁴ Read कस्य.

⁵ Read मही

⁶ Read सिंहस्य

⁷ Read °सङ्घतेः

⁸ The epithets omitted here will be found translated above, Vol. III, p 120.

⁹ I.e. the residents of the *agrahāra*.

have made (it) an *agrahāra* which is to last as long as the moon and the sun, have exempted (it) from all taxes, and that, for the sake of the increase of the religious merit of (Our) mother and father and of Ourselves, on the eighth (tithi) of the dark (fortnight) of Kārttika, with libations of water, We have given it to Jayasārman, who resides at Urāmalle, belongs to the Vatsa *gōtra*, (and) studies the Vājasaneyā (*śākhā*). Knowing this, nobody should cause obstruction to (the new owners) while they are preserving their own land.¹

(L 14) And the marks of the boundaries of this (land are) In the east, an anthill; then the bank (*pālī*) of a field, then the western bank of the *Ghōshana* tank, and then again the bank of a field. In the south, only the boundary of Hattaravanna. In the west, the bank of a field, then an anthill; then an artificial row of stones. And in the north, the bank of a field, then an anthill; again an anthill; then (the boundary) reaches the anthill in the east.

(L 18) And future kings should preserve this meritorious gift. There are also the following (verses) sung by Vyāsa.

[Lines 19-22 contain three of the customary *Śloka*s]

(L 22) Eighty—(in figures) 80—years of the reign of increasing victory, the day 8 of Kārttika

(Verse 4) At the command of his (the king's) own mouth, this edict of Rājasīmha has been written by Vinayachandra, son of Bhānuchandra

(V 5) (This is) an edict of the glorious Banabhīta, whose orders are irresistible, (and) who has crushed the collection of (his) enemies by the strokes of the point of (his) scimitar.

No 20—IPUR PLATES OF GOVINDAVARMA'S SON MADHAVAVARMA.

BY PROFESSOR E. HULTZSCH, PH D., HALLE (SAALE)

This is a set of three thin copper-plates in the possession of Brindavanam Gopalachari at the village of Īpūr in the Tenālī Taluk of the Guntūr District, which was brought to the notice of Rao Bahadur H. Krishna Sastri by Mr. A. Rangaswami Sarasvati. The plates measure $6\frac{1}{2}$ inches in breadth and $1\frac{1}{4}$ inches in height. The outer faces of the first and last plates have been left blank, while the middle one bears writing on both sides. The margins of the plates are not raised into rims, but the writing is in good preservation. The plates are strung on a copper ring, which is 3' in diameter and is passed through a hole on the left side of the writing. The two ends of the ring are secured in the base of a circular seal, which measures $1\frac{1}{4}$ ' in diameter and is somewhat worn. It is divided by a cross-line into two sections. The lower section bears, in relief, the legend श्रीनृपवर्ष in two lines. Above the line seems to be a figure of Lakshmi or a Svastika on a pedestal, flanked by two lamp-stands and surmounted by the sun (?) and the crescent of the moon. The weight of the plates, with ring and seal, is 20 tolas.

The alphabet is of an earlier southern type than that of the two other published grants of the Vābrahṛṅgīn family.² The secondary forms of *r* and *ṛ* are not always clearly distin-

¹ Cf. the corresponding portion of the Achyutapuram plates, above, Vol. III, p. 129.

² These are the Pāratrīlam plates of Indravarman, above, Vol. XII, p. 133, and the Chikkulla plate of Vikramādityavarman II, Vol. IV, p. 133.

1
 2
 4

2
 4

11 a

6
 8
 8

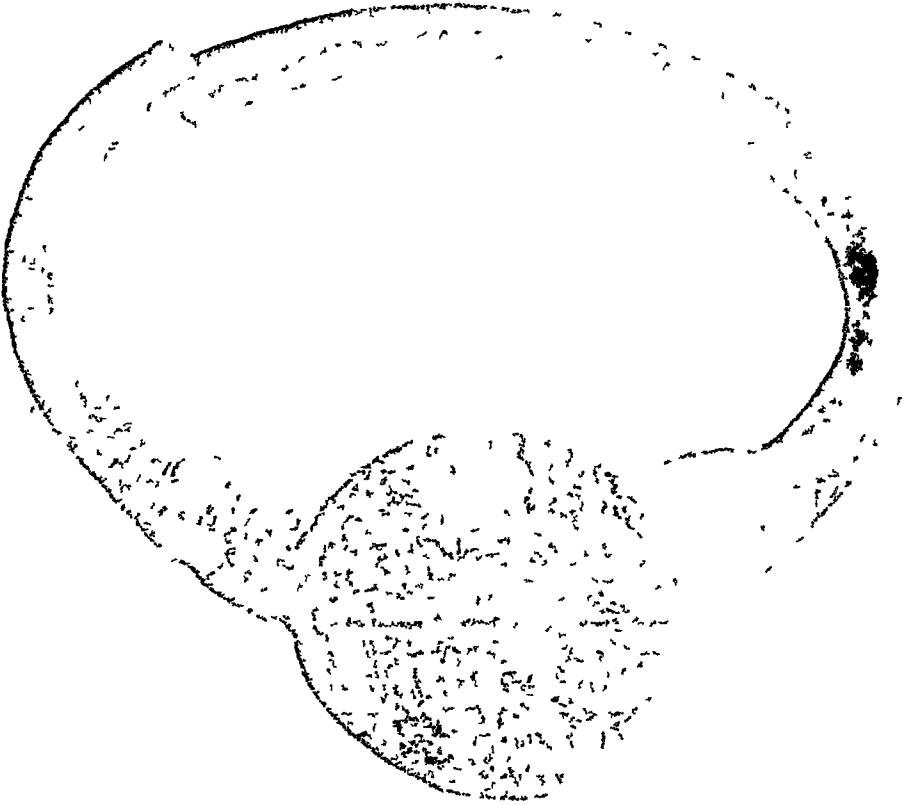
11 b

10
 10

111

12
 14
 14

Scal



FULL SIZE

gushed, in *ḥundinām* = (l. 1) *i* looks like *z*, and in *bhagarach-Ohhrīparivata*- (l. 1), *śi-Ḡōvinda*^o (l. 3), and *-mahī*- (l. 4), *z* looks like *i*, *i* is distinguished from *n* by a loop on the left but in *-janīn*= (l. 9) the second *n* has a loop, and in *-jagat-kalmashah* (l. 7) and *-sumatsarē* (l. 14) the *t* has no loop. Final forms of *m* and *t* occur in *-arītham* (l. 10), *tasundharām* and *vrajēt* (l. 13) The numerical symbols 5, 7, and 10 are used in the date (l. 14)

The language is Sanskrit prose (with two verses quoted in l. 12 f), but the abbreviation *gi* (l. 14) presupposes the Prākṛit word *gimha* (= *grīshma* in Sansk. t) The incorrect form *saptātrisē*, (for *saptatrimśē*, l. 14) seems also to be due to Prākṛit influence Palatal *z* is expressed by lingual *n* in *Manchyanā*- (l. 11) Consonants are doubled after *r* throughout, and *dh* before *y* in *-ānuddhyātasya* (l. 1), while *tva* represents *tva* in *-satva*- (ll. 3, 6) As the notes on the text will show, the rules of *sandhi* are frequently disregarded

The inscription records the grant of the village of Vilembali in the Guddādi-vishaya (l. 8 f) to the Brāhmana Agnisarman. The grantor was the Mahāīja Mādhavavarman (l. 8), son of the Mahāīja Ḡōvindavarman (l. 3), who was a worshipper of the temple at Śrīparvati and belonged to the family of the Vishnukundins (l. 1) Mādhavavarman issued his order to the villagers from his camp at Kudāvāda (l. 8) and seems to have resided at Trivaranagara (l. 4) The executor (*ajñā*) of the grant was (the king's) 'dear son,' Manchyanā-bhattāraka (l. 11) Its date was the 15th day of the 7th fortnight of the hot season in the thirty-seventh year of the reign (l. 14)

In consideration of the comparatively early type of the alphabet of this inscription, I feel tempted to identify Mādhavavarman with a king of the same name, who is known to have been the grandfather of the grantor of the Rāmātirtham plates, and the great-grandfather of the grantor of the Chikkulla plates¹ For easy reference, I subjoin a tabular statement

<i>Ipūr plates</i>	<i>Rāmātirtham plates.</i>	<i>Chikkulla plates</i>
Ḡōvindavarman | Mādhavavarman (year 37)	Mādhavavarman | Vikramēndra | Indravarmān (year 27)	Mādhavavarman | Vikramēndravarman I | Indrabhaṭṭānakavarman | Vikramēndravarman II (year 10)

Of the localities mentioned in this inscription, Śrīparvata (l. 1) is perhaps identical with Śrīśailam in the Kārnāl District² Whether the Guddādi-vishaya (l. 8 f) has anything to do with the Guddāvādi-vishaya to which Diāksharāma and Chellūi in the Ḡōdāvāri District belonged,³ I am unable to say, nor can I identify Vilembali (l. 9), Kudāvāda (l. 8), and Trivaranagara (l. 4), which can hardly be identical with the distant Tripurī (Tewarī)

¹ See my remarks above, Vol. XII, p. 133, and of the Madras Epigraphical Report for 1920, p. 95.

² See above, Vol. IV, p. 195

³ See above, Vol. IV, p. 83, *Ind Ant*, Vol. XIV, p. 53, text l. 77, Vol. XIX, p. 424

TEXT I

First Plate, Second Side

- 1 स्वस्ति [1*] भगवच्छ्रोपर्वतस्त्रामिपादानुद्ध्यातस्य विष्णुकुण्डिनामपरिमितवल-
पराक्रमस्य
2 परमधार्मिकस्य प्रणतसकलसामन्तस्यानेकगोद्धिरण्यभूमिप्रदानस्य महाराजस्य
3 श्रोगोविन्दवर्मणः पुत्रः स्मृतिमतिबलसत्वधैर्यैर्वोर्ष्यविनयसंपन्नः²
4 सकलमहोमण्ड[ल]म[नु]जपति[प्र]तिपूजितशासनः³ निवरनगरभवनगतयुव-

Second Plate, First Side

- 5 तिहृदयनन्दनः 'स्व[न]यबलंविजितसकलसामन्तातुल्यबलविनयनयनिय-
6 मसत्वमपन्नः⁴ सकलजगद्वज्रिपतिप्रतिपूजितशासनः⁶ अग्निष्टोमसहस्रया-
7 जो हि[र*]ण्यगर्भप्रसूतः⁷ एकादशान्धसेधावभृद्यविधूतजगत्कल्मषः सुस्तिर-⁸
8 कर्म[र] महाराजश्रीमाधववर्मा विजयस्कन्धावारा[त्*] कुडावाडवासक-⁹
गुहादिविष-

Second Plate, Second Side.

- 9 ये विलिम्बलिग्रामजनान्धर्वानेवम[र*]ज्ञापयति यथा¹⁰ अक्षौ वत्सगोत्राय
ब्राह्मणा-
10 य¹¹ अग्निशर्मणे अस्मद्दंशविभूत्यर्थम्¹² सर्वपरिहारेण दत्तवान्नि [1*]
तदवगम्य सर्व-
11 राजपुरुषैः परिहर्तव्यः पालयितव्यश्च [1*] अस्याज्ञा प्रियपुत्रः¹³ मण्यण्ड-
महारकः [1*]

Third Plate, First Side.

- 12 बहुभिर्वसुधा दत्ता बहुभिश्चानुपालिता [1*] यस्य यस्य यदा भूमिस्तस्य तस्य
तदा प्र-

¹ From ink-imp-ressions supplied by Rao Bahadur H Krishna Sastr.

² Read °सत्त्व°.

³ Perhaps स्मृजवत्° is intended. Read °सामन्तो ऽनुज°

⁴ Read °सत्त्वसपन्न°.

⁵ Read °प्रसूतिरेकादशा°

⁶ Read °वासकाङ्गुहादि°

⁷ Read °ब्राह्मणायाप्रियश्रेणोऽस्म°.

⁸ Read °पुत्री महारक°.

⁹ Read °शासननिवर°.

¹⁰ Read °शासनोऽग्नि°.

¹¹ Read सुस्तिर°.

¹² Read यथाशौ°.

¹³ Read °पर्य°.

13 ल[म् ॥^६] स्वदत्तां परदत्तां वा यो, हरेत वसुन्धराम् [१^{*}] आचक्षेता
चानुमन्ता च सर्वथा नरक^१ ब्रजेत् [॥^६]

14 प्रवर्द्धमानविजयराज्यसंवत्सरे सप्तत्रिंशे^२ गि प ७ दि १० ५ ॥

TRANSLATION.

(Line 1) Hail! The son of the glorious Mahārāja Gōvīndavarman, who meditated on the feet of the holy lord of Śrīparvata; (who belonged to the family) of the Vishnukunḍins; whose power and valour were immeasurable, who was most religious, to whom all vassals were bowing, (and) who (performed) many gifts of cows, gold, and land;

(L 3) the glorious Mahārāja Mādhavavarman, who is endowed with (knowledge of) the law, intelligence, power, honesty, firmness, valour, and modesty, whose edicts are worshipped by all rulers of men on the circle of the earth, who delights the hearts of the young women standing on (the top of) the palaces of Trivaranagara; who has subdued all vassals by the power of his own arm, who is endowed with unequalled power, modesty, policy, self-restraint, and honesty, whose edicts are worshipped by the rulers of the earth in the whole world^३, who has performed thousands of *Agnishtōma* sacrifices, who is a producer of (i.e. who has performed *Hiranyagarbhas* ^४, who has removed the stains of the world by bathing at the end of eleven *Āvāmēdhas* ^५, (and) whose religious rites are everlasting,

(L 8) from (his) camp of victory, pitched at Kudāvāda, commands as follows all men at the village of Vilembali in the district (*vishaya*) of Guddādi.

(L 9) 'For the sake of the prosperity of Our family, I have given (this village), with all exemptions, to this^६ Brāhmana Agnīsarman of the Vatsa *gōtra*. Knowing thus, all royal officers should exempt and preserve it'

(L 11) The executor (*ājñā*) of this (grant was the king's) dear son, Mafichyanṇa-bhattāraka.

[Line 12 f contain two of the customary Ślōkas]

(L 14) In the thirty-seventh year of the reign of increasing victory, the 15th day of the 7th fortnight of the hot season.^७

No 21.—IPUR PLATES OF MADHAVAVARMAN II.

By PROFESSOR E HULTZSCH, PH D, HALLE (SAALE)

This is another set of three thin copper-plates without rims, which belongs to the same owner as the preceding one (above, No 20) The plates measure 7 inches in breadth and 1½ inch in height and have four inscribed faces, the outer sides of the first and last plates having been left blank. The writing is much injured, especially on the two last faces. The plates are strung on a ring, which is about 3" in diameter, and the ends of which are secured in the base of

^१ Read नरक

^२ Read सप्तत्रिंशे

^३ The two last epithets are nearly identical with two others applied to the king before in line 3 f.

^४ *Hiranyagarbha* is the name of the fifth of the sixteen *Mahādānas*. Cf *anēka-Hiranyagarbbh-ōdbbhav-ōdbbhavasya* in the Matṭepād plates of Dāmōdaravarman (above, No 18), text 1 2 f, and *apramēya-Hiranyagarbbha-prasavōna* in the Gōraṅṭla plates of Ativarman *Ind Ant*, Vol IX, p 102, text 1 3

^५ The same epithet occurs (with the various reading *avadhauta* for *vidhūta*) in the Rāmatirtham plates, l. 3 f, and in the Chikkulla plates, l 2 f

^६ Cf above, Vol IX, p 59, note 6.

^७ With *g: pa 7* cf. *gimhā pakho chhaḥho 6* in the Mayidavālu plates (above, Vol VI, p 88); [*g*] *imha-pakhe pachame 5* at Kārīō (Vol VII, p 61), the following dates of four Nāsik inscriptions (above, Vol VIII) *gimhā-pakhe pachame 5* (p. 59), *gimhāna pakhe btiye 2* (p 60), *g: pa 2* (p 65); . *mha-pakhe chothe, 4* (p. 68) and *gimha pakham pidaman* in a Malavalli inscription (Vol X, Appendix, p 189, No 1195).

a circular, much worn seal, which is turned towards one side. The seal is divided by a cross-line into two sections. In the lower section the legend श्रीमध्व[वत्स], in two lines, is very faintly visible, while the symbols in the upper section cannot be made out. The weight of the plates, with ring and seal, is 30 tolas.

The alphabet reminds us of that of the British Museum plates of Chāudēvi (above, Vol. VIII, p 143). The *Upadhmanīya* occurs in lines 12 and 16. The numerical symbols 7 (thrice) and [40] are used in the date (l 13).

The language is Sanskrit prose (with two verses quoted in ll 14-16), but the abbreviation *vā* (l 13) presupposes the Prākrit form *vāsa* (= *varsha* in Sanskrit). Consonants are doubled after *r* throughout, *t* before *r* in *lshattriyā*^o (l 3 f) and *-putthas* (l 5), and *ah* before *y* in *°ddhyātō* (l 7),¹ while *tva* is employed for *tta* in *-satia* (l 6).

The inscription records the grant of a village, the name of which is doubtful, by Mādhavarman (II) (l 7), who resided at [Amā]rapura (l 1), ruled over the Trakūṭa and Mālaya mountains (l 5), was a worshipper of the temple at Śrīparvata (l 6 f), and belonged to the family of the Viṣṇukundins (ll 7, 13). His father was Dēvavarman (l 5), and his grandfather the Mahārāja Mādhavarman (I) (l 3 f). As the alphabet of this inscription seems to be of an earlier type than that of the preceding one, and as grandsons are frequently named after their grandfather, I consider it not impossible that Mādhavarman II was the grandfather of Govindavarman's son Mādhavarman,² who would then have to be designated Mādhavarman III. The first figure of the year in the date portion of the subjoined inscription (l 13) is injured and uncertain.

The localities mentioned in this inscription I am unable to identify, with the exception of Trakūṭa, a mountain on the Bombay side,³ and Mālaya, i.e. the Western Ghāts, both of which were at a safe distance from the dominions of Mādhavarman II, although he professes to have ruled over them. For Śrīparvata=Śrīsaīlam see above, Vol IV, p 195.

TEXT *

First Plate, Second Side

- 1 स्वस्ति [1*] [अम]रपुगटेकादशाश्वमेधावभ्यावधृतजगत्स्र[व]-
- 2 स्याग्निष्टोमसहस्रयाजिनोर्नैकरामन्तमकुटकूटम-
- 3 णिखचितवरणयुगलकमलस्य⁵ महाराजस्य ओमा-
- 4 धववर्माणः प्रियनसा चित्रियावस्कन्दप्र[वर्त्ति]ताप्रतिमवि-

Second Plate, First Side

- 5 [स्या]तपराक्रमस्य ओदेववर्माण. प्रियपुत्रस्त्रिकूटमलयाधिपति-
- 6 त्र्यविनयसत्त्वसंपन्नो⁶ भगवच्छीयर्व्वतस्वामिपादान्-

¹ But not in *-srādhyāya* (l 8) and *diyānō* (l 12).

² See above, p. 20

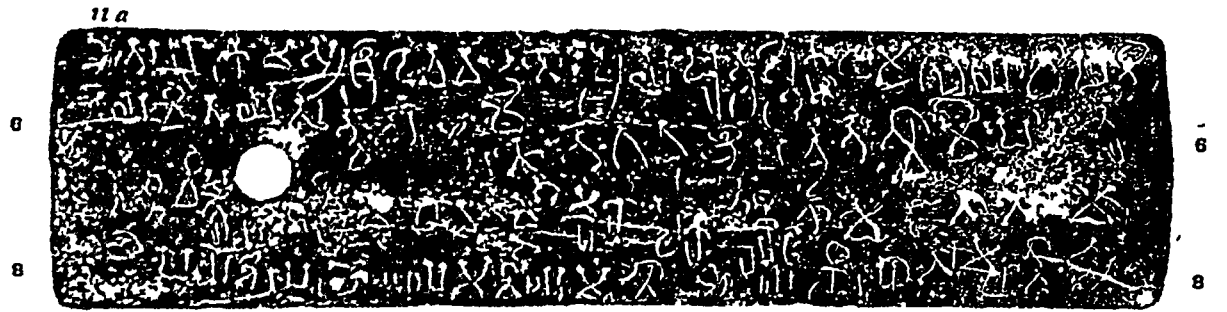
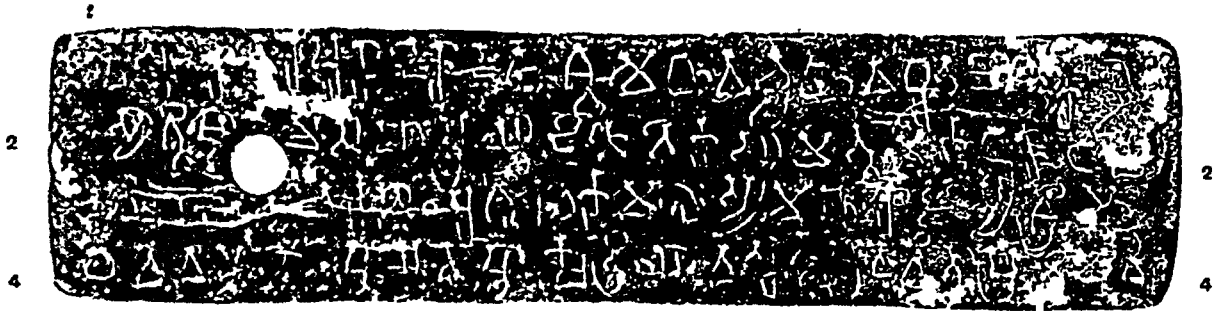
³ See above, Vol XI, p 220, and cf. Vol. IX, p 269.

⁴ From the impressions supplied by Rao Bahadur H. Krishna Sastry

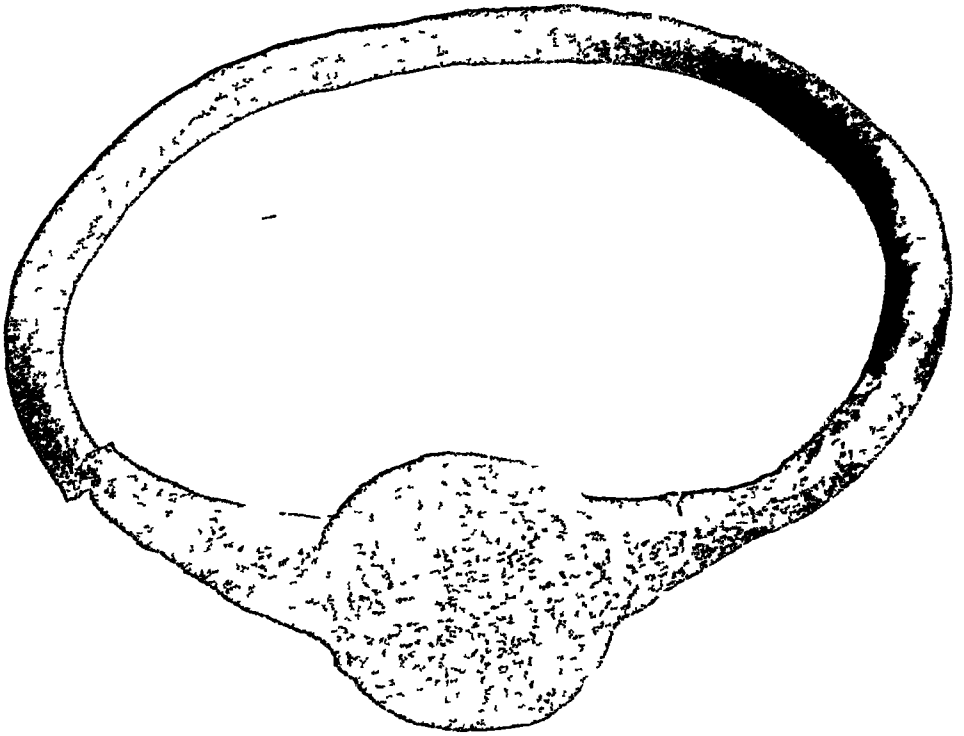
⁵ Lead "सहस्रयुगलस्य"

⁶ Lead "सत्त्व".

Ipur Plates of Madhavavarman II



Seal



7 ह्यातो विष्णु — —¹ श्री[म]ाध[वव]र्मा सुरो-क-किशामे जनाने[व]मा-
8 ज्ञापयति यथा ॥ यमनियमस्वाध्यायक्रियासम्पन्नाभ्या-

Second Plate, Second Side.

9 अग्निशर्मोन्द्र[शर्मा]भ्य[र]-
10 मा [कळि]क-
11 ग्राम
12 — — जानपदै²परिहृत्तव्य[*] [प]रिहार[यितव्यश्च] [*] अस्य [शास]-

Third Plate, First Side

13 [न]स्यान्ना विष्णुकु[रद्यधि]र[र]ज[ध्यानोदात्ता] ॥ सं [४०] ७ वा प ७
दि ७ श्री² ॥
14 बहुभिर्बुधुषा दत्ता बहुभिश्चानुपालिता [*] यस्य यस्य यदा भूमि-
15 [स्तस्य] तस्य तदा फल[म्] ॥ स्वदत्तां परदत्तां वा यो हरित वसुन्वराम् ।]
16 [गवां] शतसहस्रस्य [हन्तु]परिबति किल्बिष[मिति] ॥

TRANSLATION.

(Line 1) Hail! From [Ama]rapura, the dear grandson of the glorious Mahārāja Mādhavavarman, who had removed the stains of the world by bathing at the end of eleven *Āvamēdhas*, who had performed thousands of *Agnishtōma* sacrifices³ (and) whose pair of lotus-feet was studded with the jewels on the top of the diadems of many (bowing) vassals,

(L 4) the dear son of glorious Dēvavarman, who displayed matchless, well-known valour in attacking warriors,

(L 5.) the glorious Mādhavavarman, the lord of the Trikūta and Malaya (mountains), who is endowed with policy, modesty, and honesty, who meditates on the feet of the holy lord of Śrīparvata, (and who belongs to the family) of the Viṣṇu[kundins], commands as follows the men at the village of

[Line 8 f seems to refer to two donees, Agniśarman and Indraśarman]

(L 12) The command (*ājñā*) of this edict⁴ was ennobled by the meditation (?) of the overlord of the Viṣṇukundins.

(L 13) The year [4] 7, the 7th day of the 7th fortnight of the rainy season⁵ *Ūti*.

[Lines 14-16 contain two of the customary Ślokas]

¹ Restore perhaps विष्णुकुच्छिन्ना.

² Expressed by a symbol.

³ These two epithets occur also in line 6 f of the other Ivūr plates (above No. 20).

⁴ Cf *asya śāranasū-ājñaptik*, *South-Ind. Inscr.*, Vol I, p 57, text l 119 f

⁵ *Wātu vā pa 7* cf *vāsa 6* in the Hirahadagalli plates (above, Vol I, p 7), *varshā-pakṣhē ohaturtthē* (Vol III, p. 262), *varshā-pakṣhah ashṣamah* (*Ind Ant.*, Vol VII, p. 37), *vāsa pakṣham 8* in two inscriptions at Jaggnayya-pāta (ASSI, Vol I, p 110), *vā pa 4* at Kariē (above, Vol VII, p 64), *vāsa pakṣhe 2* and *vāvāra pakṣhe 4* at Nāsik (Vol. VIII, pp 71, 73.)

No 22 —REVISED TEXT AND TRANSLATION OF TWO OF THE
KURAM PLATES.

By PROFESSOR E. HULTZSCH, PH D, HALLE

Some time after I had published the Kūram copper-plates of the Pallava king Paramēśvaravarman I,¹ the late Professor Kielhorn recognised that plates III and IV of that inscription in which I had not only two verses are all in poetry. I now reprint the very corrupt text of this portion of the inscription (ll 19-19), arranging it in verse lines, correcting the writer's mistakes as far as I am able to do this, in notes and adding a fresh translation. Rao Bahadur Krishna Sastry was good enough to contribute to this article a few additional conjectures, viz. °बदुषि, verse 12 दुन्नसटे or रत्तसटे, v 14 च्चगसट°, v 15, हत्तवान्, v 21, स्पट, v 23.

The subjoined passage consists of 22 verses (5-26). The relative pronouns in verses 5, 6, 21, and 26 refer to the name of the donor *Paramēśvaravarmanā*, l 19) at the end of the preceding prose passage. Verses 8-21 form one long relative sentence, describing the king's victory over the Chalukya king Vikramāditya I. Verses 22-26 praise Paramēśvaravarman's state-elephant Arivāraṇa, his charger Atiśaya, his dagger, and his girdle.

TEXT.²

सचेन्द्रवर्माणाः पुत्र[ः] परमेश्वरवर्मा
भरत इव सर्व्वदमन[ः*] सगर इव क्षतासमञ्जसत्यागः [1*]
कर्ण इव युष्कलागो यः प्रियक[1*]व्यो ययातिरिव [॥ ५ ॥*]

(a) Metre of verses 5-9. Āryā (30+27 mātrās).

अनुपनतामां राज्ञा (a) यस्याश्चा मयति सर्व्वदापीळा (b) [1*]
सैव सुहृदाभ्रयच्छति सुखशोभा (c) कर्णपूरतया [॥ ६ ॥*]

(a) Read राज्ञा (b) Read °कीडः (c) Read °गीमां.

चतुरः कलाविन्तासे नियतम् यथांदो (a) भवत्वनंगस्य [1*]
सुक्तागुणस्तु हृदये सुक्तागुण एव वनिता[ना]म् [॥ ७ ॥*]

(a) Read नियतं चंडी

अगणितेनरहयकारिकुलविमर्द्दजनितेन रेणुनुहिनैः [1*]
आरोपितशशिमण्डलसादृश्यसहस्रकरविश्वे [॥ ८ ॥*]
यटहरधगर्ज्जितोथे विकीर्णनिस्त्रिशत्विद्युदाभोगे (a) [1*]
प्रक्षरितकृष्णरजलदे विकालवर्षावितार इव [॥ ९ ॥*]

(a) Read °निस्त्रिशविद्यु (dṛṣṭu)°

¹ *South-Indian Inscriptions*, Vol. I, pp. 144 ff.

² As the notes on the text are numerous and contain long Nāgarī passages, I am using for them ordinary type instead of the small and indistinct note-type, which, as I know from experience, is liable to breaking and dropping.

22 a

34
 36
 38
 40

Metre Pragita

நாபரிமவநிய்யாதநா.

22 b

42
 44
 46
 48
 48

classify the metre Aryagita.

|| 15 ||*

metre requirer

तुंगतुरंगतरंगी प्रचरत्वारिमकरजनितविषमावत्तो (a) [1*]

अविरक्तमुदोर्णशंखे विजृम्भसाणे समुद्र इव ॥ १० ॥* (b)

(a) Read °वर्णे. (b) Metre - Sugiti (32+27)

खड्गलतावरणयुते सशरासननागतिलकपुन्नागघने [1*]

उदहतकलकलशब्दे कानन इव चखुवेगपवनाकुलिते ॥ ११ ॥* (a)

(a) Metre . Āryāgiti (32+32)

योधापुरोतधनुषु (a) व्यतिपतितपतत्रिरुपवनफथे (b) [1*]

प्रचरिततोमरशक्तिप्रासगटाकण्यकप्यणचक्रो (c) ॥ १२ ॥* (d)

(a) Read योधापुरितधनुषि. (b) Read °पवनपथे. (c) Read °काप्यण°. (d) Metre Pragiti (30+29).

अन्योन्यलीशरदनकुलीशस्थिरकिलितवदनमत्तगजवृन्दे (a) [1*]

अन्योन्यमूर्ध्पातितखड्गव्यतिपत्ततुरगसादिगणे ॥ १३ ॥* (b)

(a) Read अन्योन्यरदनकुलिशस्थिरकीलित°. (b) Metre Giti (30+30).

शस्त्राशस्त्रकचाकचिदगङ्गीकीर्त्याप्रव्यक्तभटजने (a) [1*]

अन्योन्यसदृशगणनपरिभवनीर्यातना (b) ॥ १४ ॥*]

(a) Read शस्त्राशस्त्रकचाकचिदगङ्गीकीर्त्याप्रवृत्तभटे or °प्रवृत्तभटे (b) Read °गणनापरिभवनीर्यातना. The remainder of this verse is left out by the writer

मृशसदमिश्रीतश्रीणितकुकुमघनलिप्य[मा*]नभूमितले (a) [1*]

विरहितनिपतितवाहुश्रीवाजं[घो]रुकाण्डदन्तबलीये (b) ॥ १५ ॥* (c)

(a) Read मृशसदमिश्रित°. (b) Read °लीये (c) Metre Lāhī (30+32).

भ्यूहम[म्या]तविदोर्णप्रजवितविद्रुत[भूमित]तोभयपत्ते (a) [1*]

अन्योन्यजयपराजयसन्देहप्रेखलगनलक्ष्मीविहिते (b) ॥ १६ ॥* (c)

(a) From [म्या]त to the end, this line is engraved on an erasure To satisfy the metre अमिसम्पात्° might be read (b) Read perhaps °विहिते (c) Metre of verses 16-19 Āryāgiti.

रुधिरौघपालिकायीतपतितगजश्रेणिपृष्टविचरत्सुभटे (a) [1*]

अन्योन्यघातरन्धानधि[ग]मलसक्तियायतस्थितयोधे (b) ॥ १७ ॥*]

(a) Read रुधिरौघपालिकायित° and °पृष्ट° (b) Read °लुप्तक्रियायित°.

शस्त्रौद्यतभुजदण्डैः (a) सारभविलोहिताद्दष्टोष्ठपुटैः* (b) [1*]

राजन्यैः*] कृतकृत्यैः नोहितता[र्ष]हतैरितस्थितः (c) संकौर्णै ष (d) ॥ १८ ॥*]

(a) Read शस्त्रौ. (b) Read सरभ° (c) Read °कृत्यैर्निहतार्षहतैरितस्थितः. (d) The metre requires ष to be cancelled.

श्रीर्णध्वजातपत्तैः*] पतितगजश्च (a) सितचलितचाभरनिकारे [1*]

खण्डितविष्टदितचूर्णितमकुटगदहारकटककर्णाभरणे (b) ॥ १९ ॥*]

(a) Read °गजाश्व. (b) Read °मकुटागद°.

दधिरमधुपानमत्तप्रगीतकूष्माण्ड[राक्ष]सपिशाचे [1*]

द[त्त]लयतुल्यकालप्रतिभयनीनृत्यम्कवन्धशत्रयोनौ (a) [॥ २० ॥*] (b)

(a) Read °भयनन्धकवन्धशत्रयोनौ (b) Metre Giti

[योने]कलाक्षसाधनमा[योध]नशिरसि (a) विक्रमादित्य[म् 1*]

कण्ठमात्रपरिच्छेदम् (b) एकाकिपलायितम् [कृत](c) [॥] [२१ ॥*] (d)

(a) Read °लव° (b) Read कण्ठ° (c) Read °च्छेदमेकाकिपलायित इतयाम्.
(d) Metre Āṛyā

रत्नप्रभाखचितकाञ्चनशारिवन्ध (a)

सान्नाह्य(b) नागमक्विवारणनामधेय[म्*](c) [1*]

नित्यानुबन्धमदनिजरमद्रिनाथ (d)

साक्षादिव द्विपसहस्रकृतानियात्रम् (e) [॥ २२ ॥*] (f)

(a) Read रत्न° and °वन्ध (b) Read सान्नाह्य (c) Read °नरिवारण° (d) Read °निर्भररुद्रिनाथ°.
(e) Read °कृतानुवाकम्. (f) Metre Vasantatilakā

त्रिदशपतितुरगस्येवमष्टमंगलयत्रे (a)

धरसञ्चलसम् प्रव्यक्तकल्याणजातिं(b) [1*]

तुरगमतिशयाख्यां(c) रत्नपल्याणवन्तम्

सतमपि (d) ह्यलक्षैश्चामरच्छन्नकरणैः [॥ २३ ॥*] (e)

(a) Read perhaps °तुरगस्यष्टमंगलयत्रे (b) Read perhaps धरसञ्चलसम्कल्याणजातिं. (c) Read °याख्यां
रत्नपल्याणवन्त (d) Read सतमपि (e) Metre Mālinī

समरपरिभ्रमस्य सदृत्वशमहपलमलयुजवोकम् (a) [1*]

रत्नखरमनुपम (b) माणिक्यमरकतनिवेशमण्डनम् [॥ २४ ॥*] (c)

(a) Read °समसदृश लसमनहोपलमालायुजमेकम् (b) Read रत्न° and °मनुपम च (c) Metre Giti.

सञ्ज्ञगुण गुणन्तकटिसूत्रम् उदीर्णम् मणिप्रभम् (a) [1*]

भासुरकिरणमालिकोटमाणिक्यमनघमविश्रुतम् (b) [॥ २५ ॥*] (c)

(a) Read गुणन्तकटिसूत्रमुदीर्णमणिप्रभम्. (b) Read °कोटिमाणिक्यमनघमविश्रुतम् (c) Metre ?

मनसि भयवि[— — —*]र्षयन्पार्थिवाना- (a)

न्दिशि दिशि चटितनित्यौ यशम् पुष्पमाला[म्*] (b) [1*]

इदम् महरदशेष (c) सक्तया शक्तलक्ष्म्या

सह वपुषो (d) विशेषालंछते क्षोरञ्जत्या [॥ २६ ॥*] (e)

(a) Read perhaps भयविपादावर्ष° (b) Read चटितनित्यौ यशम् (c) Read इदम् महरदशेष.
(d) Read वपुषि (e) Metre Mālinī.

TRANSLATION.¹

Mahēndravarmān's son (was) Paramēśvaravarman,

(Verse 5.) who was a subduer of all (enemies), just as Bharata (bore the surname) Sarvadāmana², who avoided improper conduct (*asamañjasa*), just as Sagara banished (his son) Asamañjasa³, who possessed a strong body (*anga*), just as Karṇa (was the king) of the rich Aṅgas, who was fond of poems (*kāvya*), just as Yayāti was fond of (his father-in-law) Kāvya (Uśanas);

(Verse 6) whose command always becomes a chaplet on the heads of (i.e. is received with respect by) independent kings, (but) also confers splendour on the faces of (i.e. fills with joy) (his) friends by reaching (their) ears, [just as an ear-ring (*kurnapūra*) becomes an ornament to the face],

(Verse 7) (who) is clever in the sport of fine arts (*kalā*) (and) constantly passionate in love,⁴ and who avoids vice (*mukt-āguna*) in (his) heart, (but) also (becomes) a pearl-necklace (*muktā-guna*) on the breast of (his) wives,

(Verse 21.) who put to flight Vikramāditya,—whose army (had consisted) of several lakhs, (but who was left) quite alone (and) covered only by a rag,—at the head of a battle,

(Verse 8) in which the disk of the sun was made to assume the likeness of the circle of the moon through the mist of dust produced by the stamping of countless troops of men, horses, and elephants,

(Verse 9) which inspired terror through the thunderlike sound of kettle-drums; in which unsheathed swords (reminded of) the curves of flashes of lightning, in which elephants were advancing like clouds, (and which therefore) resembled an unseasonable breaking of the monsoon,

(Verse 10) in which tall steeds (looked like) high waves, in which elephants tore up the ground on their path, just as sea monsters produce whirlpools in diving up, in which conches were incessantly blown (or cast up), (and which therefore) resembled the gaping ocean,

(Verse 11) which contained curved swords and shields (*śvarana*), (resembling) rhinoceroses, creepers, and *varana* (trees), which teemed with heroes holding bows and (riding) mighty elephants, (as if it were) covered with *śara* (grass) and with *asana*, *nāga*, *śilaka*, and *punnāga* (trees), in which confused noises were raised; (and which therefore) resembled a forest agitated by a violent wind,

(Verse 12) in which bows were bent by warriors, in which the air was obstructed by arrows flying past each other, in which javelins, pikes, darts, clubs, lances, spears, and discuses were flying about,

(Verse 13) in which troops of *mast* elephants firmly impaled each other's faces with the thunderbolts of their tusks, in which squadrons of horsemen were connected by their swords that had struck each other's heads,

¹ To make the construction clear, I had to place verse 21 before verse 8

² Cf. *Mahābhārata*, I, 74, 8, VII, 68, 7, and *Śakuntalā*, ed. by Cappeller, p. 98, l. 2, p. 95. l. 24; p. 97, l. 8; p. 102, l. 21

³ In the epic poems he is called Asamañja or Asamañjas.

⁴ The poet seems to hint a comparison of the king to the moon, who is 'charming in the splendour of his digits (*kalā*),' and to Śiva, who 'was angry with the god of love.'

(Verse 14.) in which soldiers were engaged in fighting with sword against sword, pulling of hair against pulling of hair, and club against club; considering each other as equal (or) despising (each other),

(Verse 15.) in which the ground (seemed to be) thickly smeared with saffron, as the blood (of the wounded) was mixed with the musk (anointing their bodies), in which (both) large armies had lost and dropped arms, necks, shanks, thigh-bones, and teeth,

(Verse 16) in which, during the encounter, both parties were broken, urged on, put to flight, and stretched on the ground, which was witnessed by the goddess of fortune sitting on the swing of doubt about mutual victory and defeat;

(Verse 17.) in which brave warriors were marching on the back of lines of fallen elephants forming a bridge over the flood of blood; in which soldiers stood rendered motionless, as their blows did not hit each other's weak parts;

(Verse 18 f) which was covered here and there with elephants which had fallen (simultaneously with shattered banners and parasols), and whose respirations waved the mass of chowries and with dead (or) half-dead warriors who had done their duty, whose strong arms (still) raised the weapon, whose lips were bitten, and whose eyes were deep-red with fury, in which tiaras, armlets, necklaces, bracelets, and ear-rings were broken, crushed, and pulverized,

(Verse 20) in which Kūshmāndas, Rākshasas, and Piśāchas were singing aloud, as they were intoxicated by drinking the liquor of blood, (and) which contained hundreds of headless trunks dancing together in a fearful manner and beating the time (with their hands)

(Verse 22) Having caused to be accoutred the elephant named Arivārana,—whose golden howdah was studded with the splendour of jewels, the flow of whose rut was incessant, (and who therefore) resembled the king of mountains (Himālaya) himself, whose torrents never cease to flow,—followed by thousands of (other) elephants,

(Verse 23) also the excellent horse named Atisāya,—who displayed the majestic stepping of the horse of the lord of gods (Indra); who manifested his noble breed by his active jumping; (and) who bore a saddle (set with) jewels,—accompanied by lakhs of (other) horses whose ears were surmounted by chowries;

(Verse 24) (and having put on) an unique and unequalled curved dagger (set with) jewels, which was fit for the fatigue of battle, attached to a string of matchless big stones, (and) ornamented by being inlaid with rubies and emeralds;

(Verse 25.) (and) a valuable, priceless, famous girdle (which was strung) on a soft string, which emitted the splendour of gems, and the ruby at the end of which (resembled) the bright sun;

(Verse 26) he (viz Paramēśvaravarman) who had destroyed his enemies, inspiring with fear [and despair] the minds of princes, (and spreading) the flower-garland of (his) fame in all regions, carried all these (ornaments)¹ on (his) body that was highly adorned with heroic deeds, —along with the powerful goddess of fortune clinging (to him)

¹ This seems to refer to verse 24x.

No 23—DHANAIDAHĀ COPPER-PLATE INSCRIPTION OF THE TIME OF
KUMARAGUPTA I THE YEAR 113

By RADHAGOVINDA BASAK, M A , CALCUTTA.

This inscription, engraved on a thin copper-plate which now looks very much worn out and fragile was discovered about a decade and a half ago in a village called Dhanāidaha in the Nātoṛe Sub-division of the Rājshāhi District in the Rājshāhi Division of the Bengal Presidency. Babu Akshaya Kumāra Maitrāya, B L, Director of the Varendra Research Society of Rājshāhi, obtained it from Maulvi Muḥammad Eshād Alī Khan Chondhuri (now Khan Bahadur), and it is now deposited in the Museum of the Society along with the five copper-plate inscriptions¹ of the Gupta period recently discovered at Dāmōdarpur in the District of Dinājpur. It was edited in 1909 by Mr R D. Banerji, then of the Calcutta Museum, in the *Journal of the Asiatic Society of Bengal* (Vol V, No 11, pp 159-61). Mr Banerji's decipherment of the inscription was not correct, and the text as prepared by him contained some mistakes. Mr Vincent Smith in his *early History of India* (3rd Edition) has referred to this epigraph by the name of the Nātoṛe inscription in a foot-note at page 327, but he could not make out any material for the history of the period, probably because Mr Banerji's reading was unsatisfactory and because of his remarks that "the wording of the record is rather difficult to interpret," and that "no continued translation is possible of the text." While editing two of the Dāmōdarpur inscriptions belonging to the same monarch's reign, I had to revise the reading of this inscription, and I re-edited it in the Bengali monthly, the *Sāhitya* of Calcutta, in the Pausha issue, 1323 B S. I now record the results of my decipherment in this Journal for the scrutiny of scholars. Some of the chief mistakes in Mr Banerji's reading will be pointed out below in the foot-notes. Other differences in our readings may be left to be found out by those of our readers who may care to do so.

The inscription is a fragmentary one, consisting of 17 lines of writing incised in the early Gupta characters of the 5th century A D. It is written on one side only of the plate, which is now very much corroded. In length the full plate seems to have been almost twice the fragment now preserved, which measures 5½" x 5½". Almost the whole of the proper right half of the plate is broken and lost together with the upper right and lower left corners. From an examination of the portions of the writing preserved in lines 14-16, which form parts of the well-known imprecatory verses, it can be ascertained that about a dozen and a half letters are cut off from the proper right side of each of the lines. This loss of almost half of the inscribed portion and the extremely blurred state of the letters preserved are the greatest obstacles in explaining the document. But the five newly discovered Dāmōdarpur copper-plates and the four Farīdpur grants² have helped us much in deciding that the present plate also, like them, is not an ordinary royal land-grant, but is a sale-deed embodying the record of a purchase of land for the purpose of donation. Mr Banerji states that the fragments of the proper upper right corner, which was broken in the exhibition grounds of the Calcutta Industrial Exhibition of 1906-7, contained the two letters *ma* and *ra*, which, he thinks, were evidently the second and third syllables of the name of the emperor Kumāra-gupta. The inscription is dated in 113, which must be referred to the Gupta era, and this evidently proves that it belonged to the time of the Gupta

¹ Above, Vol XV, No 7. I take this opportunity to acknowledge most thankfully the suggestion of Mr K N Dikshīt, M A, Superintendent of Archaeology, Eastern Circle, that I should have read 128 in place of 129 and 224 in place of 214 as the dates in Plates Nos 2 and 5 respectively of the Dāmōdarpur inscriptions. These corrections in the dates do not quite materially affect the historical deductions I made in my paper on them published in this Journal.

² *Indian Antiquary*, 1910 and *J. A. S. B.*, 1911, No 8.

monarch Kumāra-gupta I The language of the inscription is Sanskrit, and it is in prose throughout excepting in lines 14-16, which contain the three imprecatory verses Mr Banerji's statement that "the bad state of preservation makes it very difficult to make any remarks on the orthography" cannot be upheld, for, the following points in respect of orthography may easily be observed.—

(1) as in the Dāmōdarpur copper-plates, the sign of the medial *ā* is attached by a hook-sign towards the bottom of the lower right of some of the letters, especially of *lha*, *ga* and *na*, e.g. *khāsaka* l 5, *Khādā(tā?)pāra*-l 7, *grām-āshṭa*-l 6, and *gun-āguna*-l 13,

(2) the sign of *dvagraha* is not used, as in *-vishayē-nuritta*-l. 7;

(3) the letters *ga*, *na*, *ta*, *ma*, *ya* and *va* (and not *sha*, e.g. *varsha*-l 15) are doubled with a preceding *r*, e.g. *vargga*-l 4, *svarggē* l. 15, *utkirṇnaṁ* l 17, *kīrtti* l 4, *-sarmma* ll 3 and 5, *dharmma* l 8, *-maryyādā*-l 7, and *-pūrvva* ll 2 and 16, *sarvra* l. 9,

(4) *m* has sometimes been joined with following *pa* and *ra*, e.g. in *scadattām-para-dattām=vā* l 14, and

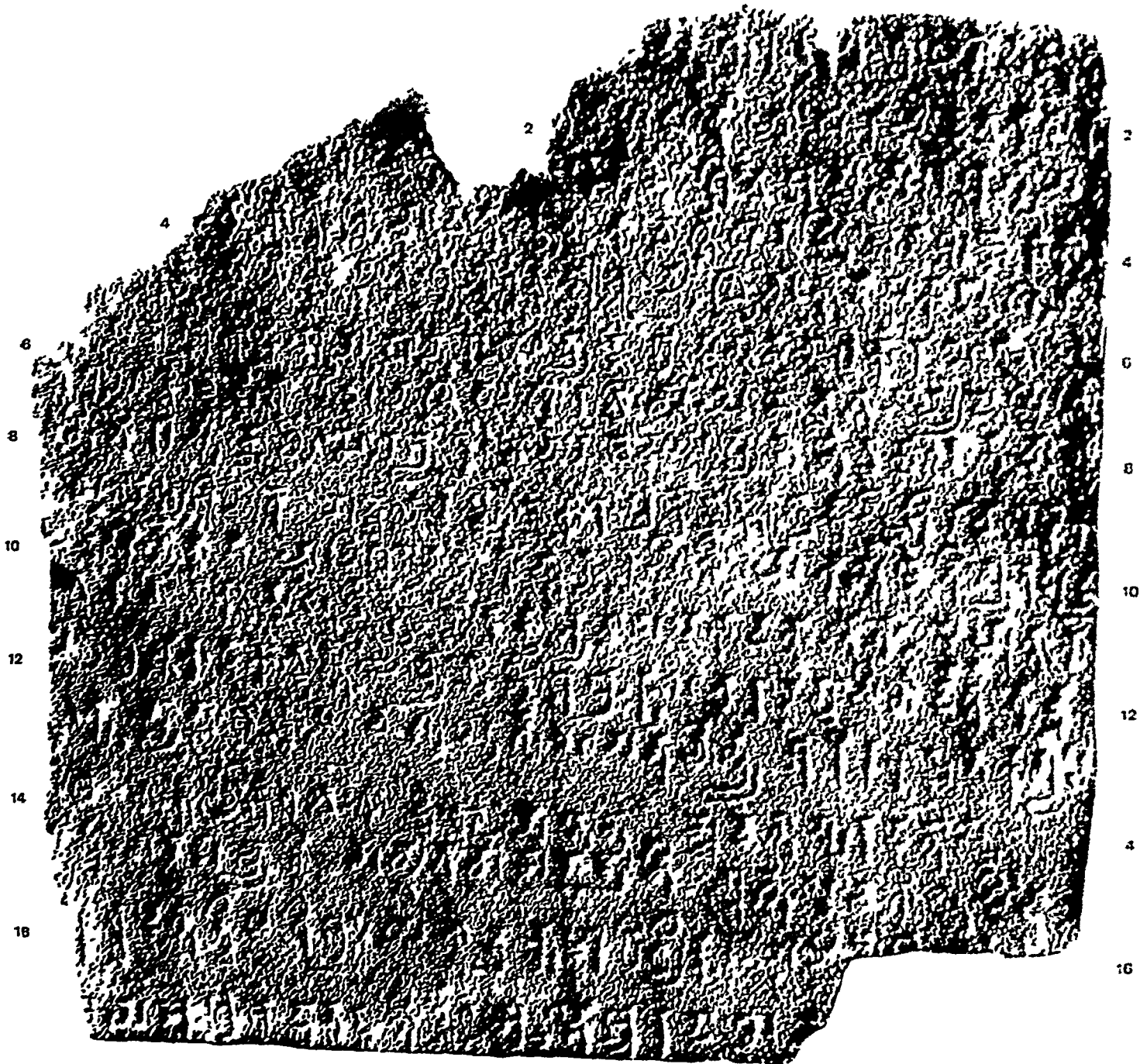
(5) *ka* has been doubled with a following *r*, e.g. in *khramēna(na)* l 8

The form of the initial vowels *ā*, *i* and *u* are seen in the following words respectively, *āyuktaka* l 11, *iha* l. 7, and *utkirṇnaṁ* l. 17. The form of the letter *mā* in *khramēna(na)* l 8, *sarvvaṁ=ēva* l. 9, *Stha(Stā)mbhēśvara* l. 17, and *-kulyavāpam=ēkaṁ* l 11, is to be noticed. For a similar incision of *mā*, especially the *ē* mark in it, we may compare the words *ṭāryam=ēshāṁ* l. 31 in Fleet's, C. I. I Vol III, No 1 and *guhām=ētām* l 5 (*ibid*, No 6), and the word *dōsha-grāmō* l 1 (wrongly read as *dās-āgrēna* by Mm H P Śāstri and Mr R D. Banerji) of the Susunia Rock Inscription (above, Vol XIII, p 133) In my paper on "The Five Damodarpur copper-plate inscriptions of the Gupta period," published in this Journal (*vide* Vol XV, Part III), I made a remark at the outset that those sale-deeds, which our present inscription resembles, "may be regarded as having roughly six different parts in the form in which they are drawn up" The same remark holds good with regard to this inscription also The first part ends with the word *vijñāptā* l 7, the second with *dā[tum]* l 8, the third with *tad-aradhritam=it yatas* l 10, the fourth with *ēkaṁ dattam* l 11, the fifth with *-Varāha-svāminō dattam* l. 12, and the sixth with the rest of the grant

The contents of the inscription may be stated as follows:—In the year 113 G E (=432-33 A D), belonging evidently to the reign of Kumāra-gupta I, some one (very likely a royal officer, an *āyuktaka*) whose name seems to have ended in *-vishnu* (l 7) approached the village householders, the *mahattaras* and the *ashta-kul-ādihikaranas* and perhaps also the local government of the district and expressed to them his desire to purchase one *kulyavāpa* of cultivated land by paying the price at the usual rate prevalent in the *vishaya* of *Khādā(tā?)pāra* It seems that the applicant wanted to buy the land by destroying the *nivī dharma* (the non-transferability of it), i.e. with the right of alienation His prayer was granted and the purchased land was severed for him by proper measurement He in turn seems to have made a donation of the same to a Śāmvēdin Brāhmaṇa (*chhandōga* l 12) of the name of *Varāha-svāmin* It seems very probable, though the mutilated condition of the plate does not permit us to be very confident on the point, that the Dhanāidaha plate contained a reference to the Puṇḍravardhana *bhukti* being under a governor appointed by the Gupta ruler (compare the Dāmōdarpur plates of the years 124 and 128 G E. belonging to the same monarch's reign) and that the *vishaya* of *Khādā(tā?)pāra* was, like Kōtivarāna, one of the many districts of the same *bhukti*. In the Khāimpur copper-plate of Dharmapāla, King of Gauda, though of the 9th century A D., we have the names of two other *vishayas*, viz. *Mahāntāprakāśa* (l. 31) and *Sthālikkata* (l. 41), as being situated in the *bhukti* of Puṇḍravardhana



Dhanaidaha Copper-plate of the time of Kumāragupta I the year 113



F W THOMAS

SCALE SIX-FIFTHS (ENLARGED)

WHITTINGHAM & GRIGGS COLL.

I edit the inscription from the original plate —

TEXT.

- 1 mvatsara¹-śat[ē] trayōdaś-ōtta²-
 2 n=d[ī]vasa³-pūrvvāyām parama-daivata-para⁴-
 3 ā (?) kutu[mbi] . . . brāhmana-Śivaśarmma-Nēgaśarm-
 ma-maha-⁵
 4 va-kirtti-Kshēmadatta⁶-Goshṭhaka - Varggapāla - Piṅgala - Śunkuka-
 Kāla-
 5 pa (?)-viṣṭu - [Dēva]śarmma - Viṣṇubhadra⁷ - Khāsaka - Rāmaka-
 Gōpāla-
 6 sa (?) su (?) Śribhadra-Sōmapāla-Rām-ādyāh (?) grām-āshta-kul-
 ādhikarapañ=cha
 7 viṣṇunā (?) vijñāpitā iha⁸ Khēdā(tā ?)pāra-viṣhayē=nuvṛtta⁹-
 maryādā-sthi[ti]-
 8 nivi-dharmma-kshayēṇa labhya[tē] [ta]d=arhatha mam¹⁰-ādy-
 ānēn=aiiva kkrāmēna(ṇa) dā[tum]
 9 samētya=ā(?)bhūlita(h ?) sarvvaṃ=ēva * jñā(?)kara-prativēśi(?)=
 kutumbbhū=avasthāpya ka-
 10 * iī * kana * yad=itō * * [ta]d=avadhṛitam¹¹=iti yatas=
 tath=ēti pratipādya
 11 vaka¹²-nalā[bhyā]m=apaviñchhya kshētra-kulyavāpam=ēkam dattam
 tataḥ śyuktaka-
 12 * bhṛā(?)ṭṛi - kaṭaka - vāstavya¹³ - chhandōga - brāhmana - Varāha=
 svāmīnō dattam tad=dha-[va ?]
 13 bhūmyā dā[n=ākshē]pē cha guṇ-āgunam¹⁴=anuchintya śarira-
 ka(kā)ūchanakasya chi-
 14 ā [u]ktañ=cha bhagavatā Dvaipāyanēna Svadattām=para-dattām=
 vā
 15 [bhūh] saha pachyatē [||*] Shashṭim¹⁵ varsha-sahasrāni(ṇi)
 svarggē mōdati [bhū]mīdah [I*]

¹ Read *samvatsara*.

² Read *-ōttarē*.

³ Read *asyān=dīvasa*.

⁴ Read *-paramabhāffāra*. In the Dāmōdarpur plates also Kumāra-gupta I is styled *parama daivata*.

⁵ Read, perhaps, *mahattara*.

⁶ & ⁷ Mr Banerji reads *Kshamavanta* and *Viṣhyabhādra*.

⁸ Mr Banerji reads *Mahā-lhushāpāra*

⁹ Mr Banerji reads *niṣatta* instead of *anuvṛtta*

¹⁰ Mr Banerji's reading "*mātādyā nanu vakkra lēna (?)*" instead of our reading "*mam=ādyā=ānēn=aiiva kkrāmēna(ṇa)*" and his remark on the palmography of his supposed *la* in his own reading *lēna (?)* is unwarranted

¹¹ Instead of *avadhṛitam=iti yatas=tath=ēti* Mr Banerji read *dahyakam=iti yatas=t(y)ojati*

¹² Read *ashṭaka navaka-nalābhhyām*. The sense of the whole document depends on the correct reading of this line of the inscription, and Mr Banerji's reading gives no help. His reading of the whole line is as follows —
 " vara nālaka sādā (?) vi . . . chya kṛitja vara-laka (?) datta tataḥ
 śyuktaka "

¹³ Mr Banerji reads *vantēbhya (?)* for *vāstavya* and *chāndāfa (?)* for *chhandōga*.

¹⁴ Mr Banerji reads *sunu (?) gunam*,

¹⁵ Mr. Banerji reads *śasṭi(m)*.

- 16 [Pū]rrva-dattām dvijātibhyō yatnād-raksha Yudhushthira [1*]
 mahim [mahi][matān-chhrēshtha*]
 17 ya[m] su (?) Śrībhadrēna(na) utkirṇam Stha(Sta)mbhē-
 śvara¹dāsē[na]

TRANSLATION.

In the year one hundred exceeded by thirteen on this day (as above specified), [during the reign of] *parama-dāvata parama-bhattāraka*, etc Kumāra-gupta the ryots (of the village) the Brāhmanas Śiva-śarman, Nāgaśarman and the *Mahattaras*² [Dē?]vakirtti, Kshēmadatta, Gōshthaka, Varggapāla, Piṅgala, Sunkuka, Kāla, -vishpu, Dēvaśarman, Vishṇubhadra, Khāsaka, Rāmaka Gōpāla, . . . su (?) Śrībhadrā, Sōmapāla, Rāma and others, and the officer³ in charge of eight *kulas* in the village were informed by (some officer whose name appears to have the ending Vishnu l. 7) as follows —

“ In this *vishaya* of Khēde(tā?)pāra the established custom (regarding the sale of cultivated land) prevalent to be had (at such rate) by the nullification of the custom of permanent endowment⁴ (*nīvi-dharma*) So deign to make a gift (of land) this day according to this method by the neighbouring house-holders who are obedient and who are (thus) addressed establishing ”

Whereas it was so determined, and whereas this determination was accepted by the statement “be it so”—one *kulyatāpa*⁵ of cultivated land was given to him, with its area severed⁶ by the measurement of 8 × 9 reeds.

Then the same land was given to the *Ohhandōga*⁷ (Sāmavedin) Brāhmaṇa Varāha-svāmin, an inhabitant of the *kataka*⁸ of, by this official⁹ (*āyuktaka*)

So, considering the merit and demerit respectively of making a gift and confiscating (it), and (the unstability) of body and gold, (this gift is to be preserved) To the same effect has been stated thus by Bhagavān Dvaipāyana (Vyāsa) —

(1) Whoever confiscates land given by himself or by another becomes a worm in ordure and rots with his forefathers.

(2) Land has been given by many kings, such as Sagara and others the reward (of these grants) belongs to whosoever at any time possesses the earth.

(3) O Yudhushthira, best of land-lords, preserve with care land already given to the twice-born (Brāhmaṇas); for, the preservation of land-grants is more meritorious than the making of a grant. Engraved by su (?) Śrībhadrā and (written) by Stambhēśvarādāsa.

¹ Mr Banerji reads the name as *Sīhahnēstara*

² Vide my note on this word in Plate No 4 of the Dāmōdarpur collection, above, Vol. XV, p. 137.

³ Vide my note on this word, *ibid*, p 137 Mr Banerji's explanation of this term as “a local officer (būdhāksarasa) who exercised authority over eight villages” does not seem to be correct. He was rather an officer in the village having supervising authority over eight *kulas* (for the technical meaning of which see Kullūka's commentary on *Manu*, VII, 119)

⁴ Vide my note on the term *nīci* in Plate No 1 of the Dāmōdarpur collection, above, Vol. XV, p. 131, n. 8, and *Indian Antiquary*, 1919, p 14.

⁵ Vide my note on this word on p 132, above, Vol. XV.

⁶ The word *aparīcālyā* occurs in the Faridpur grants (*Indian Antiquary*, 1910) and in Dāmōdarpur plate No. 3, l. 10, p 136, above, Vol. XV.

⁷ *Ohhandōga* means one studying the Sāmaveda. For the use of this term vide *Manu*, III, 145, and the *Etymology* Plate of Harsha, above, Vol. IV, p 211.

⁸ *Kataka* may either mean a camp or the capital.

⁹ Vide my note on the same in Plate No. 4 of the Dāmōdarpur collection, p. 140, above, Vol. XV,

No 24.—SOME IMAGE INSCRIPTIONS FROM EAST BENGAL.

BY NALINIKANTA BHATTANALI, M A , CURATOR, DACCA MUSEUM

The short votive inscriptions recorded on the pedestals of images are often very useful to the antiquarian in more ways than one. They not only illumine the darkness of the past like flash-lights by furnishing pointed and concise historical information, but the help that they give in determining the periods of sculptural history is by no means inconsiderable. Students of iconography too have reason to welcome them, since many votive inscriptions contain the names of the images on whose pedestals they are inscribed, helping thus to identify them easily. Below I edit six such votive inscriptions from East Bengal, in some of which all the three characteristics noted above will be found to exist to the fullest degree.

1. THE BHĀRELLĀ NARTTĒŚVARA IMAGE INSCRIPTION

The worship of images of Natēśa-Śiva (the dancing Śiva) seems to have been a peculiarity of Southern India. Such images in metal abound in Southern India and Ceylon; but they are very rarely met with in the North-Indian Provinces. How Bengal came to share this peculiarity with the Deccan is one of the unsolved problems of history. We must, however, note here that north and west Bengal do not show this peculiarity, and it is only in the south-eastern districts, roughly comprising the ancient divisions of Vanga and Samatata, that images of the dancing Śiva were discovered. The Dacca Museum has three excellent specimens, while a rather ill-preserved one is to be found in the Rājshāhī Museum¹. I know of two other very well preserved Natēśa images, which are being worshipped in two villages in the Dacca and Tippera districts of East Bengal.

The discovery of so many images of the same class in a rather limited area cannot be accidental, and it is quite possible that their worship was introduced by some Śaiva ruling family. The Sēna kings, whose origin some trace to the Deccan, had their metropolis in Vikramapura in the Dacca district, in the heart of the ancient Vānga, as is attested by the majority of their copper-plates, and they were renowned Śaivas. It is very probable that the worship of Natēśa-Śiva came from Southern India with the Sēnas. It is worth noting that out of the seven images so far discovered and known to me, five came from Vikramapura, and a village situated in the suburbs of the capital of the Sēnas in Vikramapura (a *pargana* in the Dacca district) contains the ruins of a big temple and is still called Nātēśvara. The present image, however appears to be earlier than the Sēnas.

The inscription here edited was found on the pedestal of a huge image of Natēśa-Śiva dug out of a tank in a village called Bhārellā, Police Station Badkāmā, in the district of Tippera. It was brought to my notice in 1911, and in 1912 I went to Bhārellā too late to save the image, which was broken to pieces by a fanatic Fakir, but I procured the inscribed pedestal for the Dacca Sāhitya Parishat, where it is at present preserved. A large fragment of the figure of the god is now in the Dacca Museum. I edit the inscription from the original.

The inscription is in two lines in four sections on four planed faces of the pedestal, below the lotus-seat of the god. The whole inscribed surface measures in length about 14", and the letters are approximately $\frac{1}{4}$ long. The first section has suffered a little by the peeling of the stone, while the beginning of the third and the longest section has been altogether chopped off, damaging altogether 12 or 13 letters of each line. The first line runs connectedly to the end of

¹ The image was found in the village of Kalikāl under Police Station Lauhajang in the Dacca district. So it must not be taken as an instance of a find in north Bengal.

the third section and then returns to the first section to begin the second line The name of the sculptor is given in the fourth section in two lines

The characters used are the ordinary north-eastern characters which gave birth to the modern Bengal script, and which even at this stage show distinct resemblance to the modern script of Bengal Paleographical considerations would lead us to assign the latter half of the 10th century as the time when this inscription was incised The date is missing, but it may be that the lost portion of the second line in the beginning of the third section contained a date. There are some data from which a date perhaps is obtainable by mathematical calculation. The image was consecrated on a Thursday, under the star Pushya, on the fourteenth day of the dark half of the month, the day being the 14th of Āshādhā counted by the movement of the moon It would be a very interesting calculation to lovers of astronomical problems to find out in which year or years between 900-1100 A.D. all these data met I myself do not possess the necessary equipment for the calculation Dewan Bahadur L. D. Swamikannu Pillai who was consulted by Mr. Krishna Sastri on my behalf kindly writes —

“Between 900 A.D. and 1000 A.D. there are three dates which agree perfectly, viz A.D. 912, 939 and 983 I have marked these with an asterisk in the accompanying list which shows also dates of less perfect agreement. There must be an equal number between A.D. 1000 and A.D. 1100 We cannot tell which of these dates is meant

Thursday Ashādhā, ba 14 Pushya
 A.D. 905 Th 4 July; .32, n f d 75
 A.D. 912 Th 16 July, .09, 63*
 A.D. 925 Th 21 July, f d t 52, f d. n 68
 A.D. 932 Th 5 July; 52, f d n. 90,
 A.D. 939 Th 18 July, 41, .86*
 A.D. 942 Th 14 July, f d. t 12, f d n 89.
 A.D. 966 Th 19 July, .71, f d n 09
 A.D. 969 Th 15 July, f d. t 21; f d. n 90.
 A.D. 983 Th 12 July, 03, 94*
 A.D. 993 Th 20 July, f. d. t .01, f d. n .30”

He adds “14th *tithi* means nothing more or less than 14th day by the movement of the moon. A solar month date would be different, but in a lunar month the days and *tithis* are the same in the Indian Calendar. In the Muhammadan, Jewish and Greek Calendars there may be a slight difference”

The inscription refers itself to the 18th year of the reign of a king Layaha-Chandra by name Kings with the surname Chandra are found on the thrones of two adjacent countries, viz Vaṅga and Arakan The Chandra kings of Vanga, who, like the Sena and the Varman kings, had their capital in Vikramapura, are known from two copper-plates¹ But no name in their genealogy resembles Layaha-Chandra, which sounds indeed rather outlandish. We find an account of the Chandra kings of Arakan in Phayre's *History of Burma*, p. 45, and *Numismata Orientalia*, Vol II, Pt I, p. 42, by the same author, where we learn that the dynasty came to an end in 957 A.D. We know of another isolated Chandra king of Vanga, Govinda-Chandra by name, from Rājendra-Chōla's inscription² Layaha-Chandra-dēva must have belonged to one of these three lines If Layaha-Chandra was of the Arakan line, 939 A. D. may be taken as the date of this inscription

¹ *Ep Ind.*, Vol XII, p. 186 and *Dacca Review*, Vol II, p. 250 Recently a third plate of Śrī-Chandra-dēva was found and edited by me in the *Dacca Review* for May and June 1919, 17 XII. 1919, *Ep Ind.*, Vol. IX, pp. 232-233,

Ballads, at one time very widely popular are current about a king called Gōvinda-Chandra throughout Bengal. One was published by Grierson in J. A. S. B., 1873. Another was published by Babu Sib Chandra Śil from Chinsura near Calcutta. I published a version by a poet called Bhabānidās, edited from two manuscripts of the song procured from the Tippera district. All these versions say that Gōvinda Chandra was the daughter's son of Tilak Chandra king of Mēhārkul which is still a *pargana* of the Tippera district. Gōvinda Chandra of Rājendra-Chōla's inscription and the Gōvinda-Chandra of the ballads appear to have been the same person, and Layaha may have been the name of the father of Tilak Chandra.

Kusuma-dēva, whose son Bhāvu-dēva consecrated the image of Narttēśvar¹, seems to have been a vassal prince under the suzerainty of Layaha-Chandra, ruling over Karmmānta, which I am inclined to identify with modern Baḍkāntā (the senior Kāntā), some three miles south-west of the find-place of the image. Baḍkāntā is still a place of considerable importance, being a police station with a big Zemindary kachery, situated within a spacious area surrounded by an ancient moat and containing two big tanks, in the smaller of which many ancient stone images of Brahmanical deities were found. Stone images, both Buddhist and Brahmanical, abound in the villages surrounding Baḍkāntā, and testify to the former prosperity of the tract. The area surrounded by the moat probably indicates the site of the palace. The appellation *Dēva* at the end of the names of Kusuma-dēva and Bhāvu-dēva is also in favour of supporting their claims to royal dignity. My friend Prof. Rādhāgōvinda Bāsak, M. A., however, is in favour of taking the word Karmmānta to mean 'a store of grain,' and degrading Kusuma-dēva to the rank of an officer in charge of the royal granary. We know that the two plates of Dēva Khadga published by the late Gangamohan Laskar in the *Memours*, A. S. B., Vol. I, were issued from Jaya-Karmmānta. I have elsewhere tried to show that Karmmānta the capital of the Khadgas and the Karmmānta of the present inscription are identical, and is the present Baḍkāntā (J. A. S. B., July 1914).

The language of the inscription is Sanskrit prose throughout. As to orthography, we may note the doubling of consonants after *r* as in *karmmānta* (l. 1), *sarvvākshara* (l. 2), etc., but *chaturdaśyām* (l. 1) is spelt with one *d*.

Numeral figures for 1 and 4 are used in designating the 14th day of Āshāḍha.

The letters of the inscription are mentioned to have been engraved by one Ratōka, but Madhusūdana seems to have been the sculptor who made the image.

TEXT.

Part I




- 1 [सिद्धिरस्तु¹] श्रीमङ्गलहचन्द्रदेवपादीयविजयराज्ये अष्टा[दश * * * * * क]श्चतुर्दशं
तियो वृहस्पतिवारे पुष्यनक्षत्रे कर्मान्तपालयो-
- 2 कुसुमदेवसुतश्रीभावदेवकारितश्रीनर्तेश्वरमहा[* * * * *] चन्द्रगत्या
भाषाटदिने १४ ॥ खनितञ्च रतोकेन सर्व्वीश्वरः

Part II.

- 1 खनितञ्च श्रीमधु-
- 2 सूदनमेति ॥

¹ Expressed by a symbol, see below, p. 352.

² Read वृहस्पति.

N B—It is customary to read the auspicious symbol  or  in the beginning of an inscription as श्री and this interpretation has been adopted by eminent epigraphists like Hoernle and Fleet. Hoernle writes thus (Intro *Bauer Manuscripts, Indian Antiquary* reprint p 22) — “Indian manuscripts or records as a rule commence with some benedictory word, such as *siddham* ‘success’ or *svasti* ‘hail’ or with the sacred particle *Om*. The last mentioned is almost universally used at the present day. It may be either written in full or indicated by a symbol. The latter takes the form of a spiral, which may turn either to the right or to the left, and which is probably a conventional representation of the sacred *śarīra*, or conch-shell”. In editing the Mankuwar Stone Image Inscription of Kumāra-gupta, where this symbol is met with for the first time, Dr. Fleet remarks (*Corpus Ins Ind*, p 46, n 3) — “As was usual throughout the whole of the period covered by this volume, this word is represented by a symbol, not by letters. *Om* is not of very frequent occurrence at the commencement of Buddhist inscriptions.” Thus both the scholars read the symbol as *Om*, but none has advanced any reason for their reading it so. Writing about eight centuries and a half earlier, Al Beruni also says the same thing (Vol I, p 173) — “The Hindus begin their books with *Om*, the word of creation, as we begin them with ‘In the name of God’. The figure of the word *Om* is . This figure does not consist of letters, it is simply an image invented to represent this word, which people use, believing that it will bring them a blessing and meaning thereby a confession of the unity of God.” This passage of Al Beruni is perhaps responsible for the confident reading of Hoernle and Fleet. But the reading should be reconsidered in the light of the following points —

(a) In Bengal, this symbol was largely used in all ancient documents and manuscripts and in teaching alphabets to beginners they were taught to draw this symbol to start with. This custom was prevalent as late as twenty-five years ago, but has disappeared by this time. This symbol was called *āmṛi* and was supposed to signify the god Gaṇeśa, the giver of success, being drawn to represent his elephant’s trunk. In reading, it was read *Siddhir-astu*.

(b) In the Gupta inscriptions this symbol only appears in those in which the customary benediction *Siddham* is left out, and nowhere does it appear with it. Consequently it must have stood for *Siddham*, and as time went on it must have become more and more customary to represent the word by this symbol.

(c) In some inscriptions the symbol is found to precede *Om*, which would never have been the case if the two were identical. In such cases the reading given is *Om Om*, which is certainly not reasonable. Reference may be made to *Epigraphia Indica*, Vol XII, p 8, *Ibid*, Vol XIV, p 159, for examples of the joint use of *Om* and this symbol.

In view of these facts, the symbol, I think, should be read *Siddham* or *Siddhir-astu*¹


TRANSLATION.

Part I

May success attend! In the eighteenth year of the victorious reign of His glorious Majesty Jayachandra-dēva, on Thursday in the dark Fourteenth Tithi, and under the star Pushya, Bhāvu-dēva, son of Kusuma-dēva, Lord of Karmānta, caused to be made the Lord Narttēśvara . . . on the 14th day of Āshādha (calculated) by the movement of the moon. And all the letters engraved by Ratōka.

Part II.

Also engraved by the illustrious Mādhūsūdana.

¹ [This seems to be the proper interpretation of the symbol, in spite of Al Beruni’s statement to the contrary. In the Tamil country the same symbol slightly modified  is even today called the Pillaiyār-ṣuṭi ‘Gaṇeśa’s curl’ and is first taught to be drawn by children before they begin to learn their alphabet — Ed.]

2. THE BĀGHĀURĀ NĀRĀYAṆA IMAGE INSCRIPTION.

This inscription was brought to my notice in 1912, when I went to Tippera to secure the inscription described in the foregoing pages. Rāmānath Chakravarty, a former pupil of mine, whom I met in Comillā, gave me to understand that an inscribed image of Vishnu had been discovered in a village near the Sub-divisional town of Brāhmanbānū in the Tippera district and that the local people had been able to read the word Mahipāla on the inscription. My curiosity was considerably roused to come across an inscription of the Pāla kings so far east from their native home in north Bengal. Pressure of business, however, did not allow me to go after the inscription at that time, and for the next two years I was too busy elsewhere to think of getting at it. Towards the beginning of the year 1914 a friend of mine, Babu Upendrachandra Guha, B.A., B.T., who is an enthusiast in matters archaeological, secured chalked photographs of the inscription and published an article with a reading of it in the local monthly, the *Dacca Review*. The reading, however, was rather defective, and I gave a more correct reading in the next number of the journal. I also published a correct reading of the inscription in the January number of the *J. A. S. B.*, 1915 and pointed out its importance.

The image containing the inscription was dug out of a pond some ten or twelve years ago in the village of Bāghāurā near the Sub-divisional town of Brāhmanbānū in the district of Tippera. It is now worshipped by a half-crazy woman in the neighbouring village of Vidyākūta. In January 1915 I visited the spot and obtained some excellent photographs of the image, but no amount of persuasion could prevail upon the woman to part with the image.

The inscription purports to be of the third year of king Mahipāla, presumably Mahipāla I of the Pāla dynasty of Bengal. It records the installation of the god Nārāyaṇa in Samatata, included in the kingdom of Mahipāla, by a merchant, Lōkadatta, son of Vasudatta and hailing from the village of Bilakīndaka, in furtherance of the religious merit of himself and parents. Bilakīndaka is in all probability the village Bilakēndūāi, situated close to Bāghāurā.

The importance of the inscription is twofold. First, it definitely settles the position of the kingdom of Samatata. There is no room for doubt now that the village of Bilakēndūāi must have been inside the kingdom of Samatata. Now let us recall what Yuan-Chwang says about Samatata. The pilgrim came to the country of Samatata going 1,200 or 1,300 *li* south of Kāmarūpa. Taking 5 *li* to 1 mile, 1,200-1,300 *li* represent about 250 miles. The country of Samatata was about 3,000 *li* (i.e. 600 miles) in circuit and bordered on the great sea. The land lay low and was regularly cultivated. Now, if we look round for the country which must satisfy all these conditions and at the same time must include the Brāhmanbānū Sub-division of the Tippera district, in which the village of Bilakēndūāi is situated, and if we remember that natural barriers such as mountains and rivers marked off one kingdom from another in those days, we cannot but accept the plain tract of land bounded by the Garo and the Khasi Hills and the hills of Tippera on the north and east, by the Lauhitya, or the old Brahmaputra river, on the west, and by the Bay of Bengal on the south as the ancient kingdom of Samatata. It is a perfectly natural geographical unit with neatly marked boundaries, comprising the eastern half of the present Mymensingh and Dacca districts lying east of the Brahmaputra, the greater part of Sylhet, and the whole of the Tippera and Noakhali districts. The distances between countries recorded by Yuan-Chwang are, in all reasonable probability, distances between the capital towns, and the distance of 250 miles recorded by Yuan-Chwang between Kāmarūpa and Samatata is pretty accurately the distance between Gauhāti and Comillā¹ by any modern route. The circuit of 600 miles is also right and the tract, which is a vast plain, borders on the great sea.

¹ I am of opinion that Badkāmṭī, 12 miles west of modern Comillā, was the ancient capital of Samatata. Vide my paper "A forgotten kingdom of East Bengal," *J. A. S. B.*, March 1914.

There has been much discussion about the situation of the countries of *Shi-li-ch'a-ta-lo* *Kia-mo-lang-kia*, etc, mentioned by Yuan-Chwang in his account of the kingdom of Samatata, but no satisfactory solution seems to have been arrived at. With our present identification of Samatata we may proceed to consider their cases also. This is what we find in Beal's edition about them —

"Going *north-east* from this to the borders of the ocean, we come to the kingdom of Srikshetra (*Shi-li-ch'a-ta-lo*). Farther on to the *south-east* on the borders of the ocean, we come to the country of Kamalanka (*Kia-mo-lang-kia*). Still to the east is the kingdom of Dvārapati (*To-lo-po-ti*). Still to the east is the country of Ishanapura (*I-shang-na-pu-lo*). These six countries are so hemmed in by mountains and rivers that they are inaccessible."

Now, the pilgrim says that the country of *Shi-li-ch'a-ta-lo* might be reached by proceeding *north-east* to the borders of the ocean. This anomalous statement seems to have puzzled everybody, including Beal and Watters, as the borders of the ocean are never reached by going *north-east* from Samatata, wherever its position might have been in eastern India, and the fact that all the original copies of the Travels available, as well as the biography of the pilgrim, give *north-east* as the direction, has stood in the way of emending the text to *south-east*. My studied opinion is that in spite of the unanimity of all the versions, *north-east* is a manifest mistake for *south-east* and the apparent unanimity arises from the mistake having originated in a very early copy of the 'Records'. The very qualifying phrase that the direction would lead to the borders of the ocean is sufficient for the emendation. But the emendation is confirmed by the manner in which the succeeding sentences begin. The next sentence begins thus,—"*Farther on* to the *south-east*, etc" and this would lose all force if "*south-east*" had not been the direction spoken of in the previous sentence. If we accept *south-east* and move from Comillā in that direction to the borders of the ocean, we arrive at a place called at present Chattagram (Eng. Chittagong), which was anciently called Śrī-Chattala, a name still frequently used. Is there any reasonable objection to identifying Yuan-Chwang's *Shi-li-ch'a-ta-lo* with Śrī-Chattala of the present times? It is evident that it satisfies all conditions.

The second importance of the inscription lies in the fact that it throws some light on an obscure part of the history of the Pāla kings of Bengal. The Bangarh plate of Mahipāla¹ and the Dinājpur pillar inscription² inform us that some usurpers drove Vīrabhāpāla from the throne and that he, after losing his kingdom, took shelter in the eastern country where water abounds (*dēsē prāchi prachvrapayasi*). His heroic son Mahipāla recovered the lost kingdom of his father. The two characteristics, water-abounding and eastern, agree well with the present districts which composed the ancient kingdom of Samatata,—so well that it is impossible to suggest any other country which answers equally to the description, and little room is left for doubt that the eastern country alluded to was the kingdom of Samatata. The new Bāghāurā image inscription, which is the earliest of the reign of Mahipāla, finally settles all doubts on the point. When we find that Samatata was under Mahipāla so early as in the third year of his reign, we cannot but conclude that it was Samatata where Vīrabhāpāla took shelter, suffering reverses in war with the usurper, and leaving north Bengal in the hands of the victor. The fact of the earliest inscription of Mahipāla turning up in Samatata points to his having probably been crowned there and this was perhaps the loyal country used by him as the base of operations in his fight with the usurper for the recovery of his father's kingdom.

The *śloka* in the Bangarh plate which describes Vīrabhāpāla's sojourn in the eastern country has been copied also in the Āngāchhi plate³ of his great-grandson Vīrabhāpāla III, where,

¹ *J A S B*, Vol LXI, pp 77-87 and *Gaudalēkhamālā*, p 91. Also *Ep Ind*, Vol XIV, page 224.

² *J A S B*, 1911, p 615

³ *Ind an Antiquary*, Vol. XXI, pp. 97-101.

curiously, it is applied to him. Mr R D Banerji, M A, in his Monograph on the Pālas of Bengal,¹ is inclined to discredit the statements of the *ślōka* on this ground. When a *ślōka* describing some events in the history of a monarch, occurring in a copper-plate of his son, is reproduced in a copper-plate of the great-grandson of that monarch and is applied to that great-grandson, it is presumable that the former application is correct, and the latter plate is (1) either a forgery or (ii) the composition of a very silly panegyrist, who was unaware of the historical significance of the *ślōka* and took it only as an attempt at conventional panegyrics, or (iii) the repetition denotes some similar event in the life of the latter monarch.

The inscription is incised under the lotus-seat of a standing image of Nārāyana (Vishṇu) about 3' high, between two kneeling figures. It is in a perfect state of preservation and is legible throughout without any difficulty. The lines measure each 6" in length and the characters are $\frac{3}{8}$ " long. The characters belong to the North-Eastern variety, specifically called the Kutila character, which gave birth to the Bengali characters of the modern days. The inscription is dated; but the date is given in regnal years. It refers itself to the reign of a king called Mahipāla, presumably Mahipāla I of the Pāla dynasty of Bengal, Mahipāla II had a very short and troubled reign, terminating in the successful Kavarta revolt. As the chronology of the Pāla kings of Bengal is still uncertain, it is difficult to give the exact year of the inscription, but it cannot be far removed from 976 A.D.

The language is Sanskrit. In orthography, the only point to note is the absence of the *avagraha* sign in *punyayaśō abhi*² (1 4). No distinctive mark of *virāma* is added to final consonants. There are numerical figures for 3, 2 and 7.

TEXT.

- 1 [सिद्धिरस्तु]³ सम्बत् ३ माघदिने २७ श्रीमहीपालदेवराज्ये
- 2 कीर्तिरियं नारायणभङ्ग[र]काख्या समतटे वि(वि)लकीन्द-
- 3 कीयपरमवैष्णवस्य वणिकलोकदत्तस्य वसुदत्तसुत-
- 4 स्य मातापितृोरात्मनश्च पुण्ययशोभमिद्वयै³

TRANSLATION.

May success attend. The year three, the 27th day of Māgha. In Samatata, in the kingdom of Śrī Mahipāla-dēva, this meritorious work, namely (the image of) the lord Nārāyana, is of the merchant Lōkadatta, belonging to (the village of) Bilakindaka—a great devotee of Vishṇu—son of Vasudatta, for the furtherance of the spiritual merit and fame of himself and parents.

3. THE KEOĀR VISHNU IMAGE INSCRIPTION.

The inscription was discovered by myself in 1909. That year, in the month of June, I happened to be on a visit to the little village of Keoār, some three miles to the south-east of Rāmpāl, the famous site of the ancient capital of the Sēna kings of Bengal, in the Munshuganj Sub-division of the Dacca district. I found the image lying on its face, half buried in earth, and on turning it for inspection, I noticed the inscription. The image has now been fixed against the outside wall of the *maḥ* in the same village.

The inscription is incised on the pedestal of an image of Vishnu, about 3' in height. It is in four lines, each line measuring 7", but the last line is an inch shorter, for want of plane space to write upon. The letters are about $\frac{1}{2}$ " in height and are everywhere boldly incised.

¹ *Memoirs, A S B*, Vol V, No 3.

² Expressed by a symbol.

³ Read यशोभिमयै

The second couplet has been much injured towards the end by the erosion of the stone, and the several letters could with difficulty be recognized¹

The inscription is in verse throughout, and consists of two couplets. The language is correct Sanskrit, with only a single exception, which is perhaps an engraver's mistake. The letters belong to the Kntala variety, current in Bengal in the 10th, 11th, and 12th centuries. The inscription is not dated, but paleographical considerations would not possibly allow of an earlier date than the early part of the 13th century A.D. It records the installation of an image of the lord Vishnu by one Vangōka, great-grandson of Śaurisārman, grandson of Pitāmaha and the offspring of the couple Sayōga and Anuyamī.

The absence of a royal name in a pretty long inscription is rather remarkable, though by no means uncommon. It may suggest that the inscription belongs to a period when there was no king worth the name to refer to at the time of the installation of the image. There is another fact which confirms this supposition. The Brāhmana family to which Vangōka belonged is spoken of as hailing from some place in Varēndri, i.e. north Bengal. They must have migrated to Vanga, which included the *pargana* of Vikramapura, the region where the image was found, not long before the installation of the statue, as the fact of their descent from a stock of Varēndri was, in Vangōka's estimation, still of sufficient distinction to merit a special mention. The name Vangōka is also significant. In a family where the first three of the line are named in pure Sanskrit after the sacred names of gods, the naming of the fourth member after the name of a country signifies that he was born just after the family had migrated into that country, and the migration was an important event in the family history.

The period at the end of the 12th century A.D. which necessitated the migration of Varēndri Brāhmanas from north to east Bengal must have been the time when Lakshmanasēna was worsted by Muhammad-bin-Bakhtyar, about 1200 A.D., and the old king and his court fled to Vikramapura. Muhammad established his court at Deb-kot, 14 miles south of Dinajpur, in the heart of Varēndri, and orthodox Brāhmanas must have had a rather hot time of it, necessitating flight to the Vanga country, where the Sēnas still had sway. The history of the reign of the sons of Lakshmanasēna is very imperfectly known, but erasures of royal names on their copper-plates suggest fratricidal war and consequent anarchy, and the present inscription may well belong to this troublous period.

TEXT.

- 1 [सिद्धिरस्तु]² अयमानुयमेयेन सयोगाङ्गमुवा विद्युः [I]
- 2 वङ्गीकेन कृतो विष्णुर्विष्णुसन्तोक्त्रकाव्यया [II]
- 3 वरेन्द्रीतटकीयेन शाण्डिल्यकुलजन्मना [I] पिताम-
- 4 हस्य पीत्रेण प्रणसा श्रीरिशर्मणः ॥

TRANSLATION.

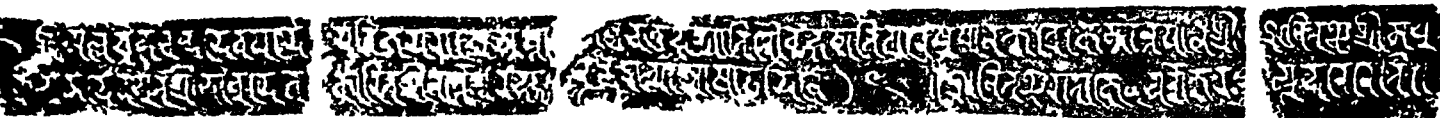
May success attend! Longing for a residence in the heaven of Vishnu, this (image of) the Lord Vishnu was consecrated by Vangōka, hailing from [the village of] Tataka in Varēndri, offspring of the body of Sayōga and (begotten on) Anuyamī, in the race of (the Saint) Śāṅḍilya, grandson of Pitāmaha and great-grandson of Saurisārman.

¹ I should put it on record here that the assistance of my friend Prof. Bādhagōvanda Bāsak, M.A., was of very great use to me in obtaining a correct decipherment and interpretation of the inscription.

² Expressed by a symbol.

Some Image Inscriptions from East Bengal

I The Bharella Nartesvara Image Inscription of the reign of Layahachandra the 18th year



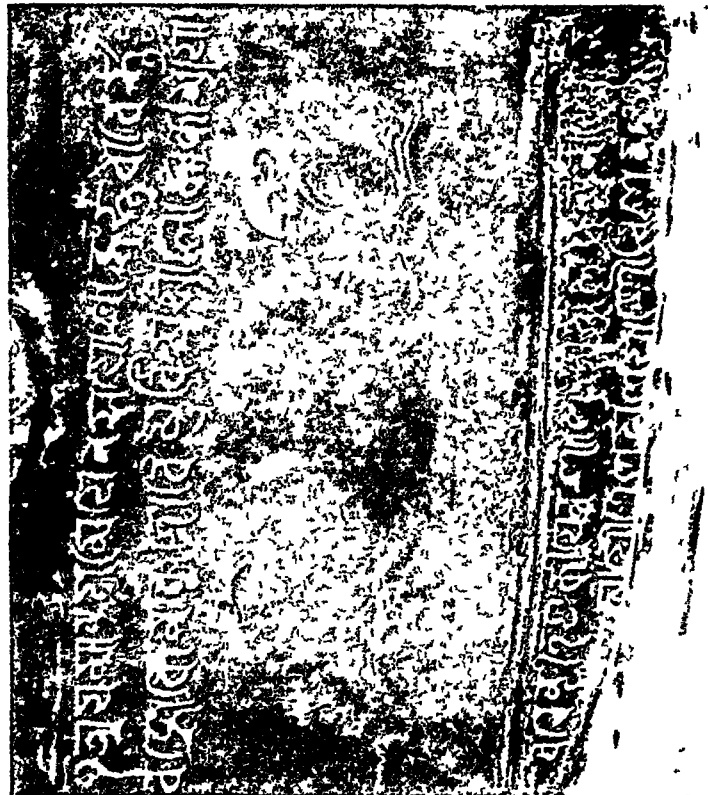
SCALE ONE-HALF

II The Baghaura Nartayana Image Inscription of the reign of Mahi-Pala I the 3rd year



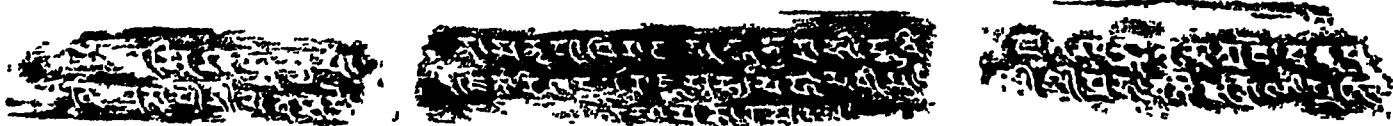
SCALE TWO-THIRDS

III The Kewar Vishnu Image Inscription



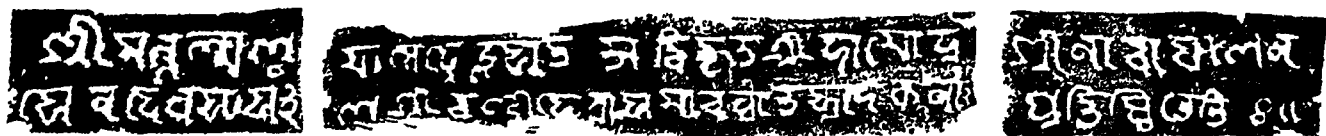
SCALE ONE-HALF

IV The Deulbadi Sarvani Image Inscription of Mahadevi Prabhavati, Queen of Deva-Khadga



SCALE FOUR-FIFTHS

V The Dacca Chandi Image Inscription of Lakshmana-Sena the 3rd year



SCALE TWO-THIRDS

4. THE DEULBĀDĪ ŚARVVĀNĪ IMAGE INSCRIPTION OF MAHĀDĒVĪ PRABHĀ- VĀTĪ, QUEEN OF DĒVA-KHAḌGA.

Deulbādi is a village situated about 14 miles south of Comillā, on the trunk road running from Comillā to Chittagong. The image with which we are dealing was found about two decades ago by one Muhammad Faqr Choudhury, when demolishing the ruins of an ancient structure standing on plot No 447 of the Settlement Map of Jāmmurā, a *mauza* in which the small village of Deulbādi is included, under Police Station Ūhaudagrāma, in the Tippera district. A fine brass statuette of the sun-god, in which the god is represented sitting inside his one-wheeled car, drawn by seven spirited horses, as well as some brass *lingas*, of which one was inscribed with a short votive inscription,¹ were discovered along with the image of Śarvvānī Babu Taransh Chakrabartī, the then Sub-Inspector of Police in charge of the Chaudagrāma Police Station, secured the images and placed them with one Kailās Chandra Chakrabartī of Deulbādi. There the images remained for about sixteen years, until they were bought by Babu Saratchandra Chakrabartī and Babu Nibāran Chandra Chakrabartī of the village Dājdi, Police Station Chāndpur, District Tippera. These two brothers are the priests of a temple on the Chandimurā peak of the Lālmā Hills in the district of Tippera, near the Lālmā Station on the Assam Bengal Railway. As the image installed in the temple of Chandī had long disappeared, these two brothers were anxious to get an image of Chandī for their temple, and they obtained the present image from a cousin of Kailās, who in the meantime had died. The image was brought to Comillā along with the other images discovered, and for cleaning they were placed in the care of Babu Maheśa Chandra Bhattāchāryya, a well-known Homoeopathic druggist. When the images were with Maheśa Babu, the inscriptions on the Śarvvānī image and on one of the *lingas* began to attract attention. Babu Anukūlechandra Roy, Manager, Wards' Estates, Comillā, sent me an imperfect rubbing of the inscription on the image. I at once recognized that this was a new inscription of the Khaḍgas and wrote to Anukūl Babu to that effect. With the help of Mr F C French, C S I, I C S, late Commissioner of the Dacca Division and President of the Dacca Museum Committee, I opened negotiations for the acquisition of the image for the Dacca Museum and went over to Comillā and obtained rubbings of the inscription and photographs of the image. The owners of the image, after much persuasion by Rai Annadāprasad Sen Bahādūr, the Additional District Magistrate, and Mr T Emerson, C I E, I C S, the then Magistrate of Tippera, consented to part with the image on condition that a duplicate should be made for them and a sum of money given. At this juncture the annual grant received by the Dacca Museum from the Bengal Government was reduced from Rs 6,000 to Rs 3,000 and all ideas of acquiring the image had to be abandoned. The image was taken to the temple at Chandimurā and set up for worship. I am informed that it has since been stolen from the temple and lost sight of.

The image is of the goddess Śarvvānī, one of the forms of Durgā. It is about 20" in height and rather heavy. A portion of the rim of the top towards the proper left is broken away and lost. The image is cast in low relief. The technique is rather crude, and the pose rigid. The goddess has eight arms, holding on the proper left, from the bottom upwards, the thunderbolt, the bell, the bow and the shield, and on the proper right, from the bottom upwards, the conch-shell, the goad, the sword and the wheel. Two maids are on her two sides, holding fly-whisks. She stands on a lotus-seat on the back of a couchant lion, with a rather well-executed head. The image was gilt all over with thin sheets of gold, the pious work of queen Prabhāvatī, and the original gilding is still intact in places. The white patches in the photograph show where it still clings fast.

¹ द[ि]व[*]वर्कोयि वाचार्थप्रथ[म]*भद्रस्थ.

The inscription refers itself to the reign of a king called Dēva-Khadga of the Khadga line of kings, who ruled over Samataṭa¹ towards the end of the 7th century A. D. The existence of the Khadga line of kings in east Bengal became known from the discovery in 1884 of two grants of Dēva-Khadga, evidently the most powerful monarch of the line. These two plates were finally edited by the late Babu Gangamohan Laskar, M.A., in the *Memoirs of the Asiatic Society of Bengal*, Vol. I, No. 6.

The inscription records the names of three generations of the Khadgas;—Khadgōdyama, the founder of the line, his son Jāta-Khadga and his son Dēva-Khadga. All these names were known from the copper-plate grants of Dēva-Khadga referred to above, and it has nothing new to tell us in this respect. It informs us that Prabhāvatī, queen of Dēva-Khadga, caused the image of Śarvvāṇī to be covered with gold leaves out of reverence for the goddess. The name of Prabhāvatī also was known previously, as she figures in one of the plates of Dēva-Khadga as a donor of land to a Buddhist monastery. The royal family of Samatata seems to have been of a particularly religious turn of mind. Yuan-Chwang states that Śilabhadra, the head of the University of Nālanda, came of the royal stock of Samatata. We can hardly conceive at this distance of time what an exalted position it must have been. As the head of the greatest centre of Buddhist culture of the time, he must have occupied the position of the dictator of the then Buddhist world. It is probable that he was a Khadga, and those who kept alive the name of Khadgas in later times tried in their way to emulate their illustrious predecessor by noble deeds of piety and benevolence. Dēva-Khadga was a donor of land to Buddhist monasteries, and his wife and son also followed in his footsteps, as appears from his grants. Yuan-Chwang calls the king of Samataṭa a devout Buddhist and Dēva-Khadga seems very well to merit this appellation. The pious soul of queen Prabhāvatī has once again spoken to posterity through the present discovery.

The image reveals a curious state of religious belief prevalent in those days. Queen Prabhāvatī and the members of her husband's family were all devout Buddhists, but all the same she did not feel it irreligious in any way to pay reverence to a goddess who must have belonged to the Brahmanical pantheon. Harshavardhana, to whose court Yuan-Chwang came, in a similar manner divided his veneration among the Buddha, the Sun-god and Śiva. All these clearly show that we must revise our idea of the Buddhists and Hindus of ancient days as two communities shut up in watertight compartments. They were more like the present-day Śāktas and Vaiṣṇavas than otherwise.

Asrafpur, near the bank of the old and the real Brahmaputra, the find-place of the two plates of Dēva-Khadga, and Deulhādi, sixty miles south-east, almost at the foot of the hills of Tippera, the find-place of the present image, mark respectively the western and eastern limits of Samataṭa, the kingdom of the Khadgas.

The inscribed surface at the base of the image is about 8" in length, and the characters are approximately $\frac{1}{4}$ " long. They are bigger in the two extreme sections than in the middle one. They are incised pretty deeply and are in an almost perfect state of preservation.

The characters belong to the Eastern variety of the Gupta script current in Bengal towards the end of the 7th and the beginning of the 8th century A.D. Mr Laskar, at the time of editing the plates of Dēva-Khadga, assigned them to "the 8th or 9th century A. D.", while Mr R. D. Banerji in his *Bengali History of Bengal* is, on paleographical grounds² inclined to push the date still further forward. I believe, however, that these Khadga inscriptions cannot be taken farther than the beginning of the 8th century A.D. No one, I believe, can

¹ Vide my paper "A forgotten kingdom of East Bengal," *J. A. S. B.* March 1914.

² Vide also Mr. Banerji's Monograph on "The Palas of Bengal." *Memoirs, A. S. B.*, Vol. V, No. 2, p. 67.

compare the letters of the present inscription, as well as those of the two plates of Dēva-Khadga, with the letters of the Nidhanpur plates of Bhāskaravarman,¹ the Apsad and the Shahpur inscriptions of Āditya-sēna-dēva, the Deobanark inscription of Jivita-gupta, the Banskhera and Madhuban plates of Harsha, without coming to the conclusion that a span of about a hundred years covers them all. A comparison of the characters of the Khadga inscriptions with those of the earliest known inscriptions of the Pāla kings leaves no doubt that the former must be considerably prior to the latter, possibly by about a century.

There is nothing special to note in the orthography, except the doubling of *v* after *r* in Śarvānī. The use of only one symbol for *b* and *v* is almost the rule in Eastern Indian inscriptions, as in the modern Bengali language.

The language is correct Sanskrit verse. The inscription is in three lines on three sections, the first two lines run over all the three sections, while the third line is incised only on the middle one.

I edit the inscription from rubbings and photographs in my possession.

TEXT.

- 1 [सिद्धिरस्तु]² स्वस्ति खड्गोद्यमो नाम नृपाधिराजस्तद्वत्, प्रभाति जातलापः [1*]
तदात्मजो दानप-
- 2 तिः प्रतापी श्रीदेवगुह्यो विजिनारिखड्गः । [1*] राज्ञस्तस्य महादेवो
महिषी श्रीप्रभावती [1*] स(श)र्वाणीप्रतिमां
- 3 भक्त्या हिमलितामकारयत् । * *

TRANSLATION

May success attend ! May welfare accrue ! There was an overlord of kings, Khadgōdyama by name. His son (became known) on earth (as) Jāta-Khadga. His powerful and benevolent son Dēva-Khadga was (like) a sword, a conqueror of all foes. Prabhāvati, the queen-consort of this king, out of reverence for Śarvāpī, covered her image with gold.

5. THE DACCA CHANDĪ IMAGE INSCRIPTION OF THE 3RD YEAR OF LAKSHMAṆA-SĒNA-DĒVA.

The inscription is on the pedestal of an image of Chandī, discovered about four decades ago in the ruins of Rāmpāl, the site of Śri Vikramapura, the capital of the Sēnas referred to in their land grants, in the *pargana* that still goes by the same name, included at present in the Dacca and Faridpur districts. It is at present worshipped in a small temple situated in the Dālbāzār quarter of Dacca on the Farāshganj Road, a little to the east of the Northbrook Hall. The late Babu Baikunthanāth Sēn, Deputy-Inspector of Schools, of Sonārang, District Dacca, was an enthusiastic collector of images, quite a crop of which used to turn up every year in the course of casual excavations in and around Rāmpāl. These, on discovery, were usually put under a tree by a roadside to receive the chance worship of the passers-by. Sometimes they were put to altogether unholy uses and sometimes consigned again to neglect and oblivion. It does great credit to Baikuntha Babu that he alone, amidst the general callousness of his countrymen was alive to the artistic and archæological merit of these relics of the past, and not a few of them owe their safe preservation to his labour. Many pieces of his collection are, it is gratifying to note, now in the Dacca Museum. This inscribed image of Chandī was one of Baikuntha Babu's finds, and he must have presented it to the founder of the temple in which it at present lies.

¹ *Ep Ind*, Vol XII, p. 65

² Expressed by a symbol.

The inscription, however, seems to have aroused little interest at the time of the discovery, and its existence was unknown to the gentry of Dacca. In April 1911 Mr R. D. Banerji, M. A., of the Archaeological Survey, and some friends discovered it, and from that time it has been known to the public.

In August 1911 Mr Banerji published a reading of this inscription in the *Bhīdra*, 1918 (B S), number of the *Pratibhā*, the journal of the Dacca Sāhitya Parishat in an article on king Lakshmana-sēna of Bengal. Four months later, in the Pausha number of the same journal, in a long article on the Sēna kings of Bengal, I gave my reading of the inscription. In June 1912 I published the inscription, with a half-tone reproduction of both the inscription and the image, in the *Dacca Review*, in an article on the era of king Lakshmana-sēna. In *J A S B*, July 1913 Mr Banerji re-published it in his article on king Lakshmana-sēna. The inscription has thus been published four times, yet it cannot be said that up to this time it has been properly edited. Mr. Banerji's reading in the *J A S B*, as well as his description of the image, is not free from mistakes.

The image is about 30" high and is a rather fine example of Bengal sculpture of the time of the Sēnas. The goddess has four arms and she stands in a graceful *tribhanga* pose on a full-blown lotus over a couchant lion. Her upper left hand holds a bunch consisting of a half-blown lotus with some buds and leaves. The lower left hand holds an ornamental basket-like thing, either a flower basket or a waterpot. The upper right hand holds an elephant-goad and the lower one is in the *Varada-Mudrā*. Two attendant female figures stand on the two sides of the goddess, and two elephants are pouring water over her from two pitchers. She seems to be a curious mixture of Gaja-Lakshmi and Chandī and may represent the Śakti of the god Harihara.

The inscription is in an excellent state of preservation. The inscribed surface is about $9\frac{1}{2}$ " in length, and the characters are approximately $\frac{1}{4}$ " high. The characters may be called Bengali characters of the 12th century A. D. They are not very well executed and are far inferior in execution to those of the Deopara inscription of Vijaya-sēna. They may be compared in style and coarse execution to the Buddha Gayā inscription of Aśokachalla-dēva executed in the 51st *aita-rājya* year of Lakshmana-sēna-dēva (*Epigraphia Indica*, Vol XII, p 29). In this connection I may lay stress on a fact which is sometimes forgotten. Printed types have accustomed us to a standard; but in ancient times contemporary inscriptions varied as much in style as handwritings, because the inscriptions were always written with ink or lac on the surfaces to be inscribed and were then engraved by sculptors who were not always literate.

The inscription refers itself to the third year of the era of king Lakshmana-sēna of the Sēna dynasty of Bengal. As the era has been proved to have begun in 1119 A. D.,¹ the inscription must have been incised in the year 1121 A. D. It records that *Adhikṛita* Dāmōdara, son of Māladatta, began the image of Chandī in the third year of the era of Lakshmana-sēna and that his relative (younger brother?) Nārāyana installed the image in the fourth year. The inscription is in two lines on three sections. I edit it from the original stone. The language is incorrect Sanskrit. *Suta* and *adhikṛita*, which should have been in the 3rd case according to grammatical rules, are both used in the 1st case.

TEXT.

- 1 श्रीमन्नरेश्वर- मालदे(द)त्तसुत अधिकृत श्रीदासीदे- श्रीनारायणेन
2 सेनदेवस्य सं ३- ण श्रीचण्डीदेवी समारब्धा तद्भादकना-प्रतिष्ठितेति ४ ॥

¹ *Indian Antiquary*, Vol XIX, p 1.

Note on the reading

The decipherment of this short inscription presents some very serious difficulties. The fourth letter in what I have read as *Māladetta* is very curious. It bears little resemblance to any letter or compound used in the inscriptions of the time. Mr. Banerji has read it as *Mālade-*, but certainly *tta* it is not like any *t* hitherto met with in the inscriptions of the period. It has moreover no perpendicular straight stroke to the proper left, distinctive of an *t* of the period. The following additional objections to the reading may be advanced —

(1) *Māladei* must be a Prākṛit form of *Māla-dēvi*, and it is not easy to understand why a Prākṛit word should be used in a Sanskrit inscription.

(2) The use of only the mother's name to denote parentage is unusual in a North Indian inscription.

The letter that one would expect here is *va*, reading the name as *Māladēva*, but the letter used does not bear the slightest resemblance to the *va* of the period or any of the *va*'s used in this inscription. Then what is this letter? My reading of the letter as *tta* is only conjectural, based on the principle of greatest resemblance and possibility and on a surmise which I shall advance presently. [Perhaps we should read *Mālā-khadga* — Ed.]

The second difficulty is about the reading of the name of the donor. Mr. Banerji has read it as *Dāmōdrēna*, but *ē* is clearly absent from *dra*. We can read it at best *Dāmōdrana*, which is inadmissible. I have read it *Dāmōdarēna*, which is admittedly the correct form of the word. It should be noted that the *ā* mark of *nā*, the letter below *dra*, is projected upwards to a considerable distance. I believe the engraver wrote *Dāmōdana* through mistake and attempted to put in *re* between *da* and *nā*. Want of space stood in his way, and he fared very ill. The projection of *ā* of *nā* should, in my opinion, be taken for the engraver's attempt to make a small *ra*, and the *r* mark of *Dāmōdra* should be taken as the *ē* he tried to make. I have thus read *rē* between *da* and *nā*.

The next difficult word is what I have read as *tad-bhrādakanā*. Mr. Banerji read it as *tabhrādakana*, which gives no meaning whatever, and which moreover is incorrect, as *na* has a clear *ā* after it. The word must be a qualifying word of *Nārāyanēna*, which follows it, and consequently must be in the 3rd case. It is also expected that the word should signify some sort of relationship between the donor and the founder, whose names prove them to have been close relatives. I have therefore read the word as *taū-bhrādakanā* and would translate it as "by his younger brother". The word *bhrādakana*, again, is perplexing and new. I can suggest nothing better than that it was an irregular East-Indian compound of the two words *bhrātā* and *kantīyān*.

Now, *Dāmōdara* was evidently a high officer of the state, and we may expect to see his younger brother too in a similar position. We know from the Tarpandighi plate of Lakshmana-sēna¹ that one *Nārāyana-datta* was his minister of peace and war. Can this *Nārāyana-datta* be the *Nārāyana* of the present inscription? *Māla* is an appellation of *Vishnu*, and the names *Nārāyana* and *Dāmōdara* are also names of *Vishnu*. It was evidently a *Vaishṇava* family and the name of the father agrees well with the names of his sons. If our conclusions, which are based on a series of surmises, are right, and if *Nārāyana* of the present inscription can be identified with *Nārāyana-datta*, the minister of peace and war of *Lakshmana-sēna*, we may read the name of *Dāmōdara*'s father as *Māladetta* and emend it to *Māla-datta* by taking the *e* of *de* as an engraver's mistake.

Mr. Banerji read a *visarga* after *ti*, which is inadmissible, it should be read as 4, resembling the modern Bengali symbol for 4. It is not usual to put the two ciphers of a *visarga* in touch with one another as has been done in the present case.

¹ *Ep. Ind.*, Vol. XII, p. 6

TRANSLATION.

The year 8 of the era of the illustrious Lakshmana-sēna-dēva The (image of the) goddess Chandī was begun by the Superintendent (*Adhikṛita*) Dāmōdara, son of Māladatta and was installed by his younger brother Nārāyana (in the year) 4

No 25 —A NOTE ON THE VAKATAKA INSCRIPTION FROM GANJ

(No 4 of Vol. XVII of the *Epigraphia Indica*)

BY K N DIKSHIT, M A, POONA

The last four paragraphs of the article on 'a Vakataka inscription from Ganj' illegible correction in the light of information available from the Poona plates of the thirteenth year of the Vākātaka queen Prabhāvatiguptā (*Ante* Vol XV, p 32 ff) and another grant of the 19th year of Pravarasēna (II) issued by the same queen Prabhāvatiguptā (*Ind Ant* Vol LIII, page 48). The characters used in the Ganj and Nachna inscriptions are later in date than those of the Poona plates of Prabhāvatiguptā The Prithvishēna of these inscriptions is therefore more likely to be identified with Prithvishēna II of the Bālāghāṭ plates, who was the great-grandson of Prabhāvatiguptā and not with Prithvishēna I her father-in-law. On paleographical grounds, Prof Jouveau-Dubreuil attributes the Nachna inscriptions to the fifth century instead of the 4th and to Prithvishēna II, in preference to Prithvishēna I (*Ancient History of the Deccan*, page 73) The present epigraph which is almost identical with the Nachna inscriptions, can therefore also be assigned to Prithvishēna II who must have lived in or about the last quarter of the 5th or the opening years of the sixth century A.D

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¹The figures refer to pages n. after a figure, to footnotes, and add to the additions on pp vii to xiv. The following other abbreviations are used — *ch.* = chief, *co* = country; *di.* = district or division; *do* = ditto, *dy.* = dynasty; *E* = Eastern, *f.* = female, *k* = king, *m* = male, *mo.* = mountain, *ri.* = river, *s. a.* = same as, *sur.* = surname, *te.* = temple, *vi.* = village or town, *W.* = Western.

