



# **ASTRONOMICAL EPHEMERIS OF GEOCENTRIC PLACES OF PLANETS**

दृश्य ग्रह स्थिति  
( पञ्चाङ्ग )

**2016-2017**

शासकीय जीवाजी वेधशाला, उज्जैन

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**ASTRONOMICAL EPHEMERIS  
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Geocentric Places of Planets  
FOR  
2016-17**

**Saka Era 1937-38**

**(Indian Standard Time observed through out)**

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Among the observatories built by Raja Jai Singh, the observatory of Ujjain has great importance in the period of ancient practical Astronomy. The Ujjain city was on the Tropic of Cancer, while the position of Kashi, Jaipur, Delhi and Mathura cities was towards the North from the Tropic of Cancer and still they are in the same direction. On other hand the position of Ujjain has been changed due to slow diminution every year in the Maximum obliquity of the Ecliptic, resulting that the sun goes towards the North from the zenith of the Ujjain.

About 4663 years ago, when the maximum declination of the Sun and the latitude of Ujjain were equal, the sun turned towards South after completing its fortnight North going at the zenith point of Ujjain. It was the point where the meridian line of ancient Lanka (Different place from the Modern Lanka. i. e. Ceylon) crossed the Tropic of Cancer. Therefore the meridian line of Ujjain became the prime Meridian of India.

Because the calculated planetary position as per Indian astronomical method is at mean midnight of Ujjain or Local mean 6 hours of Morning. Therefore for applying for the correction in Longitude and Latitude of the places is should be considered.

As the position of Ujjain observatory is on the Tropic of Cancer, therefore, the Sun comes at the Zenith of the Ujjain on the 13th and 30th June at the time of Transit. It was the reason that the observatory of Ujjain was re-organised to find out the correction through proper observations for the planetary position computed on the basis of Indian Astronomy.

The necessity of this publication was considered at the time of Second World War when the Nautical Almanac and Ephemeris were not available in time to the users. The publication of the Ephemeris in English was started from the year 1942. Looking to the difficulties in understanding the English Ephemeris by the Hindi knowing persons the necessary heading, etc., are given in Nagari Lipi (script) with detailed introduction in Hindi from the year 1964



The geocentric places of the planets given in this book are true from the true equinox of each day and have been computed from their respective elements, calculated by the method of Indian Astronomy with the latest correction required to get the apparent position. The places of the planets are given for 12.0' clock Noon Indian standard time. The Ujjain mean local time observed only for the side real time given for the Noon.

The timings for Moonrise, Sunrise and Sunset given on pages 41 to 46 are only for the Central Meridian of India. To find the time of rise or set for any place, see page V.

We are trying to add some useful topics in the Ephemeris every year. The M. C. table and mean longitudes of Uranus & Neptune have already been added from the previous issues the Ephemeris, Correction Table (page 47-48) are added from the last four years. It is useful to know the local mean time of Moonrise for desired meridian. Thus the book contains more information than other Ephemeris.

I am also thankful to my staff members Shri Deepak Gupta, Shri B.K. Tiwari, for their active and sincere Co-operation.

Ujjain (M.P.) :

**Dr. Rajendra Prakash Gupt**  
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Govt. Jiwaji Observatory, Ujjain (M.P.)

## A NOTE TO COMPUTE THE TIME OF MOONRISE, SUNRISE AND SUNSET IN 2016

The timings of Moonrise, Sunrise and Sunset given on pages 41-42 and 43 are the local mean time (L. M. T.) of those places whose latitudes are  $10^\circ$ ,  $20^\circ$ , or  $30^\circ$  for Moonrise and  $5^\circ$ ,  $8^\circ$ , or  $11^\circ$  etc. for Sunrise, which are situated on the Central Meridian of India. The L. M. T. and I. S. T for these places coincide with each other L. M. T. of other places whose latitude lies between these limits can be found by simple interpolation. In order to find the I. S. T. of Moonrise, Sunrise or Sunset for other places proceed as follows.

- (i) Find the L. M. T. for the latitude of the place by Interpolation.
- (ii) Convert the longitude of the place if given in degrees. into hours and its parts by dividing it by 15 and subtract the result from 5 hours 30 minutes.
- (iii) Add the result of (ii) into (i) algebraically.

**Example :-** To find the time of Moonrise, Sunrise and Sunset in I. S. T. on 1st January at Delhi lat.  $28^\circ 39'$  N long.  $77^\circ 13'$  E in hours 5 h. 9 m. and at Madras lat.  $13^\circ 04'$  N long.  $80^\circ 15'$  E in hours  $5^h-21^m$ .

Correction minutes to find I. S. T. from the L. M. T. for Delhi long.  $5^h.9^m$  subtracted from  $5^h.30^m=+21^m$  and for Madras long.  $5^h.21^m$  Madras subtracted from  $5^h.30^m=+9^m$

### Timing of Moonrise

|          |            |            |            |
|----------|------------|------------|------------|
| Lat.     | $10^\circ$ | $20^\circ$ | $30^\circ$ |
| L. M. T. | $5^h-45^m$ | $6^h-02^m$ | $6^h-23^m$ |

By interpolation L. M. T. of Moonrise become  $6^h-18^m$  at Delhi and  $5^h-50^m$  at Chennai as per rule (iii) by adding the correction minutes  $21^m$ - and  $9^m$  Accordingly the I. S. T. of Moonrise on 1st January 2016 at Delhi  $6^h-39^m$  and at Chennai  $5^h-59^m$ .

### Timing of Sunrise

From page 41, we get the L. M. T. of Sunrise on 1st January, 2016 for the latitudes :-

|          |                                 |                                 |                                 |
|----------|---------------------------------|---------------------------------|---------------------------------|
| Lat.     | 17°                             | 20°                             | 23°                             |
| L. M. T. | 6 <sup>h</sup> -30 <sup>m</sup> | 6 <sup>h</sup> -35 <sup>m</sup> | 6 <sup>h</sup> -41 <sup>m</sup> |

By interpolation L. M. T. of Sunrise become 6<sup>h</sup>-40<sup>m</sup> at Calcutta and 6<sup>h</sup>-33<sup>m</sup> at Bombay by adding the correction minutes the L. S. T. of Sunrise at Calcutta 6<sup>h</sup>-40<sup>m</sup> -24<sup>m</sup>=6<sup>h</sup>-16<sup>m</sup> and at Mumbai 6<sup>h</sup>-33<sup>m</sup> +39<sup>m</sup>=7<sup>h</sup>12<sup>m</sup>

**Note :-** The correction for longitude is constant for a given Place and remains the same for all days of the year. The correction for latitude depends on the motion of the Moon or the Sun and fresh calculation is necessary for each day.

### परिचय

उज्जैन, काशी, जयपुर एवं मथुरा में भव्य वेधशालाओं का निर्माण कर सवाई राजा जयसिंह ने भारतीय ज्योतिषशास्त्र में अपना महत्त्वपूर्ण स्थान बनाया। भारतीय ज्योतिषसिद्धांत काल में उज्जैन की स्थिति ठीक कर्क रेखा पर होने से तथा भारतीय ज्योतिष पूर्णतः उज्जैन मध्य रेखा पर आधारित होने से उज्जैन वेधशाला ही उक्त वेधशालाओं में महत्त्वपूर्ण है। क्रान्तिवृत्त तथा विषुवद्वृत्त के परमान्तर में प्रतिवर्ष होने वाली स्वल्प न्यूनता के कारण वर्तमान में कर्क रेखा की स्थिति उज्जैन की ओर है। अर्थात् सूर्य उज्जैन ख-मध्य से उत्तर की ओर गमन करता है।

आज से करीब 4665 वर्ष पूर्व जब सूर्य की परमक्रान्ति तथा उज्जैन के अक्षांश तुल्य थे, सूर्य उज्जैन के ख-मध्य में आकर ही अपना परमोत्तर गमन पूर्ण कर दक्षिणाभिमुख होता था, अर्थात् सूर्य के परमोत्तर गमन का बिन्दु उज्जैन ख-स्वस्तिक ही था। निरक्ष देश लंका (वर्तमान लंका से भिन्न स्थान) की याम्योत्तर रेखा तथा कर्क रेखा का सम्पात बिन्दु उज्जैन के ख-मध्य में होने के कारण उज्जैन की याम्योत्तर रेखा को देश की मध्य रेखा तथा उज्जैन को मध्य रेखा स्थित नगर होने का गौरव प्राप्त हुआ है। यही कारण है कि भारतीय ज्योतिषशास्त्र के अनुसार सम्पूर्ण ग्रह-गणित उज्जैन की मध्य मध्यमरात्रि अथवा प्रातःकालीन स्थानीय मध्यम 6 बजे का होता है।

राजा जयसिंह द्वारा निर्मित प्राचीन वेधशालाओं में उज्जैन वेधशाला ही ऐसी है, यहां दिनांक 13 एवं 30 जून को सूर्य अपने याम्योत्तर लंघनकाल में ठीक उज्जैन के ख-स्वस्तिक पर वेध किया जा सकता है। यही कारण है कि जयपुर एवं दिल्ली की भव्य वेधशालाओं के होते हुए भी भारतीय ज्योतिषशास्त्र के आधार पर प्राप्त ग्रहस्थिति को वेधोपलब्ध संस्कारों से संस्कृत कर सूक्ष्मतम बनाने के लिये संस्था के प्रथम अधीक्षक श्रद्धेय श्री गो.स. आपटे साहब ने संस्था को मार्गदर्शन दिया है।

संस्था को इस एफेमेरिज के प्रकाशन की आवश्यकता उस समय प्रतीत हुई जब द्वितीय महायुद्ध के कारण नॉटिकल आल्मनाक तथा रॉफेल्स की एफेमेरिज जैसे दृश्य ग्रहस्थिति बोधक वार्षिक प्रकाशन उपयोगकर्ताओं को यथासमय उपलब्ध नहीं होने से वे कठिनाई अनुभव कर रहे थे। जनसुविधा के लिये संस्था के एफेमेरिज का प्रकाशन 1942 से प्रारम्भ किया। सर्व-साधारण के लिये यह उपयोगी सिद्ध हो सके, इसलिए सन् 1964 के प्रकाशन से इसमें आवश्यक नागरीलिपि का समावेश किया गया। एफेमेरिज में हिन्दी भाषा में सोदाहरण विवेचन ज्योतिषशास्त्र के विद्यार्थियों के साथ-साथ हिन्दी-भाषी ज्योतिषज्ञों को विशेष लाभप्रद हुआ है।

ज्योतिषशास्त्र के विद्यार्थियों एवं इसमें उपयोगकर्ताओं की आवश्यकताओं को



ध्यान में रखते हुए इसमें आवश्यक विषयों का समावेश भी यथासम्भव प्रतिवर्ष किया जाता है। अन्य प्रकाशित होने वाली एफेमेरिज की तुलना में अधिक जानकारी देने की सामर्थ्य इस पुस्तक में सन्निहित है।

एफेमेरिज देखने की विधि :- इसमें ग्रहों की स्थिति भारतीय समय (इण्डियन स्टैण्डर्ड टाइम) के अनुसार मध्याह्न 12 बजे को स्पष्ट सम्पात बिन्दु से दी गई है। सुविधा के लिये यथास्थान ग्रहबोधक चिन्हों के साथ उनके नाम भी दिये हैं। तथापि इस दृश्य ग्रहस्थिति पुस्तिका को उपयोग में लेने के पूर्व ग्रह-राश्यादिकों के बोधक चिह्नों का ज्ञान आवश्यक है। इस हेतु पृष्ठ क्रमांक 1 का अवलोकन करें।

नाक्षत्रकाल देखने की विधि : एफेमेरिज के प्रारंभिक पृष्ठ क्रमांक xiv, xv तथा xvi, xvii पर भारतवर्ष के प्रमुख तथा अन्य देशों के कुछ स्थानों के अक्षांश उज्जैन से देशान्तर अभीष्ट स्थान का स्थानीय समयानुसार दोपहर 12 बजे का नाक्षत्रकाल जानने के लिये एफेमेरिज में दिये नाक्षत्रकाल में संस्कार तथा भारतीय समय (इण्डियन स्टैण्डर्ड टाइम) के स्थानीय समय जानने के लिये संस्कार दिये हैं।

उदाहरण- दिनांक 1 जनवरी, 2016 को इलाहाबाद में स्थानीय समयानुसार मध्याह्न 12 बजे का नाक्षत्रकाल जानने के लिए पृष्ठ xiii पर 4.01 सेकण्ड ऋण संस्कार दिया है। एफेमेरिज में इस दिन उज्जैन का स्थानीय मध्यम समयानुसार मध्याह्न 12 बजे का नाक्षत्रकाल घं. 18 मि. 43 से. 14 दिया है। इस काल में 4.01 सेकण्ड ऋण करने से इलाहाबाद में स्थानीय मध्यम मध्याह्न 12 बजे का नाक्षत्रकाल घं. 18 मि. 43 से. 10 हुआ। इसी प्रकार किसी भी क्षण के स्टैण्डर्ड टाइम 2 मि. 32 से. घटाने पर इलाहाबाद का स्थानीय समय होगा।

पृष्ठ क्रमांक xvii पर दिनांक 1 जनवरी, 2016 के दिन प्रचलित 27 नक्षत्रों की वेधतारकाओं का तथा अन्य प्रमुख तारकाओं के मध्यम भोग विषुवत्वकाल एवं शर-क्रान्ति आदि दिये हैं।

भोग जानने की विधि :- पृष्ठ क्रमांक 2 से 25 पर उज्जैन स्थानीय 12 बजे का नाक्षत्रकाल तथा भारतीय समय (स्टै.टा.) 12 बजे तक ग्रहों का भोग (स्पष्ट स्थान) दिया है। ग्रहों की स्पष्ट स्थिति अंशादि में देकर राशि के लिये उसका चिह्न लगाया गया है। उदाहरणार्थ- 1 जनवरी 2016 को सूर्य का भोग  $10^{\circ} 16' 31''$  लिखकर राशि ज्ञान के लिये मकर राशि का चिह्न लगाया है, अर्थात् सूर्य मकर राशि के  $10^{\circ} 16' 31''$  पर है। राश्यादि में इसे रा. 10 अंश व 16 कला 31 विकला लिखा जा सकता है। इन्हीं पृष्ठों पर दैनिक सूर्य की क्रान्ति तथा चन्द्रमा की शर-क्रान्ति दी हुई है। प्रतिदिन का तिथि समाप्तकला भी इन्हीं पृष्ठों पर दिया गया है। गत वर्ष से उज्जैन का रवि अस्त एवं रवि उदय भी दिया जा रहा है। तिथि देखना :- तिथियों की गणना 1 से 30 कृष्ण पक्ष की प्रतिपदा द्वितीय आदि तिथियों

को क्रमशः 16, 17 आदि संख्या दी गई है। पौष, माघ आदि महीनों के नाम तथा भारतीय दिनांक, भारतीय कैलेंडर के अनुसार है। स्थानीय मध्यम समय से स्पष्ट समय ज्ञान के लिये नित्य का कालान्तर संस्कार इन्हीं पृष्ठों पर दिया गया है। पृष्ठ क्रमांक 26 से 37 तक के पृष्ठों पर वरुणादि ग्रहों की शर-क्रान्ति एवं राहू का मध्यम योग एकान्तर दिन से दिया है।

दृष्टि विषय देखने की विधि :-

दृष्टि विषय में पृष्ठ 38 से 40 पर संक्षेप में यह बताया गया है कि अपनी-अपनी कक्षा में भ्रमणशील ग्रह किस समय किस स्थिति में रहेंगे। उदाहरणार्थ एफे मेरिज में दिनांक 2 जनवरी 2016 को  $\otimes$  Perihelion इस प्रकार लिखा हुआ है। इसका अर्थ कि दिनांक 2 जनवरी 2016 को 4 घं. 31 मि. पर पृथ्वी अपने नीचे बिन्दु पर है। दृष्टि विषय में प्रयुक्त अन्य वाक्यों का अर्थ इस प्रकार है :- Earth at Perihelion पृथ्वी अपने नीचे बिन्दु पर on equator तथा at Last quarter अमान्त के बाद चन्द्रमा क्रमशः  $90^{\circ}$  तथा  $270^{\circ}$  के अन्तर पर at perigee at apogee चन्द्रमा क्रमशः अपने नीचे तथा उच्च स्थान पर है।

से ग्रहों के पात बोधक चिह्न हैं। ग्रह तथा राशि बोधक चिह्नों के मध्य enters का अर्थ निर्दिष्ट ग्रह निर्दिष्ट राशि में प्रवेशकाल, NEW MOON अमान्तकालिक चन्द्रमा FULL MOON पूर्णान्तकालिक चन्द्र ग्रह बोधक चिह्नों के साथ Rises का अर्थ उस ग्रह का उदय तथा Sets का अर्थ उस ग्रह का अस्त। इन्हीं के साथ East पूर्व या West पश्चिम दिशा बोधक शब्द भी दिये गये हैं।

उदाहरण :- 2 January 2016  $\otimes$  at Perihelion अर्थात् 2 जनवरी, 2016 को 4 घं. 31 मि. पृथ्वी अपने नीचे बिन्दु पर होगी।

चन्द्रोदय काल निकालना :- पृष्ठांक 43 से 46 पर भारतीय मध्य याम्योत्तर रेखा पर स्थित निर्दिष्ट अक्षांशों के लिये स्थानीय समयानुसार सूर्योदय, सूर्यास्त एवं चन्द्रोदयकाल जानने के लिये पत्रक दिये हैं। इन स्थानों के भारतीय समय एवं स्थानीय समय में साम्यता है। पत्रक के आधार पर प्राप्त उदयास्तकाल बिम्ब की उपरी कोर के उदयास्त का होता है। अभीष्ट अक्षांशीय स्थान के लिये त्रेराशिक से स्थानीय उदयास्त समय जानकर, भारतीय समय तथा स्थानीय समय के अन्तर मिनट, भारतीय समय ज्ञान के लिये, भारतीय मध्य रेखा से अभीष्ट स्थान के पश्चिम होने पर धन तथा पूर्व होने पर ऋण करने से इष्ट स्थान का भारतीय समयानुसार सूर्योदय, सूर्यास्त अथवा चन्द्रोदयकाल होगा।

पृष्ठ क्रमांक 43 पर 1 जनवरी, 2016 को दिल्ली में चन्द्रोदयकाल :-

| अक्षांश                   | $10^{\circ}$ | $20^{\circ}$ | $30^{\circ}$ |
|---------------------------|--------------|--------------|--------------|
|                           | घ.मि.        | घ.मि.        | घ.मि.        |
| च.उ. स्थानीय समयानुसार :- | 5-45         | 6-02         | 6-21         |



साधारण त्रेराशिक से दिल्ली के अक्षांश  $28^{\circ}-29^{\circ}$  के लिये फल 2 मि. तथा मध्य याम्योत्तर के लिये 1 मिनट (पृष्ठ क्रमांक 47-48 पर दिये गये पत्रक के अनुसार +1) अक्षांश  $20^{\circ}$  के स्थानीय चन्द्रोदयकाल में जोड़ने पर दिल्ली में स्थानीय समयानुसार चन्द्रोदयकाल 6 घं. 18 मि. हुआ भारतीय समय के पृष्ठ xv पर दर्शाये अनुसार मि. 21 धन करने पर दिल्ली में स्टेण्डर्ड टाइम 6 घं. 39 मि. पर चन्द्रोदयकाल हुआ।

सूर्योदय काल निकालना :-

पृष्ठ क्रमांक 41 पर 1 जनवरी, 2016 को कोलकाता में सूर्योदयकाल :-

| अक्षांश                       | $17^{\circ}-0'$ | $20^{\circ}-0'$ | $23^{\circ}-0'$ |
|-------------------------------|-----------------|-----------------|-----------------|
|                               | घ.मि.           | घ.मि.           | घ.मि.           |
| सूर्योदय स्थानीय समयानुसार :- | 6-30            | 6-35            | 6-41            |

साधारण त्रेराशिक से कोलकाता के अक्षांश  $22^{\circ}-35'$  के लिये फल 5 मि. अक्षांश  $20^{\circ}$  के स्थानीय समय में जोड़ने से कोलकाता के स्थानीय काल में सूर्योदय काल घं. 6 मि. 40 में हुआ। भारतीय समय के लिए पृष्ठ पर दर्शाये 2016 के अनुसार 23 मि. 30 से. का विपरीत ऋण संस्कार करने से सूर्य उदयकाल भारतीय समय घं. 6 मि. 16 हुआ।

इसी प्रकार कलकत्ता में दिनांक 1 जनवरी, 2016 को सूर्यास्त स्टेण्डर्ड टाइम घं. 17 मि. 03 होता है।

पृष्ठ क्रमांक 50 पर यम (प्लूटो) का भोग तथा शर, क्रान्ति एवं सूर्य चन्द्र के मध्यम भोग दस-दस दिन के अन्तर से दिये हैं। इसी पृष्ठ पर स्पष्ट चन्द्र का क्षितिज लम्बन एवं अर्धव्यास दिया गया है।

चन्द्र का राशि प्रवेशकाल ज्ञात करना :-

वर्ष में चन्द्रराशि प्रवेश का दिनांक एवं समय का विवरण पृष्ठ क्रमांक 51 तथा 52 पर दिया गया है। जैसे दिनांक 1 जनवरी 2016 लिखा है  $22^{\circ}05'$  अर्थात् दिनांक 1 जनवरी, 2016 को 22 बजकर 05 मिनट पर चन्द्रमा (वृषभ) राशि में प्रविष्ट होगा।

ग्रहण :- ग्रहों के दैनिक उदयास्त के अतिरिक्त उनका सूर्य से निश्चित सीमा से अधिक अन्तर होने पर उनका उदय होता है जिसे लोप दर्शन भी कहते हैं। इस वर्ष में होने वाले ग्रहों के उदयास्त की तिथियां दृष्टि विषय में दी गई है। पृष्ठ 53-54 पर वर्ष में होने वाले ग्रहणों का उल्लेख है।

चन्द्र एवं ग्रहों का योग देखना :- पृष्ठ क्रमांक 53 से 74 पर समस्त ग्रहों के परस्पर विभिन्न अन्तरों पर होने वाले प्रचलित योग दिये गये हैं। चन्द्र एक ऐसा ग्रह है जो एक माह की अवधि

में अन्य ग्रहों से विभिन्न प्रकार के सभी योग दो बार बनाता है। उपयोगकर्ताओं की सुविधा के लिये उनका स्वतंत्र विषय रखा जाकर इसका नाम "चन्द्र से ग्रहों का योगकाल" दिया है। इसके बाद चन्द्र के अतिरिक्त अन्य ग्रहों के विभिन्न पारस्परिक योगों का दिनांक एवं समय दिया गया है। इसमें ग्रहों की क्रान्ति (एक ही दिशा या भिन्न दिशा की) तुल्य होने का दिनांक तथा समय दिया गया है।

युति एवं प्रतियुति जानना :- सभी ग्रहों की पारस्परिक युति एवं प्रतियुति का समावेश चन्द्र से ग्रहों की युति एवं प्रतियुति कालीन क्रान्त्यान्तर स्पष्ट करने के लिये "ग्रहों की युति क्रान्त्यान्तर" नाम से विशिष्ट प्रकरण समावेश एफेमेरिज में किया गया है।

लग्न कोष्ठक का उपयोग : लग्न कोष्ठक का उपयोग अपने स्थानीय नाक्षत्रकाल से करना चाहिए। एफेमेरिज में प्रतिदिन उज्जैन का स्थानीय मध्यम मध्याह्न समय का नाक्षत्रकाल दिया हुआ है। किसी अभीष्ट स्थान मध्याह्न समय का नाक्षत्रकाल जानने की विधि पूर्व में बताई गई है। अपने समय का स्थानीय मध्यम मध्याह्न समय का नाक्षत्रकाल जानकर किसी अभीष्ट भारतीय समय का नाक्षत्रकाल जानने के लिए सदैव स्थानीय समय का प्रयोग कीजिये। भारतीय समय को स्थानीय समय के लिये प्रारंभिक xiv, xv एवं xvi पृष्ठों के अन्तिम स्तम्भों में संस्कार दिये हैं। इस स्तम्भ में अपने स्थान के लिये जो संस्कार लिखा हो, उसे अभीष्ट स्टेण्डर्ड टाइम में धन अथवा ऋण कीजिए। इस प्रकार अपने अभीष्ट स्थान का स्थानीय समय ज्ञात होगा। यह स्थानीय समय, स्थानीय मध्यम मध्याह्न 12 बजे से जितना आगे या पीछे हो, उस अंतर में उपलब्ध घंटा मिनट को क्रमशः 9.86 तथा 0.16 सेकण्ड से गुणाकर फल को अन्तर में जोड़कर योगफल को स्वस्थानीय मध्यम मध्याह्न 12 बजे के नाक्षत्रकाल में अभीष्ट समय 12 बजे के बाद का हो तो धन तथा पूर्व का हो तो ऋण करने पर अपने अभीष्ट स्थान का इष्ट भारतीय समय का नाक्षत्रकाल होता है। लग्नकोष्ठक के ऊपर अक्षांश तथा वाम भाग में नाक्षत्रकाल दिया हुआ है। नाक्षत्र समय तथा अक्षांश के आधार पर सरल त्रेराशिक से सूक्ष्मलग्न ज्ञात होता है।

उदाहरण - दिनांक 1 जनवरी 2016 को सूरत में स्टे. टा. घं. 15 मि. 0 पर लग्नायन।

(1) अभीष्ट भारतीय समय पर सूरत का स्थानीय समय घं. 15 मि. 0 से. मि. 38 से 36 = घं. 14 मि. 21 से. 24

(2) सूरत में स्थानीय दोपहर 12 बजे का नाक्षत्रकाल = एफेमेरिज में निर्दिष्ट तिथि को दिया गया नाक्षत्रकाल घं. 18 मि. 41 से. 14 + 1.92 से. = घं. 18 मि. 41 से 15

अभीष्ट स्थानीय समय घं. 14 मि. 21 से 24 का नाक्षत्रकाल जानने के लिये इसका 12 बजे से अन्तर करने पर घं. 18 मि. 41 से. 24 हुआ। इसको नियमानुसार 9.86 तथा 0.16 सेकण्ड से गुणा करने पर फल 23.14 से 47.14 हुआ। अभीष्ट समय



12 के बाद का होने से सूरत के मध्यम स्थानीय 12 बजे के नाक्षत्रकाल घं. 18 मि. 41 से. 15 में धन करने पर घं. 21 मि. 3 से. 2-14 सूरत में अभीष्ट भारतीय समय घं. 15 मि. 0 बजे का नाक्षत्रकाल हुआ। सूरत के अक्षांश  $21^{\circ}-10'$  के लिये घं. 21 का लग्नकोष्ठक में फल  $55^{\circ}-51'.3''$  तथा त्रैराशिक से मि. 3 से 2 का फल  $0^{\circ}-49'$  दोनों का योग  $55^{\circ}-51'.3''$  सूरत में स्टे.टा. 15 बजे का स्पष्टलग्न हुआ।

पृष्ठ क्रमांक 89 से 96 प्रति दो मिनिट के अन्तर से किसी भी समय का दशमलग्न बिन्दु जानने के लिये दशमलग्न पत्रक दिये हुए हैं। इनका उपयोग अभीष्ट समय का नाक्षत्रकाल जानकर करना चाहिये।

ग्रहों को स्पष्ट करने की विधि :-

एफेमेरिज में स्पष्ट ग्रह दृष्टि विषय तथा अन्य विषय जिस समय में दिये हैं। उसके आधार पर किसी अभीष्टकालीन उनकी स्थिति जानने के लिये पुस्तक के अन्तिम पृष्ठ "लघुगुणक कोष्ठक" विशेष उपयोग है।

उदाहरण :- 1 जनवरी, 2016 की एफेमेरिज में स्टे. टा. 12 बजे का सूर्य भोग  $10^{\circ} 16' 31''$  दिया हुआ है। भारतीय समयानुसार सायं 6 बजे सूर्य का स्पष्ट स्थान जानने के लिये सूर्य की 24 घंटे की गति दिनांक 2 जनवरी, 2016 के सूर्यभोग से अन्तर करने पर  $1^{\circ}-1'-11''$  से. हुई। एफेमेरिज में सूर्य जिस समय का दिया है, उससे इष्ट समय का अन्तर 6 घंटा है। त्रैराशिक के द्वारा 6 घंटे का गतिफल जानकर एफेमेरिज में दिये सूर्य में धन करने पर अभीष्ट समय का सूर्य होता है। लघुगुणक कोष्ठक के द्वारा गतिफल हो इस प्रकार जाना जा सकता है। कोष्ठक के उपर अंश या घंटे तथा बाएं कलायें अथवा मिनिट दिये हैं। सूर्य की गति का  $1^{\circ}-1'-11''$  का सूक्ष्मफल 1.3718, इसमें घं. 6 मि. 0 का फल 0.6021 धन करने पर योगफल 1.9739 हुआ। इसे कोष्ठक में देखने पर घं. या अंश (0) के नीचे मि. या कला 15 के सामने 1.9823 यह संख्या लिखी है किन्तु योगफल 1.9739 है। अतः त्रैराशिक से सूक्ष्मगतिफल  $00-15'-18''$  से हुआ है। इस फल को एफेमेरिज में दिये सूर्य  $10^{\circ} 16'-31''$  में जोड़ने से सायंकाल 6 बजे का स्पष्ट सूर्य  $10^{\circ} 31' 49''$  हुआ है। इसी प्रकार अभीष्ट समय के लिये अन्य विषयों की जानकारी लघुगुणक कोष्ठक के द्वारा की जा सकती है।

डा. राजेन्द्रप्रकाश गुप्त

अधीक्षक,

शासकीय जीवाजी वेधशाला

उज्जैन (म.प्र.)

नोट : जनसुविधा हेतु एफेमेरिज में मार्च 2017 तक के ग्रहों के भोग आदि दिये हैं।

प्रमुख स्थानों के अक्षांश, देशान्तरादि  
Latitudes, Longitudes, etc., of Principal Places.

| स्थान<br>Place |             | अक्षांश<br>Latitude | देशान्तर<br>उज्जैन से<br>Longitude<br>from<br>Ujjain | उज्जैन नाक्षत्र-<br>काल में<br>संस्कार<br>Cor. to<br>Ujjain Sid.<br>Time | भारतीय समय<br>में स्थानीय<br>समय के लिये<br>संस्कार<br>Cor. To for<br>local time |
|----------------|-------------|---------------------|------------------------------------------------------|--------------------------------------------------------------------------|----------------------------------------------------------------------------------|
|                |             | ( )                 | H. M. S.                                             | Second                                                                   | H. M. S.                                                                         |
| आगरा           | Agra        | +27 11              | +0 9 04                                              | -1.49                                                                    | -0 17 52                                                                         |
| अहमदनगर        | Ahmadnagar  | +19 05              | -0 3 52                                              | +0.64                                                                    | -0 30 48                                                                         |
| अहमदाबाद       | Ahmedabad   | +23 02              | -0 12 40                                             | +2.08                                                                    | -0 39 36                                                                         |
| अजमेर          | Ajmer       | +26 27              | -0 4 32                                              | +0.75                                                                    | -0 31 28                                                                         |
| अकोला          | Akola       | +20 24              | +0 5 04                                              | -0.83                                                                    | -0 21 52                                                                         |
| अलीगढ़         | Aligarh     | +27 54              | +0 9 12                                              | -1.51                                                                    | -0 17 44                                                                         |
| अलाहाबाद       | Allahabad   | +25 28              | +0 24 24                                             | -4.01                                                                    | -0 02 32                                                                         |
| अमरावती        | Amroati     | +20 56              | +0 8 08                                              | -1.31                                                                    | -0 18 48                                                                         |
| अमृतसर         | Amritsar    | +31 38              | -0 3 32                                              | +0.58                                                                    | -0 30 28                                                                         |
| औरंगाबाद       | Aurangoabad | +19 53              | -0 1 32                                              | +0.25                                                                    | -0 28 28                                                                         |
| अयोध्या        | Ayodhya     | +26 48              | +0 25 52                                             | -4.25                                                                    | -0 01 04                                                                         |
| बंगलौर         | Bangalore   | +12 58              | +0 7 20                                              | -1.20                                                                    | -0 19 36                                                                         |
| बंकाक          | Bangkok     | +13 44              | +1 38 56                                             | -16.25                                                                   | +0 12 00                                                                         |
| बरेली          | Bareilly    | +28 22              | +0 14 44                                             | -2.41                                                                    | -0 12 12                                                                         |
| बरुदा          | Baroda      | +22 18              | -0 10 12                                             | +1.68                                                                    | -0 37 08                                                                         |
| बेलगांव        | Belgaun     | +15 52              | -0 4 48                                              | +0.79                                                                    | -0 31 44                                                                         |
| बर्लिन         | Berlin      | +52 32              | -0 9 24                                              | +40.91                                                                   | -4 36 20                                                                         |
| भोपाल          | Bhopal      | +23 16              | +0 6 36                                              | -1.08                                                                    | -0 20 20                                                                         |
| भुवनेश्वर      | Bhubaneswar | +20 15              | +0 40 16                                             | -6.61                                                                    | +0 13 20                                                                         |
| बीकानेर        | Bikaner     | +28 01              | -0 9 48                                              | +1.61                                                                    | -0 36 44                                                                         |
| बम्बई          | Bombay      | +18 58              | -0 11 44                                             | +1.93                                                                    | -0 38 40                                                                         |
| बूंदी          | Bundi       | +25 27              | -0 0 20                                              | +0.05                                                                    | -0 27 16                                                                         |
| बुरहानपुर      | Burahanpur  | +21 17              | +0 2 00                                              | -0.32                                                                    | -0 24 56                                                                         |
| काहिरा         | Cairo       | +30 08              | -2 56 48                                             | +29.05                                                                   | -3 23 44                                                                         |
| कोलकाता        | Colkata     | +22 35              | +0 50 26                                             | -8.28                                                                    | +0 23 30                                                                         |
| कैनबरा         | Canberra    | -35 19              | +4 52 57                                             | -48.12                                                                   | -4 26 01                                                                         |
| चण्डीगढ़       | Chandigarh  | +30 44              | +0 4 28                                              | -0.73                                                                    | -0 22 28                                                                         |
| कोयम्बटूर      | Coimbutore  | +11 00              | +0 4 40                                              | -0.77                                                                    | -0 22 16                                                                         |



प्रमुख स्थानों के अक्षांश, देशान्तरादि  
Latitudes, Longitudes, etc., of Principal Places.

| स्थान<br>Place |            | अक्षांश<br>Latitude | देशान्तर<br>उज्जैन से<br>Longitude<br>from<br>Ujjain | उज्जैन नाक्षत्र-<br>काल में<br>संस्कार<br>Cor. to<br>Ujjain Sid.<br>Time | भारतीय समय<br>में स्थानीय<br>समय के लिये<br>संस्कार<br>Cor. To for<br>local time |
|----------------|------------|---------------------|------------------------------------------------------|--------------------------------------------------------------------------|----------------------------------------------------------------------------------|
|                |            | ()                  | H. M. S.                                             | Second                                                                   | H. M. S.                                                                         |
| कोलम्बो        | Colombo    | +06 54              | +0 16 25                                             | -2.69                                                                    | -0 10 32                                                                         |
| कटक            | Cuttack    | +20 29              | +0 40 24                                             | -6.63                                                                    | +0 13 28                                                                         |
| ढाका           | Dacca      | +23 42              | +0 58 36                                             | -9.62                                                                    | +0 31 40                                                                         |
| दार्जिलिंग     | Darjeeling | +27 03              | +0 50 00                                             | -8.21                                                                    | +0 23 04                                                                         |
| देहरादून       | Dehradun   | +30 19              | +0 09 08                                             | -1.50                                                                    | -0 17 48                                                                         |
| दिल्ली         | Delhi      | +28 39              | +0 05 48                                             | -0.95                                                                    | -0 21 08                                                                         |
| देवास          | Dewas      | +22 58              | +0 01 20                                             | -0.22                                                                    | -0 25 36                                                                         |
| धार            | Dhar       | +22 39              | -0 01 44                                             | +0.28                                                                    | -0 28 40                                                                         |
| गंटूर          | Gantur     | +16 19              | +0 18 40                                             | -3.07                                                                    | -0 08 16                                                                         |
| गोहाटी         | Gauhati    | +26 10              | +1 03 56                                             | -10.50                                                                   | +0 37 00                                                                         |
| गया            | Gaya       | +24 48              | +0 37 00                                             | -6.07                                                                    | +0 10 04                                                                         |
| जिनेवा         | Geneva     | +46 12              | -0 38 27                                             | +45.75                                                                   | -5 05 23                                                                         |
| ग्रीनविच       | Greenwich  | +51 29              | -5 03 04                                             | +49.79                                                                   | -5 30 00                                                                         |
| ग्वालियर       | Gwalior    | +26 14              | +0 09 36                                             | -1.57                                                                    | -0 17 20                                                                         |
| हरद्वार        | Hardwar    | +29 56              | +0 09 28                                             | -1.55                                                                    | -0 17 28                                                                         |
| हेलवान         | Helwan     | +29 51              | -2 57 42                                             | +29.20                                                                   | -3 24 38                                                                         |
| हांगकांग       | Hong-Kong  | +22 18              | +2 33 37                                             | -25.23                                                                   | +2 06 41                                                                         |
| हैदराबाद       | Hyderabad  | +17 26              | +0 10 44                                             | -1.76                                                                    | -0 16 12                                                                         |
| हैदराबाद       | Hyderabad  | +25 25              | +0 28 32                                             | +4.69                                                                    | -0 55 28                                                                         |
| (सिंध)         | (Sindh)    |                     |                                                      |                                                                          |                                                                                  |
| इम्फाल         | Imphal     | +24 48              | +1 12 44                                             | -11.94                                                                   | +0 45 48                                                                         |
| इन्दौर         | Indore     | +22 43              | +0 0 20                                              | -0.05                                                                    | -0 26 36                                                                         |
| इस्ताम्बूल     | Istambul   | +41 01              | -3 07 12                                             | +30.76                                                                   | -3 34 08                                                                         |
| जबलपुर         | Jabalpur   | +23 09              | +0 16 44                                             | -2.75                                                                    | -0 10 12                                                                         |
| जयपुर          | Jaipur     | +26 55              | +0 0 12                                              | -0.03                                                                    | -0 26 44                                                                         |
| जकार्ता        | Jakarta    | -06 16              | +2 04 28                                             | -20.44                                                                   | +1 37 32                                                                         |
| जम्मू          | Jammu      | -32 43              | -0 03 36                                             | +0.58                                                                    | -0 30 37                                                                         |
| जमशेदपुर       | Jemshedpur | +22 48              | +0 41 40                                             | -6.68                                                                    | +0 14 44                                                                         |

प्रमुख स्थानों के अक्षांश, देशान्तरादि  
Latitudes, Longitudes, etc., of Principal Places.

| स्थान<br>Place |             | अक्षांश<br>Latitude | देशान्तर<br>उज्जैन से<br>Longitude<br>from<br>Ujjain | उज्जैन नाक्षत्र-<br>काल में<br>संस्कार<br>Cor. to<br>Ujjain Sid.<br>Time | भारतीय समय<br>में स्थानीय<br>समय के लिये<br>संस्कार<br>Cor. To for<br>local time |
|----------------|-------------|---------------------|------------------------------------------------------|--------------------------------------------------------------------------|----------------------------------------------------------------------------------|
|                |             | ()                  | H. M. S.                                             | Second                                                                   | H. M. S.                                                                         |
| जोधपुर         | Jodhpur     | +26 18              | -0 10 56                                             | -1.80                                                                    | -0 37 52                                                                         |
| काबुल          | Kabul       | +34 33              | -0 26 16                                             | +4.32                                                                    | -0 53 12                                                                         |
| कानपुर         | Kanpur      | +26 29              | +0 18 20                                             | -3.01                                                                    | -0 08 36                                                                         |
| कराची          | Karachi     | +24 51              | -0 35 00                                             | +5.75                                                                    | -1 01 56                                                                         |
| काठमाण्डू      | Kathmandu   | +27 42              | +0 37 44                                             | -6.19                                                                    | +0 10 48                                                                         |
| खण्डवा         | Khandwa     | +21 50              | +0 02 28                                             | -0.41                                                                    | -0 24 28                                                                         |
| कोहिमा         | Kohima      | +25 41              | +1 13 24                                             | -12.05                                                                   | +0 46 28                                                                         |
| कोल्हापुर      | Kolhapur    | +16 42              | -0 06 08                                             | +0.99                                                                    | -0 33 04                                                                         |
| क्योटो         | Kyoto       | +35 00              | +4 0 06                                              | -39.44                                                                   | +3 33 10                                                                         |
| लाहौर          | Lahore      | +31 35              | -0 05 52                                             | +0.94                                                                    | -0 32 48                                                                         |
| लेनिनग्राद     | Leningrad   | +59 56              | -3 01 47                                             | +29.88                                                                   | -3 28 43                                                                         |
| लन्दन          | London      | +51 30              | -5 03 24                                             | +49.84                                                                   | -5 30 20                                                                         |
| लखनऊ           | Lucknow     | +26 51              | +0 20 40                                             | -3.39                                                                    | -0 06 16                                                                         |
| मद्रास         | Madras      | +13 04              | +0 17 55                                             | -2.94                                                                    | -0 09 01                                                                         |
| मसुलिपटम       | Masulipatam | +16 09              | +0 21 44                                             | -3.57                                                                    | -0 05 12                                                                         |
| मथुरा          | Mathura     | +27 28              | +0 07 44                                             | -1.27                                                                    | -0 19 12                                                                         |
| मॉस्को         | Moscow      | +55 45              | -2 32 47                                             | +25.10                                                                   | -2 59 43                                                                         |
| मैसूर          | Musore      | +12 18              | +0 03 32                                             | -0.58                                                                    | -0 23 24                                                                         |
| नागपुर         | Nagpur      | +21 09              | +0 13 16                                             | -2.18                                                                    | -0 13 40                                                                         |
| नैनिताल        | Nainital    | +29 22              | +0 14 46                                             | -2.42                                                                    | -0 12 10                                                                         |
| नासिक          | Nasik       | +20 02              | -0 07 44                                             | +1.27                                                                    | -0 34 40                                                                         |
| न्यूयार्क      | New York    | +40 48              | -9 58 54                                             | +98.39                                                                   | -10 25 50                                                                        |
| पेरिस          | Paris       | +48 50              | -4 53 43                                             | +48.25                                                                   | -5 20 38                                                                         |
| पटियाला        | Patiala     | +30 19              | +0 02 32                                             | -0.41                                                                    | -0 24 24                                                                         |
| पटना           | Patna       | +25 36              | +0 37 28                                             | -6.15                                                                    | +0 10 32                                                                         |
| पेशावर         | Peshawar    | +34 01              | -0 16 48                                             | +2.79                                                                    | -0 13 46                                                                         |
| पण्डिचेरी      | Pondicherry | +11 56              | +0 16 16                                             | -2.67                                                                    | -0 10 40                                                                         |
| पूना           | Poona       | +18 31              | -0 07 32                                             | +1.24                                                                    | -0 34 28                                                                         |



प्रमुख स्थानों के अक्षांश, देशान्तरादि  
Latitudes, Longitudes, etc., of Principal Places.

| प्रमुख स्थानों के अक्षांश, देशान्तरादि<br>Latitudes, Longitudes, etc., of Principal Places. |                     |                     |                                                      |                                                                          |                                                                                  |
|---------------------------------------------------------------------------------------------|---------------------|---------------------|------------------------------------------------------|--------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| स्थान<br>Place                                                                              |                     | अक्षांश<br>Latitude | देशान्तर<br>उज्जैन से<br>Longitude<br>from<br>Ujjain | उज्जैन नाक्षत्र-<br>काल में<br>संस्कार<br>Cor. to<br>Ujjain Sid.<br>Time | भारतीय समय<br>में स्थानीय<br>समय के लिये<br>संस्कार<br>Cor. To for<br>local time |
|                                                                                             |                     | 0                   | H. M. S.                                             | Second                                                                   | H. M. S.                                                                         |
| पोरबन्दर                                                                                    | Porbandar           | +21 38              | -0 24 36                                             | +4.04                                                                    | -0 51 32                                                                         |
| पुरी                                                                                        | Puri                | +19 48              | +0 40 16                                             | -6.61                                                                    | +0 51 20                                                                         |
| रायपुर                                                                                      | Raipur              | +21 15              | +0 23 40                                             | 2.89                                                                     | 0 03 16                                                                          |
| राजकोट                                                                                      | Rajkot              | +22 18              | -0 19 52                                             | +3.27                                                                    | -0 46 40                                                                         |
| रानपूर                                                                                      | Ranapur             | +16 47              | +0 21 36                                             | -13.40                                                                   | -0 54 40                                                                         |
| रतलाम                                                                                       | Ratlam              | +23 31              | -0 02 36                                             | +0.43                                                                    | -0 29 32                                                                         |
| रावलपिण्डी                                                                                  | Rawalpindi          | +33 35              | -0 10 52                                             | +1.79                                                                    | -0 37 48                                                                         |
| रीवा                                                                                        | Rewa                | +24 31              | +0 22 12                                             | -3.65                                                                    | -0 04 44                                                                         |
| रोम                                                                                         | Rome                | +41 55              | -4 13 16                                             | +41.60                                                                   | -4 40 12                                                                         |
| सतारा                                                                                       | Satara              | +17 42              | -0 06 56                                             | +1.14                                                                    | -0 33 52                                                                         |
| सोलापुर                                                                                     | Solapur             | +17 39              | +3 00 36                                             | -0.10                                                                    | -0 26 20                                                                         |
| शिमला                                                                                       | Shimla              | +34 06              | +5 05 36                                             | -0.92                                                                    | -0 21 20                                                                         |
| शिवगढ़                                                                                      | Shivgarh            | +34 06              | -0 03 52                                             | +0.64                                                                    | -0 30 48                                                                         |
| सूरत                                                                                        | Surat               | +21 10              | -0 11 40                                             | -1.92                                                                    | -0 38 36                                                                         |
| तेहरान                                                                                      | Teheran             | +35 41              | -1 37 48                                             | +16.06                                                                   | -2 04 44                                                                         |
| टोकियो                                                                                      | Tokyo               | +35 40              | +0 15 06                                             | -41.90                                                                   | +3 48 10                                                                         |
| त्रिवेन्द्रम                                                                                | Trivandrum          | +08 31              | +0 04 05                                             | -0.80                                                                    | -2 22 00                                                                         |
| उदयपुर                                                                                      | Udaipur             | +24 32              | -0 08 36                                             | +1.41                                                                    | -0 35 32                                                                         |
| उडिपी                                                                                       | Udipi               | +13 20              | -0 04 04                                             | +0.67                                                                    | -0 31 00                                                                         |
| उज्जैन                                                                                      | Ujjain              | +23 11              | -0 0 00                                              | 0.00                                                                     | -0 26 56                                                                         |
| वाराणसी                                                                                     | Varanasi            | +25 19              | +0 29 00                                             | -4.76                                                                    | +0 02 04                                                                         |
| विशाखापटन                                                                                   | Vishakha-<br>patnam | +17 43              | -0 30 12                                             | -4.96                                                                    | +0 03 16                                                                         |
| वाशिंगटन                                                                                    | Washington          | +38 55              | -10 11 20                                            | 100.43                                                                   | -10 38 16                                                                        |

प्रमुख तारकाओं में मध्यम स्थान, दिनांक 1 जनवरी 2015  
Mean Places of Principal Stars on 1st January 2015

| क्र.<br>S.<br>No. | अंग्रेजी नाम<br>English<br>Names | भारतीय नाम<br>Indian<br>Names | चमक<br>Mag. | वि. क्रान्ति<br>R. A. | क्रान्ति<br>Decl. | भोग<br>Long. | शर<br>Lat. |
|-------------------|----------------------------------|-------------------------------|-------------|-----------------------|-------------------|--------------|------------|
|                   |                                  |                               |             | H. M.                 | 0                 | 0            | 0          |
| 1                 | Pagasi                           | उ. भाद्र                      | 2.83        | 0-14                  | +15-16            | 9-22         | 12-36      |
| 2                 | Andromed                         | उ. भाद्र                      | 2.1         | 0-09                  | +29-10            | 14-32        | 25-41      |
| 3                 | Piscium                          | रेवती                         | 5.2         | 1-14                  | +07-39            | 20-06        | -0-12      |
| 4                 | Arietis                          | अश्विनी                       | 2.6         | 1-55                  | +20-53            | 34-12        | +18-29     |
| 5                 | Arietis                          | अश्विनी                       | 2.0         | 2-08                  | +23-32            | 37-53        | +9-58      |
| 6                 | Arietis                          | अश्विनी                       | 3.6         | 2-50                  | +27-19            | 48-26        | +10-27     |
| 7                 | Persel                           | ययाति                         | 2.1         | 3-09                  | +41-01            | 56-23        | +22-25     |
| 8                 | Tanry                            | रोहिणी                        | 3.70        | 4-36                  | +16-32            | 59-38        | +4-11      |
| 9                 | Tanry                            | कृत्तिका                      | 2.9         | 3-48                  | +24-09            | 70-01        | -5-27      |
| 10                | Orionis                          | मृग                           | 0.1         | 5-15                  | -8-11             | 77-03        | -31-07     |
| 11                | Aungac                           | ब्रह्महृदय                    | 0.1         | 5-17                  | +46-00            | 82-05        | +22-51     |
| 12                | Orionis                          | मृगशीर्ष                      | 3.6         | 5-35                  | +9-56             | 83-56        | -13-22     |
| 13                | Palaris                          | ध्रुव                         | 2.0         | 2-50                  | +89-19            | 88-47        | +66-06     |
| 14                | Orionis                          | आर्द्रा                       | 0.5         | 5-56                  | +7-24             | 88-59        | -16-01     |
| 15                | Canis Maioris                    | ज्याध                         | -1.5        | 6-45                  | -16-44            | 104-18       | -39-36     |
| 16                | Carinac                          | अगस्त्य                       | -0.7        | 6-24                  | -4-35             | 105-11       | -75-49     |
| 17                | Geminorum                        | पुनर्वसु                      | 1.9         | 7-35                  | +31-51            | 110-28       | +10-06     |
| 18                | Geminorum                        | पुनर्वसु                      | 1.1         | 7-46                  | +27-59            | 113-26       | +06-41     |
| 19                | Canis Maioris                    | प्रश्वा                       | 0.4         | 7-40                  | +5-11             | 116-01       | -16-01     |
| 20                | Cancri                           | पुष्या                        | 3.9         | 8-45                  | +18-05            | 128-57       | +0-04      |
| 21                | Cancri                           | आश्लेषा                       | 4.25        | 8-59                  | +11-47            | 133-52       | -05-04     |
| 22                | Leonis                           | मघा                           | 1.35        | 10-09                 | +11-53            | 150-03       | +00-27     |
| 23                | Leonis                           | पू. फा.                       | 2.6         | 11-14                 | +20-26            | 161-32       | +14-20     |
| 24                | Leonis                           | उ. फा.                        | 2.1         | 11-49                 | +14-29            | 171-50       | +12-16     |
| 25                | Corvi                            | हस्ता                         | 2.9         | 12-30                 | -16-36            | 193-40       | -12-11     |
| 26                | Virgins                          | चित्रा                        | 1.0         | 13-26                 | -11-14            | 204-04       | -02-03     |
| 27                | Bootis                           | स्वाति                        | -0.4        | 14-16                 | +19-06            | 204-27       | +30-44     |
| 28                | Librate                          | विशाखा                        | 2.7         | 14-51                 | -16-06            | +225-18      | +00-20     |
| 29                | Piicro                           | अनुराधा                       | 2.3         | 16-01                 | -22-39            | -242-48      | -01-59     |





के पीछे यह विचार था कि वह स्थान प्राचीन भारत के मध्य में स्थित होकर कर्क रेखा पर इसकी स्थिति ज्योतिषीय दृष्टि से अधिक युक्तियुक्त थी और वराहमिहिर की कर्मस्थली थी।

मराठा और अंग्रेजी शासनकाल में उज्जैन की वेधशाला उपेक्षित पड़ी रही। सन् 1904 में मुंबई में आयोजित ज्योतिष सम्मेलन में इसे सक्रिय करने का निर्णय किया गया। इस सम्मेलन की अध्यक्षता लोकमान्य बाल गंगाधर तिलक ने की थी। तत्पश्चात् ग्वालियर के महाराजा जीवाजीराव सिंधिया ने इसका पुनरुद्धार किया तभी से इसे श्री जीवाजी वेधशाला के रूप में अभिहित किया गया। मध्यप्रदेश की एकमात्र यह वेधशाला वर्तमान में शिक्षा विभाग के अधीन संचालित है। इस वेधशाला में प्रतिवर्ष हजारों दर्शक अपनी खगोलीय जिज्ञासा का समाधान करते हैं। इसके द्वारा प्रकाशित पंचांग (एफ मेरिज) की गणना का लाभ अनेक पारंपरिक पंचांगकर्ताओं को मिलता है। यह खगोल विज्ञान में मध्यप्रदेश के लिये गौरव का स्थान है।

श्री संजय गोयल  
जिला शिक्षा अधिकारी  
जिला-उज्जैन (मध्यप्रदेश)

बोधक चिन्हों की व्याख्या  
EXPLANATION OF SYMBOLS

| Planats   | ग्रह     | Sings         | राशि    | Aspects                 | योग           |
|-----------|----------|---------------|---------|-------------------------|---------------|
| ☉ Sun     | सूर्य    | ♈ Aries       | मेष     | ♂ Conjunction = 0°      | युति          |
| ☿ Mercury | बुध      | ♉ Taurus      | वृषभ    | ♌ Semi-Sextile = 30°    | द्विदिश       |
| ♀ Venus   | शुक्र    | ♊ Gemini      | मिथुन   | ♋ Semi-Quintile = 36°   | अंशयोग        |
| ♁ Earth   | पृथ्वी   | ♋ Cancer      | कर्क    | ♌ Semi-Aquare = 45°     | अर्द्धकेन्द्र |
| ☾ Moon    | चन्द्र   | ♌ Leo         | सिंह    | ♎ Sextile = 60°         | त्रिकोण       |
| ♂ Mars    | मंगल     | ♍ Virgo       | कन्या   | ♏ Quintile = 72°        | अंशयोग        |
| ♃ Jupiter | गुरु     | ♎ Libra       | तुला    | ♐ Square = 90°          | केन्द्र       |
| ♄ Saturn  | शनि      | ♏ Scorpio     | वृश्चिक | ♐ Trine = 120°          | त्रिकोण       |
| ♅ Uranus  | प्रजापति | ♐ Sagittarus  | धन      | ♑ Sesquiquadrate = 135° | अंशयोग        |
| ♆ Neptune | वरुण     | ♑ Capricornus | मकर     | ♒ Biquintile = 144°     | अंशयोग        |
| ♇ Pluto   | यम       | ♒ Aquatius    | कुंभ    | ♓ Quincunx = 150°       | षडाष्टक       |
| ♈ Rahu    | राहु     | ♓ Pisces      | मीन     | ♈ Opposition = 180°     | प्रतियोग      |

| Paush- Magha              |                          |             |         | JANUARY 2016                    |              |                   |              |            |                   |        |         |       |                           |       |
|---------------------------|--------------------------|-------------|---------|---------------------------------|--------------|-------------------|--------------|------------|-------------------|--------|---------|-------|---------------------------|-------|
| भा<br>र<br>ती<br>य<br>दि. | G<br>r<br>e<br>n.<br>Dt. | D<br>a<br>y | वा<br>र | नाक्षत्रकाल<br>Sidereal<br>Time | सूर्य        |                   |              |            | चन्द्र            |        |         |       | रवि<br>उदय<br>Sun<br>Rise |       |
|                           |                          |             |         |                                 | भोग<br>Long. | क्रान्ति<br>Decl. | भोग<br>Long. | शर<br>Lat. | क्रान्ति<br>Decl. |        |         |       |                           |       |
|                           |                          |             |         | H. M. S                         | ०            | १                 | २            | ०          | १                 | ०      | १       | ०     | १                         | H. M. |
| 11                        | 1                        | F           | शुक्र   | 6 40 22                         | 10           | 15                | 30           | 23 S 03    | 2 51              | 0 N 27 | 1 S 15  | 7: 09 |                           |       |
| 12                        | 2                        | S           | शनि     | 6 44 04                         | 11           | 16                | 41           | 22 58      | 14 43             | 1 28   | 4 N 05  | 7: 09 |                           |       |
| 13                        | 3                        | Su          | रवि     | 6 48 00                         | 12           | 17                | 50           | 22 52      | 16 32             | 2 26   | 7 39    | 7: 09 |                           |       |
| 14                        | 4                        | M           | सोम     | 6 51 57                         | 13           | 19                | 00           | 22 46      | 08 41             | 3 17   | 10 59   | 7: 10 |                           |       |
| 15                        | 5                        | Tu          | मंगल    | 6 55 53                         | 14           | 20                | 10           | 22 40      | 20 46             | 4 01   | 13 40   | 7: 10 |                           |       |
| 16                        | 6                        | W           | बुध     | 6 59 49                         | 15           | 21                | 21           | 22 33      | 03 06             | 4 34   | 15 49   | 7: 10 |                           |       |
| 17                        | 7                        | Th          | गुरु    | 7 03 45                         | 16           | 22                | 31           | 22 26      | 15 40             | 4 55   | 17 34   | 7: 10 |                           |       |
| 18                        | 8                        | F           | शुक्र   | 7 07 42                         | 17           | 23                | 41           | 22 18      | 28 50             | 5 S 01 | 18 13   | 7: 10 |                           |       |
| 19                        | 9                        | S           | शनि     | 7 11 38                         | 18           | 24                | 52           | 22 10      | 12 04             | 4 48   | 18 S 11 | 7: 10 |                           |       |
| 20                        | 10                       | Su          | रवि     | 7 15 34                         | 19           | 26                | 02           | 22 02      | 25 37             | 4 26   | 16 52   | 7: 10 |                           |       |
| 21                        | 11                       | M           | सोम     | 7 19 30                         | 20           | 27                | 12           | 21 53      | 09 23             | 3 45   | 14 32   | 7: 11 |                           |       |
| 22                        | 12                       | Tu          | मंगल    | 7 23 17                         | 21           | 08                | 21           | 21 43      | 23 37             | 2 49   | 11 51   | 7: 11 |                           |       |
| 23                        | 13                       | W           | बुध     | 7 27 23                         | 22           | 29                | 30           | 21 33      | 07 42             | 1 42   | 07 21   | 7: 11 |                           |       |
| 24                        | 14                       | Th          | गुरु    | 7 31 19                         | 23           | 30                | 39           | 21 23      | 21 50             | 0 43   | 03 10   | 7: 11 |                           |       |
| 25                        | 15                       | F           | शुक्र   | 7 35 15                         | 24           | 31                | 47           | 21 13      | 05 59             | 0 N 46 | 02 N 14 | 7: 11 |                           |       |
| 26                        | 16                       | S           | शनि     | 7 39 12                         | 25           | 32                | 55           | 21 02      | 20 06             | 1 58   | 05 38   | 7: 11 |                           |       |
| 27                        | 17                       | Su          | रवि     | 7 43 08                         | 26           | 34                | 01           | 20 50      | 04 13             | 3 03   | 09 30   | 7: 11 |                           |       |
| 28                        | 18                       | M           | सोम     | 7 47 04                         | 27           | 35                | 06           | 20 39      | 18 15             | 3 57   | 13 07   | 7: 11 |                           |       |
| 29                        | 19                       | Tu          | मंगल    | 7 51 00                         | 28           | 36                | 11           | 20 26      | 01 57             | 4 36   | 15 44   | 7: 11 |                           |       |
| 30                        | 20                       | W           | बुध     | 7 54 57                         | 29           | 37                | 15           | 20 13      | 15 49             | 4 59   | 17 27   | 7: 11 |                           |       |
| 1                         | 21                       | Th          | गुरु    | 7 58 53                         | 00           | 38                | 18           | 20 00      | 29 33             | 5 06   | 18 11   | 7: 11 |                           |       |
| 2                         | 22                       | F           | शुक्र   | 8 02 49                         | 1            | 39                | 21           | 19 47      | 13 06             | 4 52   | 18 S 06 | 7: 11 |                           |       |
| 3                         | 23                       | S           | शनि     | 8 06 45                         | 2            | 40                | 22           | 19 33      | 25 28             | 4 24   | 16 46   | 7: 11 |                           |       |
| 4                         | 24                       | Su          | रवि     | 8 10 41                         | 3            | 41                | 23           | 19 19      | 09 18             | 3 43   | 14 32   | 7: 10 |                           |       |
| 5                         | 25                       | M           | सोम     | 8 14 38                         | 4            | 42                | 24           | 19 05      | 22 07             | 2 51   | 11 35   | 7: 10 |                           |       |
| 6                         | 26                       | Tu          | मंगल    | 8 18 34                         | 5            | 43                | 23           | 18 50      | 04 40             | 1 51   | 08 24   | 7: 09 |                           |       |
| 7                         | 27                       | W           | बुध     | 8 22 30                         | 6            | 44                | 22           | 18 36      | 16 57             | 0 47   | 04 51   | 7: 09 |                           |       |
| 8                         | 28                       | Th          | गुरु    | 8 26 27                         | 7            | 45                | 19           | 18 20      | 28 44             | 0 N 18 | 01 50   | 7: 09 |                           |       |
| 9                         | 29                       | F           | शुक्र   | 8 30 23                         | 8            | 46                | 16           | 18 04      | 10 39             | 1 22   | 02 N 36 | 7: 09 |                           |       |
| 10                        | 30                       | S           | शनि     | 8 32 54                         | 9            | 47                | 13           | 17 48      | 22 29             | 2 21   | 06 15   | 7: 08 |                           |       |
| 11                        | 31                       | Su          | रवि     | 8 36 38                         | 10           | 48                | 09           | 17 32      | 04 19             | 3 14   | 09 39   | 7: 08 |                           |       |

| JANUARY 2016 पौष-माघ     |                |               |          |           |           |            |          |                                |       |                           |
|--------------------------|----------------|---------------|----------|-----------|-----------|------------|----------|--------------------------------|-------|---------------------------|
| G<br>r<br>e<br>n.<br>Dt. | Longitudes भोग |               |          |           |           |            |          | Ending<br>Moments of<br>Tithis |       | रवि<br>अस्त<br>Sun<br>Set |
|                          | वरुण<br>♄      | प्रजापति<br>♁ | शनि<br>♄ | गुरु<br>♁ | मंगल<br>♂ | शुक्र<br>♀ | बुध<br>♂ | तिथ्यंकाल<br>Tithi Times       |       |                           |
|                          | ०              | १             | ०        | १         | ०         | १          | ०        | १                              | ०     | H. M. H. S. H. M.         |
| 1                        | 07 32          | 16 35         | 11 10    | 23 10     | 28 42     | 02 23      | 29 28    | K 7                            | 21 39 | 3 19 5 52                 |
| 2                        | 34             | 35            | 17       | 11 29     | 16 03     | 36 00      | 30 05    | 8                              | 0 22  | 3 47 5 53                 |
| 3                        | 36             | 36            | 23       | 12 49     | 04 49     | 34         | 9        | 2 59                           | 4 15  | 5 53                      |
| 4                        | 37             | 36            | 30       | 13 00     | 22 06     | 02 51      | 10       | 5 13                           | 4 42  | 5 54                      |
| 5                        | 38             | 36            | 36       | 13 11     | 55 07     | 15 01      | 01 11    | ---                            | 5 10  | 5 55                      |
| 6                        | 40             | 37            | 43       | 14 01     | 28 08     | 28 00      | R 58     | 11                             | 6 54  | 5 36 5 56                 |
| 7                        | 41             | 37            | 49       | 14 02     | 07 09     | 41 45      | 12       | 7 55                           | 6 03  | 5 56                      |
| 8                        | 43             | 38            | 55       | 14 34     | 10 55     | 18 13      | 8 14     | 6 28                           | 5 57  |                           |
| 9                        | 45             | 38            | 12 02    | R 14 03   | 06 12     | 08 29      | 0 41     | 14                             | 7 54  | 6 54 5 58                 |
| 10                       | 47             | 39            | 08       | 14 39     | 13 21     | 28 52      | K 15     | 7 05                           | 7 19  | 5 59                      |
| 11                       | 48             | 40            | 14       | 14 04     | 11 14     | 34 27      | 53       | 17                             | 4 00  | 7 43 5 59                 |
| 12                       | 50             | 41            | 20       | 13 44     | 15 48     | 26 45      | 18       | 2 06                           | 8 07  | 6 00                      |
| 13                       | 51             | 42            | 26       | 12 05     | 16 17     | 01 25      | 32       | 19                             | 0 05  | 8 30 6 01                 |
| 14                       | 53             | 43            | 32       | 11 48     | 18 15     | 24 15      | 20       | 22 01                          | 8 52  | 6 01                      |
| 15                       | 55             | 44            | 38       | 09 16     | 20 19     | 28 22      | 56       | 21                             | 19 57 | 9 14 6 02                 |
| 16                       | 57             | 45            | 44       | 08 52     | 20 42     | 21 57      | 22       | 17 56                          | 9 35  | 6 03                      |
| 17                       | 58             | 46            | 50       | 06 07     | 24 21     | 55 20      | 23       | 15 58                          | 9 56  | 6 03                      |
| 18                       | 08 00          | 47            | 55       | 04 56     | 23 09     | 19 14      | 24       | 14 05                          | 10 15 | 6 04                      |
| 19                       | 02             | 48            | 13 01    | 02 08     | 27 24     | 22 18      | 10       | 25                             | 12 20 | 10 34 6 05                |
| 20                       | 04             | 49            | 06       | 00 59     | 25 36     | 17 15      | 26       | 10 43                          | 10 52 | 6 05                      |
| 21                       | 06             | 50            | 12       | 57 09     | 29 26     | 50 16      | 32       | 27                             | 9 20  | 11 10 6 06                |
| 22                       | 08             | 52            | 17       | 55 10     | 00 28     | 03 15      | 53       | 28                             | 8 14  | 11 26 6 07                |
| 23                       | 10             | 54            | 23       | 52 32     | 29 17     | 25 29      | 7 31     | 11 42                          | 6 08  |                           |
| 24                       | 12             | 55            | 28       | 49 11     | 03 00     | 0 31       | 07       | S 30                           | 7 16  | 11 57 6 08                |
| 25                       | 14             | 56            | 33       | 46 33     | 01 44     | 14 57      | K 1      | 7 33                           | 12 12 | 6 09                      |
| 26                       | 16             | 58            | 39       | 43 12     | 04 02     | 58 56      | 2        | 8 26                           | 12 25 | 6 10                      |
| 27                       | 18             | 59            | 44       | 39 55     | 04 12     | 15 02      | 3        | 9 56                           | 12 38 | 6 11                      |
| 28                       | 20             | 01            | 50       | 36 13     | 05 05     | 26 16      | 4        | 11 58                          | 12 49 | 6 11                      |
| 29                       | 22             | 03            | 54       | 32 36     | 06 40     | 36 5       | 14 25    | 13 01                          | 6 12  |                           |
| 30                       | 24             | 04            | 14 00    | 28 14     | 06 07     | 54 16      | 03       | 6 17 05                        | 13 11 | 6 12                      |
| 31                       | 26             | 06            | 04       | 24 36     | 09 08     | 36 7       | 19 44    | 13 20                          | 6 13  |                           |



| Magha-Phalguna FEBRUARY 2016 |                |       |       |                              |              |                   |       |              |            |                   |                     |  |  |
|------------------------------|----------------|-------|-------|------------------------------|--------------|-------------------|-------|--------------|------------|-------------------|---------------------|--|--|
| भारतीय दि.                   | G r e e n. Dt. | D a y | वा र  | नाक्षत्रकाल<br>Sidereal Time | ☉ सूर्य      |                   |       | ☾ चन्द्र     |            |                   | रवि उदय<br>Sun Rise |  |  |
|                              |                |       |       |                              | भोग<br>Long. | क्रान्ति<br>Decl. |       | भोग<br>Long. | शर<br>Lat. | क्रान्ति<br>Decl. |                     |  |  |
|                              |                |       |       | H. M. S                      | 0 1 11       | 0 1               |       | 0 1          | 0 1        | 0 1               | H. M.               |  |  |
| 12                           | 1              | M     | सोम   | 8 42 35                      | 11 49 04     | 17 S 14           |       | 16 29        | 4 N 00     | 12 N 27           | 7:08                |  |  |
| 13                           | 2              | Tu    | मंगल  | 8 44 43                      | 12 49 59     | 16 57             | 28 33 | 4 36         | 15 04      |                   | 7:07                |  |  |
| 14                           | 3              | W     | बुध   | 8 48 40                      | 13 50 52     | 16 40             | 10 51 | 5 00         | 16 48      |                   | 7:07                |  |  |
| 15                           | 4              | Th    | गुरु  | 8 52 37                      | 14 51 45     | 16 22             | 23 28 | 5 10         | 17 49      |                   | 7:06                |  |  |
| 16                           | 5              | F     | शुक्र | 8 56 33                      | 15 52 37     | 16 04             | 06 43 | 5 S 04       | 18 S 12    |                   | 7:06                |  |  |
| 17                           | 6              | S     | शनि   | 9 00 30                      | 16 53 28     | 15 46             | 20 06 | 4 43         | 17 10      |                   | 7:05                |  |  |
| 18                           | 7              | Su    | रवि   | 9 04 26                      | 17 54 18     | 15 28             | 04 08 | 4 04         | 15 27      |                   | 7:05                |  |  |
| 19                           | 8              | M     | सोम   | 9 08 23                      | 18 55 07     | 15 09             | 18 14 | 3 10         | 13 06      |                   | 7:04                |  |  |
| 20                           | 9              | Tu    | मंगल  | 9 12 19                      | 19 55 54     | 14 50             | 02 36 | 2 03         | 08 49      |                   | 7:04                |  |  |
| 21                           | 10             | W     | बुध   | 9 16 16                      | 20 56 40     | 14 31             | 17 08 | 0 53         | 04 43      |                   | 7:03                |  |  |
| 22                           | 11             | Th    | गुरु  | 9 20 12                      | 21 57 25     | 14 12             | 01 44 | 0 32         | 02 25      |                   | 7:03                |  |  |
| 23                           | 12             | F     | शुक्र | 9 24 09                      | 22 58 09     | 13 52             | 16 18 | 1 N 49       | 04 N 18    |                   | 7:02                |  |  |
| 24                           | 13             | S     | शनि   | 9 28 05                      | 23 58 50     | 13 32             | 00 44 | 2 59         | 08 37      |                   | 7:02                |  |  |
| 25                           | 14             | Su    | रवि   | 9 32 02                      | 24 59 30     | 13 12             | 15 01 | 3 57         | 12 16      |                   | 7:01                |  |  |
| 26                           | 15             | M     | सोम   | 9 35 59                      | 26 00 08     | 12 51             | 28 49 | 4 39         | 15 31      |                   | 7:00                |  |  |
| 27                           | 16             | Tu    | मंगल  | 9 39 55                      | 27 00 48     | 12 30             | 12 40 | 5 05         | 16 55      |                   | 6:59                |  |  |
| 28                           | 17             | W     | बुध   | 9 43 52                      | 28 01 19     | 12 09             | 26 17 | 5 13         | 17 54      |                   | 6:59                |  |  |
| 29                           | 18             | Th    | गुरु  | 9 47 48                      | 29 02 25     | 11 48             | 09 41 | 5 S 03       | 18 S 07    |                   | 6:58                |  |  |
| 30                           | 19             | F     | शुक्र | 9 51 45                      | 00 02 24     | 11 27             | 22 34 | 4 38         | 17 05      |                   | 6:57                |  |  |
| 1                            | 20             | S     | शनि   | 9 55 41                      | 01 03 53     | 11 05             | 05 30 | 3 59         | 15 08      |                   | 6:57                |  |  |
| 2                            | 21             | Su    | रवि   | 9 59 38                      | 02 03 21     | 10 44             | 18 13 | 3 09         | 12 44      |                   | 6:56                |  |  |
| 3                            | 22             | M     | सोम   | 10 03 34                     | 03 04 47     | 10 23             | 00 43 | 2 10         | 09 27      |                   | 6:55                |  |  |
| 4                            | 23             | Tu    | मंगल  | 10 07 31                     | 04 04 11     | 10 01             | 13 02 | 1 06         | 06 03      |                   | 6:54                |  |  |
| 5                            | 24             | W     | बुध   | 10 11 28                     | 05 04 35     | 09 39             | 25 09 | 0 N 26       | 02 25      |                   | 6:54                |  |  |
| 6                            | 25             | Th    | गुरु  | 10 15 24                     | 06 04 55     | 09 17             | 06 52 | 1 06         | 01 N 47    |                   | 6:53                |  |  |
| 7                            | 26             | F     | शुक्र | 10 19 21                     | 07 05 15     | 08 55             | 18 45 | 2 09         | 05 01      |                   | 6:52                |  |  |
| 8                            | 27             | S     | शनि   | 10 23 17                     | 08 05 34     | 08 32             | 00 34 | 3 05         | 08 30      |                   | 6:51                |  |  |
| 9                            | 28             | Su    | रवि   | 10 27 14                     | 09 05 50     | 08 10             | 12 23 | 3 53         | 11 24      |                   | 6:50                |  |  |
| 10                           | 29             | M     | सोम   | 10 32 58                     | 10 06 06     | 07 47             | 24 17 | 4 32         | 14 09      |                   | 6:49                |  |  |

| FEBRUARY 2016 माघ-फाल्गुन |                |               |          |           |           |            |          |     |                          |       |                     |  |  |
|---------------------------|----------------|---------------|----------|-----------|-----------|------------|----------|-----|--------------------------|-------|---------------------|--|--|
| G r e e n. Dt.            | Longitudes भोग |               |          |           |           |            |          |     | Ending Moments of Tithis |       | रवि अस्त<br>Sun Set |  |  |
|                           | वरुण<br>♄      | प्रजापति<br>♁ | शनि<br>♄ | गुरु<br>♁ | मंगल<br>♂ | शुक्र<br>♀ | बुध<br>♁ |     | तिथ्यंकाल<br>Tithi Times |       |                     |  |  |
|                           | 0 1            | 0 1           | 0 1      | 0 1       | 0 1       | 0 1        | 0 1      |     | H.M.                     | H.S.  | H.M.                |  |  |
| 1                         | 8 28           | 17 08         | 14 09    | 22 19     | 15 06     | 10 22      | 17 13    | K8  | 22 06                    | 13 29 | 6:14                |  |  |
| 2                         | 30             | 10            | 13       | R 15      | 36 11     | 36         | 55       | 9   | 23 57                    | 13 37 | 6:15                |  |  |
| 3                         | 32             | 12            | 18       | 10 16     | 05 12     | 50 18      | 42       | 10  | 1 07                     | 13 44 | 6:15                |  |  |
| 4                         | 34             | 14            | 23       | 05        | 35 14     | 04 19      | 32       | 11  | 1 31                     | 13 51 | 6:16                |  |  |
| 5                         | 36             | 16            | 27       | 00 17     | 04 15     | 18 20      | 25       | 12  | 1 08                     | 13 56 | 6:17                |  |  |
| 6                         | 38             | 18            | 32       | 21 55     | 33 16     | 32 21      | 22       | 13  | 0 03                     | 14 01 | 6:17                |  |  |
| 7                         | 41             | 20            | 36       | 50 18     | 02 17     | 46 22      | 22       | 14  | 22 20                    | 14 05 | 6:18                |  |  |
| 8                         | 43             | 22            | 41       | 44        | 31 19     | 00 23      | 24       | K15 | 20 09                    | 14 08 | 6:19                |  |  |
| 9                         | 45             | 24            | 45       | 38        | 59 20     | 14 24      | 29       | S16 | 17 37                    | 14 10 | 6:19                |  |  |
| 10                        | 47             | 26            | 49       | 32 19     | 28 21     | 28 25      | 37       | 17  | 14 52                    | 14 12 | 6:19                |  |  |
| 11                        | 49             | 28            | 53       | 26        | 56 22     | 42 26      | 46       | 18  | 12 03                    | 14 13 | 6:20                |  |  |
| 12                        | 51             | 30            | 57       | 20 20     | 24 23     | 56 27      | 57       | 19  | 9 17                     | 14 13 | 6:21                |  |  |
| 13                        | 54             | 33            | 15 01    | 14        | 51 25     | 10 29      | 10       | 20  | 6 40                     | 14 12 | 6:21                |  |  |
| 14                        | 56             | 35            | 05       | 08 21     | 19 26     | 24 00      | 25       | 22  | 2 12                     | 14 11 | 6:22                |  |  |
| 15                        | 58             | 38            | 09       | 02        | 46 27     | 38 01      | 41       | 23  | 0 27                     | 14 08 | 6:23                |  |  |
| 16                        | 09 00          | 40            | 13 20    | 55 22     | 13 28     | 53 02      | 58       | 24  | 23 05                    | 14 05 | 6:24                |  |  |
| 17                        | 03             | 43            | 16       | 48        | 40 00     | 07 04      | 18       | 25  | 22 07                    | 14 01 | 6:24                |  |  |
| 18                        | 05             | 46            | 20       | 42 23     | 07 01     | 21 05      | 38       | 26  | 21 34                    | 13 57 | 6:24                |  |  |
| 19                        | 07             | 48            | 23       | 35        | 33 02     | 36 07      | 00       | S27 | 21 27                    | 13 52 | 6:25                |  |  |
| 20                        | 09             | 50            | 27       | 28 24     | 00 03     | 49 08      | 23       | 28  | 21 47                    | 13 46 | 6:25                |  |  |
| 21                        | 12             | 53            | 30       | 21        | 26 05     | 03 09      | 47       | 29  | 22 34                    | 13 39 | 6:26                |  |  |
| 22                        | 14             | 55            | 33       | 14        | 52 06     | 18 11      | 13       | S30 | 23 50                    | 13 32 | 6:26                |  |  |
| 23                        | 16             | 58            | 36       | 07 25     | 17 07     | 32 12      | 40       | K1  | 1 32                     | 13 24 | 6:27                |  |  |
| 24                        | 18             | 18 00         | 39       | 19 59     | 43 08     | 46 14      | 08       | 2   | 3 39                     | 13 16 | 6:28                |  |  |
| 25                        | 21             | 03            | 42       | 52 26     | 08 10     | 00 15      | 36       | 3   | 6 05                     | 13 07 | 6:29                |  |  |
| 26                        | 23             | 06            | 45       | 45        | 33 11     | 14 17      | 07       | 4   | -- --                    | 12 57 | 6:29                |  |  |
| 27                        | 25             | 09            | 48       | 37        | 57 12     | 29 18      | 38       | 4   | 8 43                     | 12 47 | 6:29                |  |  |
| 28                        | 27             | 12            | 51       | 30 27     | 21 13     | 43 20      | 09       | 5   | 11 21                    | 12 36 | 6:29                |  |  |
| 29                        | 30             | 15            | 53       | 22        | 45 14     | 57 21      | 43       | 6   | 13 48                    | 12 25 | 6:30                |  |  |



| Phalguna-Chaitra          |                          |             |         | MARCH 2016                      |              |                   |              |            |                   |    |    |                           |      |      |      |       |      |
|---------------------------|--------------------------|-------------|---------|---------------------------------|--------------|-------------------|--------------|------------|-------------------|----|----|---------------------------|------|------|------|-------|------|
| भा<br>र<br>ती<br>य<br>दि. | G<br>r<br>e<br>n.<br>Dt. | D<br>a<br>y | वा<br>र | नाक्षत्रकाल<br>Sidereal<br>Time | ☉ सूर्य      |                   | ☾ चन्द्र     |            |                   |    |    | रवि<br>उदय<br>Sun<br>Rise |      |      |      |       |      |
|                           |                          |             |         |                                 | भोग<br>Long. | क्रान्ति<br>Decl. | भोग<br>Long. | शर<br>Lat. | क्रान्ति<br>Decl. |    |    |                           |      |      |      |       |      |
|                           |                          |             |         | H. M. S                         | 0            | 1                 | 11           | 0          | 1                 | 0  | 1  | 0                         | 1    | 0    | 1    | H. M. |      |
| 11                        | 1                        | Tu          | मंगल    | 10 36 55                        | 11           | 06                | 19           | 07         | S 17              | 06 | 20 | 36                        | 5    | N 00 | 16   | N 05  | 6:49 |
| 12                        | 2                        | W           | बुध     | 10 39 03                        | 12           | 06                | 31           | 07         | 01                | 18 | 52 | 5                         | 14   | 17   | 21   | 6:49  |      |
| 13                        | 3                        | Th          | गुरु    | 10 43 00                        | 13           | 06                | 42           | 06         | 38                | 01 | 26 | 5                         | S 14 | 18   | 04   | 6:48  |      |
| 14                        | 4                        | F           | शुक्र   | 10 46 57                        | 14           | 06                | 51           | 06         | 15                | 14 | 38 | 4                         | 58   | 17   | S 54 | 6:47  |      |
| 15                        | 5                        | S           | शनि     | 10 50 53                        | 15           | 06                | 59           | 05         | 52                | 27 | 58 | 4                         | 26   | 16   | 29   | 6:47  |      |
| 16                        | 6                        | Su          | रवि     | 10 54 50                        | 16           | 07                | 05           | 05         | 28                | 12 | 00 | 3                         | 38   | 13   | 33   | 6:45  |      |
| 17                        | 7                        | M           | सोम     | 10 58 46                        | 17           | 07                | 08           | 05         | 05                | 20 | 12 | 2                         | 35   | 10   | 42   | 6:44  |      |
| 18                        | 8                        | Tu          | मंगल    | 11 02 43                        | 18           | 07                | 11           | 04         | 42                | 10 | 47 | 1                         | 21   | 06   | 34   | 6:43  |      |
| 19                        | 9                        | W           | बुध     | 11 06 39                        | 19           | 07                | 11           | 04         | 18                | 25 | 37 | 0                         | N 33 | 02   | 14   | 6:42  |      |
| 20                        | 10                       | Th          | गुरु    | 11 10 36                        | 20           | 07                | 11           | 03         | 55                | 10 | 51 | 1                         | 21   | 02   | N 29 | 6:42  |      |
| 21                        | 11                       | F           | शुक्र   | 11 14 32                        | 21           | 07                | 08           | 03         | 31                | 25 | 34 | 2                         | 38   | 07   | 06   | 6:41  |      |
| 22                        | 12                       | S           | शनि     | 11 18 29                        | 22           | 07                | 02           | 03         | 07                | 10 | 26 | 3                         | 43   | 10   | 56   | 6:40  |      |
| 23                        | 13                       | Su          | रवि     | 11 22 26                        | 23           | 06                | 55           | 02         | 44                | 25 | 03 | 4                         | 32   | 14   | 39   | 6:39  |      |
| 24                        | 14                       | M           | सोम     | 11 26 22                        | 24           | 06                | 45           | 02         | 20                | 09 | 11 | 5                         | 04   | 16   | 23   | 6:38  |      |
| 25                        | 15                       | Tu          | मंगल    | 11 30 19                        | 25           | 06                | 33           | 01         | 56                | 23 | 02 | 5                         | S 16 | 17   | 38   | 6:37  |      |
| 26                        | 16                       | W           | बुध     | 11 34 15                        | 26           | 06                | 19           | 01         | 33                | 06 | 36 | 5                         | 10   | 18   | S 06 | 6:36  |      |
| 27                        | 17                       | Th          | गुरु    | 11 38 12                        | 27           | 06                | 02           | 01         | 09                | 19 | 50 | 4                         | 48   | 17   | 18   | 6:35  |      |
| 28                        | 18                       | F           | शुक्र   | 11 42 08                        | 28           | 05                | 44           | 00         | 45                | 02 | 02 | 4                         | 12   | 15   | 34   | 6:34  |      |
| 29                        | 19                       | S           | शनि     | 11 46 05                        | 29           | 05                | 24           | 00         | 21                | 15 | 08 | 3                         | 23   | 13   | 21   | 6:33  |      |
| 30                        | 20                       | Su          | रवि     | 11 50 01                        | 00           | 04                | 59           | 00         | S 01              | 27 | 08 | 2                         | 26   | 10   | 15   | 6:32  |      |
| 1                         | 21                       | M           | सोम     | 11 53 58                        | 1            | 04                | 34           | 00         | N 26              | 09 | 47 | 1                         | 24   | 06   | 58   | 6:31  |      |
| 2                         | 22                       | Tu          | मंगल    | 11 57 55                        | 2            | 04                | 06           | 00         | 50                | 21 | 34 | 0                         | 34   | 03   | 24   | 6:30  |      |
| 3                         | 23                       | W           | बुध     | 12 01 51                        | 3            | 03                | 37           | 01         | 13                | 03 | 31 | 0                         | N 48 | 01   | N 43 | 6:29  |      |
| 4                         | 24                       | Th          | गुरु    | 12 03 00                        | 4            | 03                | 05           | 01         | 37                | 15 | 25 | 1                         | 51   | 04   | 00   | 6:28  |      |
| 5                         | 25                       | F           | शुक्र   | 12 06 57                        | 5            | 02                | 31           | 02         | 00                | 27 | 15 | 2                         | 49   | 07   | 33   | 6:27  |      |
| 6                         | 26                       | S           | शनि     | 12 10 53                        | 6            | 01                | 55           | 02         | 24                | 09 | 06 | 3                         | 40   | 10   | 50   | 6:26  |      |
| 7                         | 27                       | Su          | रवि     | 12 14 49                        | 7            | 01                | 18           | 02         | 47                | 20 | 55 | 4                         | 22   | 13   | 27   | 6:25  |      |
| 8                         | 28                       | M           | सोम     | 12 18 45                        | 8            | 00                | 38           | 03         | 11                | 03 | 08 | 4                         | 52   | 15   | 32   | 6:24  |      |
| 9                         | 29                       | Tu          | मंगल    | 12 22 42                        | 8            | 59                | 14           | 03         | 34                | 15 | 13 | 5                         | 10   | 17   | 15   | 6:23  |      |
| 10                        | 30                       | W           | बुध     | 12 21 38                        | 9            | 59                | 14           | 03         | 57                | 27 | 28 | 5                         | S 14 | 17   | 58   | 6:22  |      |
| 11                        | 31                       | Th          | गुरु    | 12 35 12                        | 10           | 58                | 30           | 04         | 20                | 10 | 23 | 5                         | 04   | 18   | S 06 | 6:21  |      |

| MARCH 2016 फल्गुन-चैत्र  |                         |               |          |           |           |            |          |                                |                           |
|--------------------------|-------------------------|---------------|----------|-----------|-----------|------------|----------|--------------------------------|---------------------------|
| G<br>r<br>e<br>n.<br>Dt. | Longitudes भोग          |               |          |           |           |            |          | Ending<br>Moments of<br>Tithis | रवि<br>अस्त<br>Sun<br>Set |
|                          | वरुण<br>卐               | प्रजापति<br>॥ | शनि<br>॥ | गुरु<br>卐 | मंगल<br>॥ | शुक्र<br>卐 | बुध<br>卐 | तिथ्यकाल<br>Tithi Times        |                           |
|                          | 0 1 0 1 0 1 0 1 0 1 0 1 |               |          |           |           |            |          | H. M. H. S.                    | 0 1                       |
| 1                        | 09 32                   | 18 17         | 15 56    | 19 14     | 28 09     | 16 11      | 23 17    | K 7                            | 15 52 12 13 6:30          |
| 2                        | 34                      | 18 20         | 58       | R 07      | 32        | 17 25      | 24 52    | 8                              | 17 20 12 01 6:30          |
| 3                        | 37                      | 23 16         | 00 18    | 59        | 56        | 18 40      | 26 58    | 9                              | 18 05 11 49 6:31          |
| 4                        | 39                      | 26            | 02       | 51        | 29 19     | 19 54      | 28 06    | 10                             | 18 02 11 36 6:31          |
| 5                        | 41                      | 29            | 04       | 43        | 41        | 21 08      | 29 44    | 11                             | 17 12 11 22 6:31          |
| 6                        | 44                      | 32            | 06       | 36        | 00 04     | 22 22      | 01 23    | 12                             | 15 36 11 08 6:32          |
| 7                        | 46                      | 35            | 08       | 28        | 26 23     | 37 03      | 04 13    | 13                             | 13 21 10 54 6:33          |
| 8                        | 48                      | 38            | 10       | 20        | 47        | 24 51      | 04 46    | 14                             | 10 34 10 39 6:33          |
| 9                        | 50                      | 41            | 11       | 12        | 01 09     | 26 05      | 06 29    | K 15<br>S 16                   | 7 15<br>4 01 10 24 6:34   |
| 10                       | 53                      | 44            | 13       | 04        | 29 27     | 19 08      | 13 S 17  | 0 34                           | 10 09 6:34                |
| 11                       | 55                      | 47            | 14       | 17        | 56        | 50 28      | 34 09    | 58                             | 18 21 12 09 53 6:34       |
| 12                       | 57                      | 51            | 16       | 49        | 02 10     | 29 48      | 11 44    | 19                             | 18 03 09 37 6:35          |
| 13                       | 10 00                   | 54            | 17       | 41        | 30 01 02  | 13 31      | 20 15    | 16                             | 19 21 6:35                |
| 14                       | 02                      | 57            | 18       | 33        | 49 02     | 16 15      | 20 21    | 12 58                          | 19 04 6:35                |
| 15                       | 04                      | 19 00         | 19       | 25        | 03 08 03  | 31 17      | 10 22    | 11 12                          | 08 48 6:36                |
| 16                       | 06                      | 03            | 20       | 18        | 27 04     | 45 19      | 00 23    | 10 03                          | 08 30 6:36                |
| 17                       | 08                      | 05            | 21       | 10        | 45 05     | 59 20      | 53 24    | 9 02                           | 08 13 6:37                |
| 18                       | 10                      | 10            | 22       | 02        | 04 03 07  | 13 22      | 46 25    | 9 39                           | 07 56 6:37                |
| 19                       | 12                      | 13            | 22       | 16        | 55 21 08  | 27 24      | 40 26    | 10 20                          | 07 38 6:38                |
| 20                       | 15                      | 16            | 23       | 47        | 37 09     | 42 26      | 36 27    | 11 32                          | 07 20 6:38                |
| 21                       | 17                      | 20            | 23       | 40        | 54 10     | 56 28      | 33 S 28  | 13 12                          | 07 02 6:38                |
| 22                       | 19                      | 23            | 24       | 33        | 05 10 12  | 10 00      | 00 29    | 15 13                          | 06 44 6:39                |
| 23                       | 21                      | 26            | 24       | 25        | 25 13     | 24 02      | 30 30    | 17 31                          | 06 26 6:39                |
| 24                       | 23                      | 30            | 24       | 18        | 41 14     | 38 04      | 30 K 1   | 20 00                          | 06 08 6:39                |
| 25                       | 25                      | 33            | 24       | 11        | 55 15     | 52 06      | 30 2     | 22 35                          | 05 50 6:40                |
| 26                       | 28                      | 36            | 24       | 04        | 06 10     | 17 07      | 08 31    | 3                              | 1 08 05 32 6:40           |
| 27                       | 30                      | 40            | R 24     | 15 57     | 24 18     | 21 10      | 33 4     | 3 34                           | 05 13 6:41                |
| 28                       | 32                      | 43            | 24       | 50        | 37 19     | 35 12      | 35 5     | 5 41                           | 04 55 6:41                |
| 29                       | 34                      | 46            | 24       | 43        | 49 20     | 49 14      | 39 6     | --                             | 04 37 6:41                |
| 30                       | 36                      | 50            | 23       | 37        | 07 01     | 22 03      | 16 41    | 6                              | 7 22 04 19 6:42           |
| 31                       | 38                      | 54            | 23       | 30        | 13 23     | 17 18      | 43 7     | 8 28                           | 04 01 6:42                |



## Chaitra-Vaishakha

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| इल<br>य<br>प्र<br>ॐ | G<br>r<br>e<br>n.<br>Dt. | D<br>a<br>y | वा<br>र | नाक्षत्रकाल<br>Sidereal<br>Time | ☉ सूर्य      |                   | ☾ चन्द्र     |            |                   | रवि<br>उदय<br>Sun<br>Rise |
|---------------------|--------------------------|-------------|---------|---------------------------------|--------------|-------------------|--------------|------------|-------------------|---------------------------|
|                     |                          |             |         |                                 | भोग<br>Long. | क्रान्ति<br>Decl. | भोग<br>Long. | शर<br>Lat. | क्रान्ति<br>Decl. |                           |
|                     |                          |             |         |                                 |              |                   |              |            |                   |                           |
|                     |                          |             |         | H. M. S                         | 0 1 2        | 0 1               | 0 1          | 0 1        | 0 1               | H. M.                     |
| 12                  | 1                        | F           | शुक्र   | 12 39 08                        | 11 57 40     | 04 N 43           | 23 04        | 4 S 38     | 17 S 03           | 6:20                      |
| 13                  | 2                        | S           | शनि     | 12 43 05                        | 12 56 52     | 05 06             | 06 17        | 3 57       | 15 03             | 6:19                      |
| 14                  | 3                        | Su          | रवि     | 12 47 01                        | 13 56 02     | 05 30             | 19 55        | 3 01       | 12 08             | 6:18                      |
| 15                  | 4                        | M           | सोम     | 12 50 58                        | 14 55 10     | 05 52             | 04 16        | 01 54      | 08 23             | 6:17                      |
| 16                  | 5                        | Tu          | मंगल    | 12 54 54                        | 15 54 16     | 06 15             | 18 47        | 00 59      | 04 15             | 6:16                      |
| 17                  | 6                        | W           | बुध     | 12 58 51                        | 16 53 20     | 06 N 38           | 03 55        | 00 N 44    | 01 51             | 6:15                      |
| 18                  | 7                        | Th          | गुरु    | 13 02 47                        | 17 52 23     | 07 01             | 19 02        | 02 04      | 06 N 02           | 6:14                      |
| 19                  | 8                        | F           | शुक्र   | 13 06 44                        | 18 51 23     | 07 23             | 04 15        | 03 15      | 09 40             | 6:13                      |
| 20                  | 9                        | S           | शनि     | 13 10 41                        | 19 50 21     | 07 45             | 19 24        | 04 12      | 13 08             | 6:13                      |
| 21                  | 10                       | Su          | रवि     | 13 14 37                        | 20 49 17     | 08 08             | 04 05        | 04 50      | 15 53             | 6:12                      |
| 22                  | 11                       | M           | सोम     | 13 18 34                        | 21 48 11     | 08 30             | 18 40        | 05 09      | 17 34             | 6:11                      |
| 23                  | 12                       | Tu          | मंगल    | 13 22 30                        | 22 47 04     | 08 52             | 02 32        | 05 S 09    | 18 09             | 6:10                      |
| 24                  | 13                       | W           | बुध     | 13 26 27                        | 23 45 53     | 09 13             | 16 14        | 04 51      | 17 S 38           | 6:09                      |
| 25                  | 14                       | Th          | गुरु    | 13 30 24                        | 24 44 40     | 09 35             | 29 13        | 04 17      | 16 23             | 6:08                      |
| 26                  | 15                       | F           | शुक्र   | 13 34 20                        | 25 43 25     | 09 57             | 12 05        | 03 31      | 14 02             | 6:07                      |
| 27                  | 16                       | S           | शनि     | 13 38 17                        | 26 42 07     | 10 18             | 24 36        | 02 37      | 11 03             | 6:06                      |
| 28                  | 17                       | Su          | रवि     | 13 42 13                        | 27 40 48     | 10 39             | 06 51        | 01 36      | 07 51             | 6:05                      |
| 29                  | 18                       | M           | सोम     | 13 46 10                        | 28 39 26     | 11 00             | 18 37        | 00 40      | 04 20             | 6:04                      |
| 30                  | 19                       | Tu          | मंगल    | 13 50 06                        | 29 38 02     | 11 20             | 00 33        | 00 N 33    | 01 53             | 6:04                      |
| 31                  | 20                       | W           | बुध     | 13 54 03                        | 00 36 36     | 11 41             | 12 24        | 01 36      | 03 N 04           | 6:03                      |
| 01                  | 21                       | Th          | गुरु    | 13 57 59                        | 01 35 08     | 12 01             | 24 13        | 02 34      | 06 41             | 6:02                      |
| 02                  | 22                       | F           | शुक्र   | 14 01 56                        | 02 33 38     | 12 21             | 06 03        | 03 25      | 10 04             | 6:01                      |
| 03                  | 23                       | S           | शनि     | 14 05 53                        | 03 32 06     | 12 41             | 17 55        | 04 08      | 12 49             | 6:01                      |
| 04                  | 24                       | Su          | रवि     | 14 09 49                        | 04 30 33     | 13 01             | 00 08        | 04 40      | 15 22             | 6:00                      |
| 05                  | 25                       | M           | सोम     | 14 13 46                        | 05 28 57     | 13 21             | 12 10        | 05 01      | 17 00             | 5:59                      |
| 06                  | 26                       | Tu          | मंगल    | 14 17 42                        | 06 27 20     | 13 40             | 24 21        | 05 07      | 17 56             | 5:58                      |
| 07                  | 27                       | W           | बुध     | 14 21 39                        | 07 25 41     | 13 59             | 06 41        | 04 S 59    | 18 18             | 5:57                      |
| 08                  | 28                       | Th          | गुरु    | 14 25 35                        | 08 24 04     | 14 18             | 19 14        | 04 37      | 17 S 31           | 5:56                      |
| 09                  | 29                       | F           | शुक्र   | 14 29 32                        | 09 22 20     | 14 37             | 02 19        | 04 02      | 15 49             | 5:55                      |
| 10                  | 30                       | S           | शनि     | 14 33 28                        | 10 20 36     | 14 55             | 15 27        | 03 12      | 13 31             | 5:55                      |

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चैत्र - वैशाख

| G<br>r<br>e<br>n.<br>Dt. | Longitudes भोग |               |          |           |           |            |          |                    |              |      | Ending<br>Moments<br>of Tithis | Equa-<br>tion of<br>Time | रवि<br>अस्त<br>Sun<br>Set |      |          |              |       |      |
|--------------------------|----------------|---------------|----------|-----------|-----------|------------|----------|--------------------|--------------|------|--------------------------------|--------------------------|---------------------------|------|----------|--------------|-------|------|
|                          | वरुण<br>♄      | प्रजापति<br>♁ | शनि<br>♄ | गुरु<br>♄ | मंगल<br>♂ | शुक्र<br>♀ | बुध<br>♁ | तिथ्यंकाल<br>Tithi | कला-<br>न्तर |      |                                |                          |                           |      |          |              |       |      |
|                          | 0              | 1             | 0        | 1         | 0         | 1          | 0        | 1                  | 0            | 1    |                                | H.M.                     | MS.                       | H.M. |          |              |       |      |
| 1                        | 103            | 41            | 19       | 56        | 16        | 22         | 15       | 02                 | 07           | 24   | 24                             | 31                       | 20                        | 45   | K 8      | 8 54         | 03 43 | 6:42 |
| 2                        |                | 43            | 20       | 01        |           | R 21       |          | R 17               |              | 34   | 25                             | 46                       | 22                        | 46   | 9        | 8 34         | 03 26 | 6:42 |
| 3                        |                | 45            |          | 04        |           | 21         |          | 11                 |              | 44   | 27                             | 00                       | 24                        | 46   | 10<br>11 | 7 28<br>6 38 | 03 08 | 6:43 |
| 4                        |                | 47            |          | 08        |           | 20         |          | 05                 |              | 53   | 28                             | 14                       | 26                        | 44   | 12       | 3 07         | 02 51 | 6:44 |
| 5                        |                | 49            |          | 11        |           | 19         | 14       | 59                 | 08           | 02   | 29                             | 08                       | 28                        | 40   | 13       | 0 04         | 02 34 | 6:44 |
| 6                        |                | 51            |          | 15        |           | 17         |          | 54                 |              | 10   | 00                             | 44                       | 00                        | 35   | 14       | 20 37        | 02 17 | 6:44 |
| 7                        |                | 53            |          | 18        |           | 16         |          | 48                 |              | 17   | 01                             | 56                       | 02                        | 26   | 15       | 16 54        | 02 00 | 6:44 |
| 8                        |                | 55            |          | 22        |           | 15         |          | 43                 |              | 24   | 03                             | 10                       | 04                        | 14   | S 16     | 13 06        | 01 44 | 6:45 |
| 9                        |                | 56            |          | 25        |           | 13         |          | 38                 |              | 30   | 04                             | 24                       | 05                        | 59   | 17       | 9 27         | 01 27 | 6:45 |
| 10                       |                | 58            |          | 28        |           | 12         |          | 33                 |              | 35   | 05                             | 38                       | 07                        | 40   | 18<br>19 | 5 56<br>2 54 | 01 12 | 6:45 |
| 11                       | 11             | 00            |          | 32        |           | 10         |          | 28                 |              | 40   | 06                             | 53                       | 09                        | 17   | 20       | 00 27        | 00 56 | 6:45 |
| 12                       |                | 02            |          | 35        |           | 08         |          | 23                 |              | 44   | 08                             | 07                       | 10                        | 49   | 21       | 22 41        | 00 40 | 6:46 |
| 13                       |                | 04            |          | 39        |           | 07         |          | 18                 |              | 48   | 09                             | 21                       | 12                        | 18   | 22       | 21 41        | 00 25 | 6:46 |
| 14                       |                | 06            |          | 42        |           | 05         |          | 13                 |              | 51   | 10                             | 35                       | 13                        | 40   | 25       | 21 29        | 00 10 | 6:46 |
| 15                       |                | 07            |          | 46        |           | 03         |          | 09                 |              | 52   | 11                             | 49                       | 14                        | 59   | 24       | 22 03        | 01 56 | 6:47 |
| 16                       |                | 09            |          | 49        |           | 01         |          | 05                 |              | 53   | 13                             | 03                       | 16                        | 12   | 25       | 23 18        | 01 42 | 6:48 |
| 17                       |                | 11            |          | 52        | 15        | 58         |          | 00                 |              | 54   | 14                             | 17                       | 17                        | 20   | 26       | 25 07        | 01 28 | 6:48 |
| 18                       |                | 12            |          | 56        |           | 56         | 13       | 57                 |              | R 54 | 15                             | 31                       | 18                        | 23   | 27       | 03 19        | 01 15 | 6:48 |
| 19                       |                | 14            |          | 59        |           | 54         |          | 53                 |              | 53   | 16                             | 45                       | 19                        | 20   | 28       | -- --        | 01 02 | 6:49 |
| 20                       |                | 16            | 21       | 03        |           | 52         |          | 49                 |              | 51   | 17                             | 59                       | 20                        | 12   | 28       | 5 47         | 02 49 | 6:49 |
| 21                       |                | 17            |          | 06        |           | 49         |          | 46                 |              | 49   | 19                             | 13                       |                           | 57   | 29       | 8 21         | 02 37 | 6:50 |
| 22                       |                | 19            |          | 09        |           | 47         |          | 42                 |              | 46   | 20                             | 27                       | 21                        | 37   | S 30     | 10 54        | 02 25 | 6:50 |
| 23                       |                | 20            |          | 13        |           | 44         |          | 39                 |              | 42   | 21                             | 41                       | 22                        | 11   | K 1      | 13 20        | 02 14 | 6:50 |
| 24                       |                | 22            |          | 16        |           | 41         |          | 36                 |              | 37   | 22                             | 55                       |                           | 39   | 2        | 15 35        | 02 03 | 6:51 |
| 25                       |                | 23            |          | 20        |           | 39         |          | 34                 |              | 31   | 24                             | 08                       | 23                        | 02   | 3        | 17 34        | 03 53 | 6:51 |
| 26                       |                | 25            |          | 23        |           | 36         |          | 31                 |              | 25   | 25                             | 22                       |                           | 19   | 4        | 19 11        | 03 43 | 6:52 |
| 27                       |                | 26            |          | 26        |           | 33         |          | 29                 |              | 18   | 26                             | 36                       |                           | 30   | 5        | 20 23        | 03 34 | 6:52 |
| 28                       |                | 28            |          | 30        |           | 30         |          | 27                 |              | 11   | 27                             | 50                       |                           | 35   | 6        | 21 05        | 03 25 | 6:53 |
| 29                       |                | 29            |          | 33        |           | 27         |          | 25                 |              | 03   | 29                             | 04                       |                           | R 35 | 7        | 21 10        | 03 17 | 6:53 |
| 30                       |                | 31            |          | 36        |           | 24         |          | 23                 | 07           | 53   | 00                             | 18                       |                           | 29   | 8        | 20 37        | 03 09 | 6:53 |



| Vaishakha-Jyaistha MAY 2016 |                               |             |         |                                 |              |                   |              |            |                   |                           |
|-----------------------------|-------------------------------|-------------|---------|---------------------------------|--------------|-------------------|--------------|------------|-------------------|---------------------------|
| भा<br>र<br>ती<br>य<br>दि.   | G<br>r<br>e<br>e<br>n.<br>Dt. | D<br>a<br>y | वा<br>र | नाक्षत्रकाल<br>Sidereal<br>Time | ☉ सूर्य      |                   | ☾ चन्द्र     |            |                   | रवि<br>उदय<br>Sun<br>Rise |
|                             |                               |             |         |                                 | भोग<br>Long. | क्रान्ति<br>Decl. | भोग<br>Long. | शर<br>Lat. | क्रान्ति<br>Decl. |                           |
|                             |                               |             |         | H. M. S                         | 0 1 11       | 0 1               | 0 1          | 0 1        | 0 1               | H. M.                     |
| 11                          | 1                             | Su          | रवि     | 14 37 25                        | 11 18 51     | 15 N 13           | 28 57        | 02 S 10    | 10 S 06           | 5:54                      |
| 12                          | 2                             | M           | सोम     | 14 41 22                        | 12 17 05     | 15 31             | 13 07        | 01 00      | 06 02             | 5:54                      |
| 13                          | 3                             | Tu          | मंगल    | 14 45 18                        | 13 15 17     | 15 49             | 27 24        | 00 24      | 02 16             | 5:53                      |
| 14                          | 4                             | W           | बुध     | 14 49 15                        | 14 13 28     | 16 07             | 12 05        | 01 N 33    | 02 N 55           | 5:52                      |
| 15                          | 5                             | Th          | गुरु    | 14 53 11                        | 15 11 37     | 16 24             | 27 21        | 02 46      | 07 29             | 5:51                      |
| 16                          | 6                             | F           | शुक्र   | 14 57 08                        | 16 09 45     | 16 40             | 12 31        | 03 47      | 11 27             | 5:51                      |
| 17                          | 7                             | S           | शनि     | 15 01 04                        | 17 07 50     | 16 57             | 27 42        | 04 31      | 14 39             | 5:50                      |
| 18                          | 8                             | Su          | रवि     | 15 05 01                        | 18 05 54     | 17 13             | 12 28        | 04 57      | 16 58             | 5:49                      |
| 19                          | 9                             | M           | सोम     | 15 08 57                        | 19 03 57     | 17 29             | 27 12        | 05 03      | 18 05             | 5:49                      |
| 20                          | 10                            | Tu          | मंगल    | 15 12 54                        | 20 01 59     | 17 45             | 11 14        | 04 S 49    | 18 16             | 5:48                      |
| 21                          | 11                            | W           | बुध     | 15 16 51                        | 20 59 58     | 18 00             | 25 04        | 04 18      | 17 S 04           | 5:48                      |
| 22                          | 12                            | Th          | गुरु    | 15 20 47                        | 21 57 55     | 18 15             | 08 24        | 03 35      | 14 56             | 5:47                      |
| 23                          | 13                            | F           | शुक्र   | 15 24 44                        | 22 55 51     | 18 30             | 21 03        | 02 41      | 12 04             | 5:47                      |
| 24                          | 14                            | S           | शनि     | 15 28 40                        | 23 53 44     | 18 45             | 03 34        | 01 41      | 08 55             | 5:47                      |
| 25                          | 15                            | Su          | रवि     | 15 32 34                        | 24 51 36     | 18 59             | 15 46        | 00 43      | 05 26             | 5:46                      |
| 26                          | 16                            | M           | सोम     | 15 36 33                        | 25 49 25     | 19 13             | 27 30        | 00 N 26    | 01 50             | 5:45                      |
| 27                          | 17                            | Tu          | मंगल    | 15 40 30                        | 26 47 14     | 19 26             | 09 22        | 01 28      | 02 N 00           | 5:45                      |
| 28                          | 18                            | W           | बुध     | 15 44 26                        | 27 45 00     | 19 40             | 21 10        | 02 25      | 05 41             | 5:44                      |
| 29                          | 19                            | Th          | गुरु    | 15 48 23                        | 28 42 46     | 19 52             | 03 11        | 00 03      | 16 09             | 5:44                      |
| 30                          | 20                            | F           | शुक्र   | 15 52 20                        | 29 40 29     | 20 05             | 14 51        | 03 59      | 12 04             | 5:43                      |
| 31                          | 21                            | S           | शनि     | 15 56 16                        | 00 II 38     | 20 17             | 27 06        | 04 31      | 14 57             | 5:43                      |
| 1                           | 22                            | Su          | रवि     | 16 00 13                        | 01 35 53     | 20 28             | 09 11        | 04 52      | 16 39             | 5:43                      |
| 2                           | 23                            | M           | सोम     | 16 04 09                        | 02 33 32     | 20 40             | 21 23        | 04 59      | 17 49             | 5:43                      |
| 3                           | 24                            | Tu          | मंगल    | 16 08 06                        | 03 31 10     | 20 51             | 03 46        | 04 S 53    | 18 26             | 5:42                      |
| 4                           | 25                            | W           | बुध     | 16 12 02                        | 04 28 18     | 21 02             | 16 18        | 04 33      | 18 S 10           | 5:42                      |
| 5                           | 26                            | Th          | गुरु    | 16 15 59                        | 05 26 24     | 21 13             | 29 01        | 03 58      | 16 43             | 5:42                      |
| 6                           | 27                            | F           | शुक्र   | 16 19 55                        | 06 23 59     | 21 22             | 12 13        | 03 11      | 14 22             | 5:42                      |
| 7                           | 28                            | S           | शनि     | 16 23 52                        | 07 21 33     | 21 32             | 25 24        | 02 13      | 11 13             | 5:41                      |
| 8                           | 29                            | Su          | रवि     | 16 27 49                        | 08 19 07     | 21 41             | 08 51        | 01 07      | 07 39             | 5:41                      |
| 9                           | 30                            | M           | सोम     | 16 31 45                        | 09 16 40     | 21 50             | 22 54        | 00 27      | 03 18             | 5:41                      |
| 10                          | 31                            | Tu          | मंगल    | 16 35 42                        | 10 14 11     | 21 58             | 07 00        | 01 N 18    | 02 19             | 5:41                      |

| MAY 2016                      |                |               |          |           |           |            |          |                          |          |       |            |           |                                |       |                          | वैशाख-ज्येष्ठ             |  |  |  |
|-------------------------------|----------------|---------------|----------|-----------|-----------|------------|----------|--------------------------|----------|-------|------------|-----------|--------------------------------|-------|--------------------------|---------------------------|--|--|--|
| G<br>r<br>e<br>e<br>n.<br>Dt. | Longitudes भोग |               |          |           |           |            |          |                          |          |       |            |           | Ending<br>Moments<br>of Tithis |       | Equa-<br>tion of<br>Time | रवि<br>अस्त<br>Sun<br>Set |  |  |  |
|                               | वरुण<br>♄      | प्रजापति<br>♎ | शनि<br>♄ | गुरु<br>♄ | मंगल<br>♂ | शुक्र<br>♀ | बुध<br>♅ | तिथ्यंकाल<br>Tithi Times | H. M.    | MS.   | H. M.      |           |                                |       |                          |                           |  |  |  |
|                               | 0              | 1             | 0        | 1         | 0         | 1          | 0        | 1                        | 0        | 1     | 0          | 1         |                                | H. M. | MS.                      | H. M.                     |  |  |  |
| 1                             | 11             | 32            | 21       | 39        | 15        | 20         | 13       | 07 43                    | 01 32    | 23 18 | K 9        | 19 23     | 3 02                           | 6:54  |                          |                           |  |  |  |
| 2                             |                | 33            |          | 43        | R 17      | R 20       | R 32     | 02 46                    | 23 R 03  | 10    | 17 29      | 4 55      | 6:54                           |       |                          |                           |  |  |  |
| 3                             |                | 35            |          | 46        |           | 14         | 19       | 21 04                    | 00 22    | 44    | 11         | 14 58     | 4 49                           | 6:55  |                          |                           |  |  |  |
| 4                             |                | 36            |          | 49        |           | 10         | 18       | 08 05                    | 14       |       | 20         | 12 11 56  | 4 44                           | 6:55  |                          |                           |  |  |  |
| 5                             |                | 37            |          | 53        |           | 07         | 17       | 06 55                    | 06 28    | 21 52 | 13 8 29    | 4 39      | 6:56                           |       |                          |                           |  |  |  |
| 6                             |                | 38            |          | 56        |           | 03         | 16       | 42 07                    | 41       |       | 21         | K 15 1 00 | 4 35                           | 6:56  |                          |                           |  |  |  |
| 7                             |                | 39            |          | 59        |           | 00         | 16       | 28 08                    | 55 20    | 49    | S 16 21 17 | 4 31      | 6:57                           |       |                          |                           |  |  |  |
| 8                             |                | 40            | 22       | 02        | 14        | 56         | 16       | 13 10                    | 09       |       | 14         | 17 17 51  | 4 28                           | 6:57  |                          |                           |  |  |  |
| 9                             |                | 42            |          | 05        |           | 52         | 15       | 05 57                    | 11 23    | 19 38 | 18         | 14 52     | 4 25                           | 6:58  |                          |                           |  |  |  |
| 10                            |                | 43            |          | 08        |           | 49         | 15       | 41 12                    | 37       |       | 02         | 19 12 30  | 4 23                           | 6:59  |                          |                           |  |  |  |
| 11                            |                | 44            |          | 12        |           | 45         | 16       | 24 13                    | 51 18    | 25    | 20         | 10 53     | 4 22                           | 6:59  |                          |                           |  |  |  |
| 12                            |                | 45            |          | 15        |           | 41         | 16       | 07 15                    | 05 17    | 50    | 21         | 10 06     | 4 21                           | 6:59  |                          |                           |  |  |  |
| 13                            |                | 46            |          | 18        |           | 37         | 16       | 04 49                    | 16 18    |       | 15         | 22 10 11  | 4 20                           | 7:00  |                          |                           |  |  |  |
| 14                            |                | 47            |          | 21        |           | 33         | 17       | 31 17                    | 32 16    | 43    | 23         | 11 05     | 4 20                           | 7:00  |                          |                           |  |  |  |
| 15                            |                | 48            |          | 24        |           | 29         | 18       | 12 18                    | 46       |       | 12         | 24 12 42  | 4 21                           | 7:00  |                          |                           |  |  |  |
| 16                            |                | 49            |          | 27        |           | 25         | 19       | 03 53                    | 20 00    | 15    | 45         | 25 14 50  | 4 22                           | 7:01  |                          |                           |  |  |  |
| 17                            |                | 50            |          | 30        |           | 21         | 21       | 34 21                    | 14       |       | 21         | 26 17 18  | 4 24                           | 7:02  |                          |                           |  |  |  |
| 18                            |                | 51            |          | 33        |           | 17         | 23       | 14 22                    | 27       |       | 01         | 27 19 52  | 4 28                           | 7:03  |                          |                           |  |  |  |
| 19                            |                | 51            |          | 36        |           | 13         | 24       | 02 54                    | 23 41    | 14    | 44         | 28 22 23  | 4 29                           | 7:03  |                          |                           |  |  |  |
| 20                            |                | 52            |          | 39        |           | 08         | 26       | 33 24                    | 55       |       | 33         | 29 00 42  | 4 33                           | 7:03  |                          |                           |  |  |  |
| 21                            |                | 53            |          | 42        |           | 04         | 28       | 12 26                    | 09       |       | 25         | S 30 2 44 | 4 37                           | 7:04  |                          |                           |  |  |  |
| 22                            |                | 54            |          | 44        |           | 00         | 30       | 01 51                    | 27 22    |       | 21         | K 1 4 27  | 4 41                           | 7:04  |                          |                           |  |  |  |
| 23                            |                | 55            |          | 47        | 13        | 56         | 33       | 30 28                    | 36       |       | 22         | 2 4 46    | 4 46                           | 7:05  |                          |                           |  |  |  |
| 24                            |                | 55            |          | 50        |           | 51         | 35       | 09 29                    | 50       |       | 27         | 2 5 48    | 4 52                           | 7:05  |                          |                           |  |  |  |
| 25                            |                | 56            |          | 53        |           | 47         | 38       | 00 48                    | 01 II 04 |       | 38         | 3 6 46    | 4 58                           | 7:05  |                          |                           |  |  |  |
| 26                            |                | 57            |          | 56        |           | 43         | 41       | 27 02                    | 18       |       | 52         | 4 7 20    | 3 04                           | 7:05  |                          |                           |  |  |  |
| 27                            |                | 57            |          | 58        |           | 38         | 44       | 06 03                    | 31 15    | 11    | 5          | 7 28      | 3 11                           | 7:06  |                          |                           |  |  |  |
| 28                            |                | 58            | 23       | 01        |           | 34         | 47       | 29 III 45                | 04 45    |       | 34         | 6 7 03    | 3 19                           | 7:07  |                          |                           |  |  |  |
| 29                            |                | 58            |          | 04        |           | 29         | 50       | 25 05                    | 59 16    | 01    | 18         | 4 57      | 3 27                           | 7:07  |                          |                           |  |  |  |
| 30                            |                | 59            |          | 06        |           | 25         | 54       | 04 07                    | 12       |       | 33         | 9 3 04    | 3 35                           | 7:07  |                          |                           |  |  |  |
| 31                            |                | 59            |          | 09        |           | 21         | 57       | 28 44                    | 08 26    | 17    | 10         | 10 0 40   | 3 44                           | 7:07  |                          |                           |  |  |  |



| Jyaistha-Asadha           |                          |             |         | JUNE 2016                       |             |    |                   |    |             |    |            |    |                           |                   |       |      |      |
|---------------------------|--------------------------|-------------|---------|---------------------------------|-------------|----|-------------------|----|-------------|----|------------|----|---------------------------|-------------------|-------|------|------|
| भा<br>र<br>ती<br>य<br>दि. | G<br>r<br>e<br>n.<br>Dt. | D<br>a<br>y | वा<br>र | नाक्षत्रकाल<br>Sidereal<br>Time | ☉ सूर्य     |    |                   |    | ☾ चन्द्र    |    |            |    | रवि<br>उदय<br>Sun<br>Rise |                   |       |      |      |
|                           |                          |             |         |                                 | भोग<br>Long |    | क्रान्ति<br>Decl. |    | भोग<br>Long |    | शर<br>Lat. |    |                           | क्रान्ति<br>Decl. |       |      |      |
|                           |                          |             |         | H. M. S                         | 0           | 1  | 0                 | 1  | 0           | 1  | 0          | 1  | 0                         | 1                 | H. M. |      |      |
| 11                        | 1                        | W           | बुध     | 16 39 38                        | 11          | 11 | 42                | 22 | N 07        | 21 | 17         | 25 | 2                         | N 29              | 05    | N 39 | 5:41 |
| 12                        | 2                        | Th          | गुरु    | 16 43 35                        | 12          | 09 | 12                | 22 | 15          | 06 | 18         | 07 | 3                         | 30                | 09    | 59   | 5:41 |
| 13                        | 3                        | F           | शुक्र   | 16 47 31                        | 13          | 06 | 42                | 22 | 22          | 21 | 00         | 00 | 4                         | 52                | 13    | 33   | 5:41 |
| 14                        | 4                        | S           | शनि     | 16 51 28                        | 14          | 04 | 11                | 22 | 29          | 05 | 11         | 57 | 4                         | 48                | 16    | 17   | 5:41 |
| 15                        | 5                        | Su          | रवि     | 16 55 24                        | 15          | 01 | 38                | 22 | 36          | 20 | 50         |    | 4                         | 59                | 17    | 57   | 5:41 |
| 16                        | 6                        | M           | सोम     | 16 59 21                        | 15          | 59 | 05                | 22 | 42          | 05 | 08         | 27 | 4                         | S 50              | 18    | 27   | 5:41 |
| 17                        | 7                        | Tu          | मंगल    | 17 03 18                        | 16          | 56 | 32                | 22 | 48          | 19 | 28         |    | 4                         | 22                | 17    | S 45 | 5:41 |
| 18                        | 8                        | W           | बुध     | 17 07 14                        | 17          | 53 | 56                | 22 | 54          | 03 | 02         | 18 | 3                         | 40                | 15    | 57   | 5:41 |
| 19                        | 9                        | Th          | गुरु    | 17 11 11                        | 18          | 51 | 20                | 22 | 58          | 16 | 42         |    | 2                         | 47                | 13    | 34   | 5:41 |
| 20                        | 10                       | F           | शुक्र   | 17 15 07                        | 19          | 48 | 43                | 23 | 02          | 29 | 24         |    | 1                         | 47                | 10    | 16   | 5:41 |
| 21                        | 11                       | S           | शनि     | 17 19 04                        | 20          | 46 | 05                | 23 | 07          | 11 | 10         | 57 | 0                         | 45                | 06    | 48   | 5:41 |
| 22                        | 12                       | Su          | रवि     | 17 23 00                        | 21          | 43 | 25                | 23 | 11          | 24 | 11         |    | 0                         | 21                | 03    | 06   | 5:41 |
| 23                        | 13                       | M           | सोम     | 17 26 57                        | 22          | 40 | 45                | 23 | 14          | 05 | 11         | 56 | 1                         | N 24              | 01    | 49   | 5:41 |
| 24                        | 14                       | Tu          | मंगल    | 17 30 53                        | 23          | 38 | 04                | 23 | 17          | 17 | 48         |    | 2                         | 22                | 04    | N 27 | 5:41 |
| 25                        | 15                       | W           | बुध     | 17 34 50                        | 24          | 35 | 22                | 23 | 20          | 29 | 38         |    | 3                         | 13                | 08    | 03   | 5:41 |
| 26                        | 16                       | Th          | गुरु    | 17 38 47                        | 25          | 32 | 39                | 23 | 22          | 11 | 11         | 29 | 3                         | 57                | 11    | 21   | 5:41 |
| 27                        | 17                       | F           | शुक्र   | 17 42 43                        | 26          | 29 | 55                | 23 | 23          | 23 | 41         |    | 4                         | 30                | 13    | 59   | 5:41 |
| 28                        | 18                       | S           | शनि     | 17 46 40                        | 27          | 27 | 10                | 23 | 24          | 05 | 11         | 46 | 4                         | 51                | 16    | 04   | 5:41 |
| 29                        | 19                       | Su          | रवि     | 17 50 36                        | 28          | 24 | 26                | 23 | 25          | 18 | 01         |    | 4                         | 59                | 17    | 46   | 5:42 |
| 30                        | 20                       | M           | सोम     | 17 54 33                        | 29          | 21 | 41                | 23 | 25'54"      | 00 | 11         | 26 | 4                         | S 54              | 18    | 24   | 5:42 |
| 31                        | 21                       | Tu          | मंगल    | 17 58 29                        | 00          | 23 | 18 54             | 23 | 26'05"      | 13 | 04         |    | 4                         | 34                | 18    | S 24 | 5:42 |
| 1                         | 22                       | W           | बुध     | 18 02 26                        | 01          | 16 | 07                | 23 | 25'51"      | 25 | 54         |    | 3                         | 59                | 17    | 13   | 5:42 |
| 2                         | 23                       | Th          | गुरु    | 18 06 22                        | 02          | 13 | 21                | 23 | 25          | 09 | 11         | 10 | 3                         | 13                | 15    | 06   | 5:43 |
| 3                         | 24                       | F           | शुक्र   | 18 10 19                        | 03          | 10 | 34                | 23 | 24          | 22 | 23         |    | 2                         | 14                | 12    | 08   | 5:43 |
| 4                         | 25                       | S           | शनि     | 18 14 16                        | 04          | 07 | 47                | 23 | 22          | 05 | 11         | 47 | 1                         | 08                | 08    | 44   | 5:43 |
| 5                         | 26                       | Su          | रवि     | 18 18 12                        | 05          | 05 | 00                | 23 | 20          | 19 | 22         |    | 0                         | 28                | 04    | 31   | 5:43 |
| 6                         | 27                       | M           | सोम     | 18 22 09                        | 06          | 02 | 12                | 23 | 18          | 03 | 11         | 10 | 1                         | N 15              | 02    | 21   | 5:44 |
| 7                         | 28                       | Tu          | मंगल    | 18 26 05                        | 06          | 59 | 25                | 23 | 15          | 17 | 28         |    | 2                         | 24                | 04    | N 11 | 5:44 |
| 8                         | 29                       | W           | बुध     | 18 30 02                        | 07          | 56 | 38                | 23 | 12          | 01 | 18         | 42 | 3                         | 25                | 08    | 33   | 5:44 |
| 9                         | 30                       | Th          | गुरु    | 18 33 58                        | 08          | 53 | 51                | 23 | 08          | 16 | 05         |    | 4                         | 14                | 12    | 13   | 5:44 |

| JUNE 2016 ज्येष्ठ-आषाढ़  |                |               |          |           |           |            |          |                          |       |                  |      |                  |       |
|--------------------------|----------------|---------------|----------|-----------|-----------|------------|----------|--------------------------|-------|------------------|------|------------------|-------|
| G<br>r<br>e<br>n.<br>Dt. | Longitudes भोग |               |          |           |           |            |          | Ending Moments of Tithis |       | Equation of Time |      | रवि अस्त Sun Set |       |
|                          | वरुण<br>☿      | प्रजापति<br>♌ | शनि<br>♄ | गुरु<br>♋ | मंगल<br>♂ | शुक्र<br>♊ | बुध<br>♈ | Tithi Times              |       | वर्षा-नर         |      | H. M.            |       |
|                          | 0              | 1             | 0        | 1         | 0         | 1          | 0        | 1                        | 0     | 1                | 0    | 1                | H. M. |
| 1                        | 12 00          | 23 11         | 13 16    | 14 01     | 28 24     | 09 40      | 17 49    | K11                      | 21 50 | 3 53             | 7:08 |                  |       |
| 2                        | 00             | 14            | R 12     | 05        | R 04      | 10 54      | 18 33    | 12 18 40                 | 2 03  | 7:09             |      |                  |       |
| 3                        | 00             | 16            | 07       | 09 27     | 44 12     | 07 19      | 21       | 13 15 17                 | 2 13  | 7:10             |      |                  |       |
| 4                        | 01             | 19            | 03       | 14        | 25 13     | 21 20      | 12       | 14 11 50                 | 2 23  | 7:10             |      |                  |       |
| 5                        | 01             | 21            | 12 58    | 18        | 07 14     | 35 21      | 06       | 15 8 30                  | 2 34  | 7:11             |      |                  |       |
| 6                        | 01             | 24            | 54       | 23 26     | 48 15     | 49 22      | 04       | 16 5 26                  | 2 45  | 7:12             |      |                  |       |
| 7                        | 02             | 26            | 49       | 28        | 31 17     | 02 23      | 06       | 18 00 50                 | 2 56  | 7:12             |      |                  |       |
| 8                        | 02             | 28            | 45       | 33        | 14 18     | 16 24      | 11       | 19 23 36                 | 1 08  | 7:12             |      |                  |       |
| 9                        | 02             | 31            | 41       | 38 25     | 58 19     | 30 25      | 19       | 20 23 10                 | 1 20  | 7:12             |      |                  |       |
| 10                       | 02             | 33            | 36       | 43        | 42 20     | 44 26      | 31       | 21 23 36                 | 1 32  | 7:13             |      |                  |       |
| 11                       | 02             | 35            | 32       | 49        | 26 21     | 57 27      | 46       | 22 00 48                 | 1 44  | 7:13             |      |                  |       |
| 12                       | 02             | 37            | 27       | 55        | 12 23     | 11 29      | 03       | 23 2 40                  | 1 56  | 7:13             |      |                  |       |
| 13                       | 02             | 40            | 23 15    | 01 24     | 58 24     | 25 00      | 11 24    | 24 4 57                  | 0 09  | 7:14             |      |                  |       |
| 14                       | 02             | 42            | 19       | 07        | 45 25     | 38 01      | 48       | 25 -- --                 | 0 22  | 7:14             |      |                  |       |
| 15                       | 02             | 44            | 14       | 13        | 33 26     | 52 03      | 15       | 25 7 27                  | 0 34  | 7:14             |      |                  |       |
| 16                       | R 02           | 46            | 10       | 19        | 21 28     | 06 04      | 46       | 26 9 55                  | 0 47  | 7:14             |      |                  |       |
| 17                       | 02             | 48            | 06       | 25        | 10 29     | 20 06      | 19       | 27 12 10                 | 1 00  | 7:15             |      |                  |       |
| 18                       | 02             | 50            | 02       | 31        | 00 00     | 00 33      | 07 55    | 28 14 03                 | 1 13  | 7:15             |      |                  |       |
| 19                       | 02             | 52            | 11 58    | 38 23     | 51 01     | 47 09      | 33       | 29 15 31                 | 1 26  | 7:15             |      |                  |       |
| 20                       | 02             | 53            | 53       | 45        | 43 03     | 01 11      | 15       | S 30 16 32               | 1 39  | 7:15             |      |                  |       |
| 21                       | 02             | 55            | 49       | 51        | 35 04     | 14 13      | 00       | K 1 17 07                | 1 52  | 7:16             |      |                  |       |
| 22                       | 01             | 57            | 45       | 58        | 28 05     | 28 14      | 48       | 2 17 18                  | 2 05  | 7:16             |      |                  |       |
| 23                       | 01             | 59            | 41 16    | 05        | 22 06     | 42 16      | 38       | 3 17 05                  | 2 18  | 7:16             |      |                  |       |
| 24                       | 01             | 24 00         | 37       | 13        | 17 07     | 56 18      | 31       | 4 16 31                  | 2 31  | 7:16             |      |                  |       |
| 25                       | 00             | 02            | 33       | 20        | 13 09     | 09 20      | 27       | 5 15 37                  | 2 43  | 7:16             |      |                  |       |
| 26                       | 00             | 03            | 29       | 27        | 09 10     | 23 02      | 25       | 6 14 21                  | 2 56  | 7:17             |      |                  |       |
| 27                       | 00             | 05            | 25       | 35        | 06 11     | 37 24      | 25       | 7 12 45                  | 3 08  | 7:17             |      |                  |       |
| 28                       | 11 59          | 06            | 22       | 43        | 05 12     | 50 26      | 27       | 8 10 48                  | 3 20  | 7:17             |      |                  |       |
| 29                       | 59             | 08            | 18       | 50        | 04 14     | 04 28      | 31       | 9 8 32                   | 3 32  | 7:17             |      |                  |       |
| 30                       | 58             | 09            | 14       | 58        | 03 15     | 18 00      | 37       | K 10 5 59                | 3 44  | 7:17             |      |                  |       |



## Asadha-Sravana

JULY 2016

| भा<br>र<br>ती<br>य<br>दि. | G<br>r<br>e<br>n.<br>Dt. | D<br>a<br>y | वा<br>र | नाक्षत्रकाल<br>Sidereal<br>Time | ☉ सूर्य  |       |          |          | ☾ चन्द्र |       |    |      | रवि<br>उदय<br>Sun<br>Rise |          |  |
|---------------------------|--------------------------|-------------|---------|---------------------------------|----------|-------|----------|----------|----------|-------|----|------|---------------------------|----------|--|
|                           |                          |             |         |                                 | भोग      |       | क्रान्ति |          | भोग      |       | शर |      |                           | क्रान्ति |  |
|                           |                          |             |         |                                 | Long     | Decl. | Long     | Lat.     | Decl.    | Decl. |    |      |                           |          |  |
|                           |                          |             |         | H. M. S                         | 0        | 1     | 2        | 0        | 1        | 0     | 1  | 0    | 1                         | H. M.    |  |
| 10                        | 1                        | F           | शुक्र   | 18 47 55                        | 09 51 05 | 23    | N 04     | 00 11 37 | 4        | N 46  | 15 | N 13 | 5:45                      |          |  |
| 11                        | 2                        | S           | शनि     | 18 41 51                        | 10 48 18 | 23    | 00       | 15 11    | 5        | 01    | 17 | 17   | 5:45                      |          |  |
| 12                        | 3                        | Su          | रवि     | 18 35 48                        | 11 45 32 | 22    | 55       | 29 40    | 4        | S 56  | 18 | 17   | 5:45                      |          |  |
| 13                        | 4                        | M           | सोम     | 18 49 45                        | 12 42 45 | 22    | 50       | 13 59    | 4        | 32    | 18 | 23   | 5:45                      |          |  |
| 14                        | 5                        | W           | बुध     | 18 53 41                        | 13 39 59 | 22    | 44       | 27 45    | 3        | 53    | 17 | S 04 | 5:45                      |          |  |
| 15                        | 6                        | W           | बुध     | 18 57 38                        | 14 37 12 | 22    | 38       | 11 26    | 3        | 01    | 14 | 44   | 5:46                      |          |  |
| 16                        | 7                        | Th          | गुरु    | 19 01 34                        | 15 34 26 | 22    | 31       | 24 44    | 2        | 00    | 11 | 39   | 5:47                      |          |  |
| 17                        | 8                        | F           | शुक्र   | 19 05 31                        | 16 31 39 | 22    | 25       | 07 23    | 0        | 54    | 08 | 18   | 5:47                      |          |  |
| 18                        | 9                        | S           | शनि     | 19 09 27                        | 17 28 52 | 22    | 18       | 19 56    | 0        | 20    | 04 | 37   | 5:47                      |          |  |
| 19                        | 10                       | Su          | रवि     | 19 13 24                        | 18 26 05 | 22    | 10       | 02 12    | 1        | N 18  | 02 | 00   | 5:48                      |          |  |
| 20                        | 11                       | M           | सोम     | 19 17 20                        | 19 23 18 | 22    | 02       | 13 58    | 2        | 18    | 03 | N 12 | 5:48                      |          |  |
| 21                        | 12                       | Tu          | मंगल    | 19 21 17                        | 20 20 31 | 21    | 54       | 25 53    | 3        | 12    | 06 | 43   | 5:48                      |          |  |
| 22                        | 13                       | W           | बुध     | 19 25 14                        | 21 17 44 | 21    | 45       | 07 44    | 3        | 56    | 10 | 09   | 5:49                      |          |  |
| 23                        | 14                       | Th          | गुरु    | 19 29 10                        | 22 14 57 | 21    | 36       | 19 37    | 4        | 31    | 12 | 56   | 5:49                      |          |  |
| 24                        | 15                       | F           | शुक्र   | 19 33 07                        | 23 12 10 | 21    | 26       | 01 54    | 4        | 55    | 15 | 30   | 5:50                      |          |  |
| 25                        | 16                       | S           | शनि     | 19 37 03                        | 24 09 23 | 21    | 16       | 14 04    | 5        | 05    | 17 | 11   | 5:50                      |          |  |
| 26                        | 17                       | Su          | रवि     | 19 41 00                        | 25 06 37 | 21    | 06       | 26 27    | 5        | S 03  | 18 | 08   | 5:50                      |          |  |
| 27                        | 18                       | M           | सोम     | 19 44 56                        | 26 03 50 | 20    | 56       | 09 05    | 4        | 43    | 18 | 29   | 5:51                      |          |  |
| 28                        | 19                       | W           | बुध     | 19 48 52                        | 27 01 04 | 20    | 45       | 22 14    | 4        | 10    | 17 | S 37 | 5:51                      |          |  |
| 29                        | 20                       | W           | बुध     | 19 52 43                        | 27 58 19 | 20    | 34       | 05 23    | 3        | 24    | 15 | 47   | 5:51                      |          |  |
| 30                        | 21                       | Th          | गुरु    | 19 56 46                        | 28 55 34 | 20    | 22       | 18 46    | 2        | 25    | 13 | 03   | 5:52                      |          |  |
| 31                        | 22                       | F           | शुक्र   | 20 00 43                        | 29 52 49 | 20    | 10       | 02 21    | 1        | 17    | 09 | 48   | 5:52                      |          |  |
| 1                         | 23                       | S           | शनि     | 20 04 39                        | 00 50 06 | 19    | 58       | 16 06    | 0        | 31    | 05 | 40   | 5:53                      |          |  |
| 2                         | 24                       | Su          | रवि     | 20 08 36                        | 01 47 23 | 19    | 45       | 00 17    | 1        | N 10  | 02 | 21   | 5:53                      |          |  |
| 3                         | 25                       | M           | सोम     | 20 12 32                        | 02 44 40 | 19    | 32       | 14 19    | 2        | 21    | 03 | N 03 | 5:54                      |          |  |
| 4                         | 26                       | Tu          | मंगल    | 20 16 29                        | 03 41 59 | 19    | 19       | 28 25    | 3        | 24    | 07 | 23   | 5:55                      |          |  |
| 5                         | 27                       | W           | बुध     | 20 20 25                        | 04 39 19 | 19    | 05       | 12 36    | 4        | 15    | 11 | 08   | 5:55                      |          |  |
| 6                         | 28                       | Th          | गुरु    | 20 24 22                        | 05 36 40 | 18    | 52       | 26 49    | 4        | 50    | 14 | 16   | 5:55                      |          |  |
| 7                         | 29                       | F           | शुक्र   | 20 28 18                        | 06 34 02 | 18    | 38       | 11 02    | 5        | 07    | 16 | 35   | 5:56                      |          |  |
| 8                         | 30                       | S           | शनि     | 20 32 15                        | 07 31 24 | 18    | 23       | 25 13    | 5        | 09    | 17 | 55   | 5:56                      |          |  |
| 9                         | 31                       | Su          | रवि     | 20 36 12                        | 08 28 49 | 18    | 08       | 08 58    | 4        | S 46  | 18 | 25   | 5:56                      |          |  |

JULY 2016

आषाढ़-श्रावण

| G<br>r<br>e<br>n.<br>Dt. | Longitudes भोग |                    |             |              |              |               |             |                          |              |    | Ending<br>Moments<br>of Tithis | Equa-<br>tion of<br>Time | रवि<br>अस्त<br>Sun<br>Set |       |      |      |      |      |
|--------------------------|----------------|--------------------|-------------|--------------|--------------|---------------|-------------|--------------------------|--------------|----|--------------------------------|--------------------------|---------------------------|-------|------|------|------|------|
|                          | वरुण<br>卐      | प्रजापति<br>𑀧𑀺𑀓𑀺𑀭𑀺 | शनि<br>𑀲𑀺𑀓𑀺 | गुरु<br>𑀲𑀺𑀓𑀺 | मंगल<br>𑀲𑀺𑀓𑀺 | शुक्र<br>𑀲𑀺𑀓𑀺 | बुध<br>𑀲𑀺𑀓𑀺 | तिथ्यंकाल<br>Tithi Times | कला-<br>न्तर |    |                                |                          |                           |       |      |      |      |      |
|                          | 0              | 1                  | 0           | 1            | 0            | 1             | 0           | 1                        | 0            | 1  |                                | H. M.                    | MS.                       | H. M. |      |      |      |      |
| 1                        | 11             | 58                 | 24          | 11           | 11           | 58            | 17          | 06                       | 23           | 04 | 16                             | 32                       | 02                        | 45    | K12  | 0 23 | 3 56 | 7:17 |
| 2                        | R              | 57                 | 12          | R            | 07           | 15            | 06          | 17                       | 45           | 04 | 53                             | 13                       | 21                        | 34    | 4    | 07   | 7:17 |      |
| 3                        | 57             | 13                 | 03          | 23           | 08           | 18            | 59          | 07                       | 03           | 14 | 18                             | 53                       | 4                         | 18    | 7:17 |      |      |      |
| 4                        | 56             | 14                 | 00          | 31           | 11           | 20            | 13          | 09                       | 13           | 15 | 16                             | 31                       | 4                         | 29    | 7:17 |      |      |      |
| 5                        | 55             | 16                 | 10          | 57           | 40           | 15            | 21          | 27                       | 11           | 23 | 16                             | 14                       | 36                        | 4     | 40   | 7:17 |      |      |
| 6                        | 55             | 17                 | 53          | 48           | 20           | 22            | 40          | 13                       | 33           | 17 | 13                             | 16                       | 4                         | 50    | 7:17 |      |      |      |
| 7                        | 54             | 18                 | 50          | 57           | 26           | 23            | 54          | 15                       | 43           | 18 | 12                             | 38                       | 4                         | 59    | 7:17 |      |      |      |
| 8                        | 53             | 19                 | 47          | 18           | 06           | 32            | 25          | 08                       | 17           | 52 | 19                             | 12                       | 45                        | 5     | 09   | 7:17 |      |      |
| 9                        | 52             | 20                 | 44          | 15           | 39           | 26            | 22          | 20                       | 01           | 20 | 13                             | 37                       | 5                         | 17    | 7:17 |      |      |      |
| 10                       | 52             | 21                 | 40          | 24           | 46           | 27            | 35          | 22                       | 10           | 21 | 15                             | 09                       | 5                         | 26    | 7:17 |      |      |      |
| 11                       | 51             | 22                 | 37          | 33           | 55           | 28            | 49          | 24                       | 16           | 22 | 17                             | 12                       | 5                         | 34    | 7:17 |      |      |      |
| 12                       | 50             | 23                 | 35          | 43           | 24           | 05            | 00          | 02                       | 26           | 23 | 19                             | 34                       | 5                         | 41    | 7:17 |      |      |      |
| 13                       | 49             | 24                 | 32          | 52           | 15           | 01            | 17          | 28                       | 26           | 24 | 22                             | 00                       | 5                         | 48    | 7:17 |      |      |      |
| 14                       | 48             | 25                 | 29          | 19           | 02           | 25            | 02          | 30                       | 00           | 02 | 28                             | 25                       | 00                        | 15    | 5    | 55   | 7:16 |      |
| 15                       | 47             | 26                 | 26          | 11           | 36           | 03            | 44          | 02                       | 29           | 26 | 2                              | 08                       | 6                         | 01    | 7:16 |      |      |      |
| 16                       | 46             | 26                 | 24          | 21           | 49           | 04            | 58          | 04                       | 29           | 27 | 3                              | 32                       | 6                         | 06    | 7:16 |      |      |      |
| 17                       | 45             | 27                 | 21          | 31           | 25           | 02            | 06          | 02                       | 06           | 27 | 28                             | 4                        | 23                        | 6     | 11   | 7:15 |      |      |
| 18                       | 44             | 27                 | 19          | 41           | 15           | 07            | 25          | 08                       | 22           | 29 | 4                              | 40                       | 6                         | 15    | 7:15 |      |      |      |
| 19                       | 43             | 28                 | 16          | 51           | 29           | 08            | 39          | 10                       | 17           | 30 | 4                              | 27                       | 6                         | 19    | 7:15 |      |      |      |
| 20                       | 42             | 28                 | 14          | 20           | 01           | 44            | 09          | 53                       | 12           | 09 | K1                             | 3 45                     | 6                         | 22    | 7:15 |      |      |      |
| 21                       | 41             | 29                 | 12          | 11           | 59           | 11            | 06          | 13                       | 59           | 2  | 2 41                           | 6                        | 25                        | 7:15  |      |      |      |      |
| 22                       | 40             | 29                 | 10          | 21           | 26           | 16            | 12          | 20                       | 15           | 48 | 3                              | 1 17                     | 6                         | 27    | 7:15 |      |      |      |
| 23                       | 39             | 29                 | 08          | 31           | 33           | 13            | 34          | 17                       | 35           | 4  | 23 38                          | 6                        | 29                        | 7:14  |      |      |      |      |
| 24                       | 38             | 30                 | 06          | 42           | 50           | 14            | 48          | 19                       | 20           | 5  | 21 47                          | 6                        | 30                        | 7:14  |      |      |      |      |
| 25                       | 37             | 30                 | 04          | 52           | 27           | 07            | 16          | 01                       | 21           | 04 | 6                              | 19 46                    | 6                         | 30    | 7:13 |      |      |      |
| 26                       | 36             | 30                 | 02          | 21           | 03           | 25            | 17          | 15                       | 22           | 45 | 7                              | 17 36                    | 6                         | 30    | 7:13 |      |      |      |
| 27                       | 34             | 30                 | 01          | 13           | 44           | 18            | 29          | 24                       | 25           | 8  | 15 22                          | 6                        | 29                        | 7:13  |      |      |      |      |
| 28                       | 33             | 30                 | 09          | 59           | 24           | 29            | 04          | 19                       | 43           | 26 | 03                             | 9                        | 13 04                     | 6     | 28   | 7:12 |      |      |
| 29                       | 32             | 30                 | 58          | 35           | 24           | 20            | 56          | 27                       | 39           | 10 | 10 47                          | 6                        | 26                        | 7:11  |      |      |      |      |
| 30                       | 31             | 30                 | 56          | 45           | 45           | 22            | 10          | 29                       | 14           | 11 | 8 34                           | 6                        | 24                        | 7:11  |      |      |      |      |
| 31                       | 29             | 30                 | 55          | 56           | 29           | 06            | 23          | 24                       | 00           | 46 | 12 13                          | 6                        | 31                        | 4 42  | 6    | 20   | 7:10 |      |



## Sravana- Bhadra

AUGUST 2016

| भा<br>र<br>ती<br>य<br>दि. | G<br>r<br>e<br>n.<br>Dt. | D<br>a<br>y | वा<br>र | नाक्षत्रकाल<br>Sidereal<br>Time | ☉ सूर्य                      |                              | ☾ चन्द्र                     |                              |                              | रवि<br>उदय<br>Sun<br>Rise |
|---------------------------|--------------------------|-------------|---------|---------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|---------------------------|
|                           |                          |             |         |                                 | भोग<br>Long                  | क्रान्ति<br>Decl.            | भोग<br>Long                  | शर<br>Lat.                   | क्रान्ति<br>Decl.            |                           |
|                           |                          |             |         |                                 |                              |                              |                              |                              |                              |                           |
|                           |                          |             |         | H. M. S                         | 0 1 2 3 4 5 6 7 8 9 10 11 12 | 0 1 2 3 4 5 6 7 8 9 10 11 12 | 0 1 2 3 4 5 6 7 8 9 10 11 12 | 0 1 2 3 4 5 6 7 8 9 10 11 12 | 0 1 2 3 4 5 6 7 8 9 10 11 12 | H. M.                     |
| 10                        | 1                        | M           | सोम     | 20 40 08                        | 09 26 14                     | 17 N 53                      | 22 50 50                     | 4 S 10                       | 17 S 32                      | 5:57                      |
| 11                        | 2                        | Tu          | मंगल    | 20 44 05                        | 10 23 40                     | 17 38                        | 06 29                        | 3 20                         | 15 36                        | 5:57                      |
| 12                        | 3                        | W           | बुध     | 20 48 01                        | 11 21 07                     | 17 22                        | 19 51                        | 2 19                         | 12 50                        | 5:58                      |
| 13                        | 4                        | Th          | गुरु    | 20 51 58                        | 12 18 35                     | 17 06                        | 02 39                        | 1 13                         | 09 41                        | 5:58                      |
| 14                        | 5                        | F           | शुक्र   | 20 55 54                        | 13 16 03                     | 16 50                        | 15 25                        | 0 17                         | 06 05                        | 5:58                      |
| 15                        | 6                        | S           | शनि     | 20 59 51                        | 14 13 33                     | 16 33                        | 27 54                        | 1 N 04                       | 02 17                        | 5:58                      |
| 16                        | 7                        | Su          | रवि     | 21 03 47                        | 15 11 03                     | 16 16                        | 10 07                        | 2 07                         | 01 59                        | 5:59                      |
| 17                        | 8                        | M           | सोम     | 21 07 44                        | 16 08 34                     | 15 59                        | 21 52                        | 3 04                         | 05 N 20                      | 5:59                      |
| 18                        | 9                        | Tu          | मंगल    | 21 11 41                        | 17 06 06                     | 15 42                        | 03 17                        | 3 52                         | 08 53                        | 6:00                      |
| 19                        | 10                       | W           | बुध     | 21 15 37                        | 18 03 39                     | 15 25                        | 15 39                        | 4 31                         | 11 49                        | 6:01                      |
| 20                        | 11                       | Th          | गुरु    | 21 19 34                        | 19 01 12                     | 15 07                        | 27 34                        | 4 58                         | 14 34                        | 6:01                      |
| 21                        | 12                       | F           | शुक्र   | 21 23 30                        | 19 58 47                     | 14 49                        | 09 51                        | 5 11                         | 16 27                        | 6:02                      |
| 22                        | 13                       | S           | शनि     | 21 27 27                        | 20 56 23                     | 14 31                        | 22 03                        | 5 S 11                       | 17 41                        | 6:02                      |
| 23                        | 14                       | Su          | रवि     | 21 31 23                        | 21 53 59                     | 14 12                        | 04 30                        | 4 57                         | 18 21                        | 6:02                      |
| 24                        | 15                       | M           | सोम     | 21 35 20                        | 22 51 37                     | 13 54                        | 17 15                        | 4 28                         | 18 S 08                      | 6:03                      |
| 25                        | 16                       | Tu          | मंगल    | 21 39 16                        | 23 49 16                     | 13 35                        | 00 35                        | 3 45                         | 16 42                        | 6:03                      |
| 26                        | 17                       | W           | बुध     | 21 43 13                        | 24 46 55                     | 13 16                        | 13 59                        | 2 48                         | 14 17                        | 6:03                      |
| 27                        | 18                       | Th          | गुरु    | 21 47 10                        | 25 44 36                     | 12 56                        | 27 42                        | 1 40                         | 11 00                        | 6:04                      |
| 28                        | 19                       | F           | शुक्र   | 21 51 06                        | 26 42 19                     | 12 37                        | 11 58                        | 0 42                         | 07 00                        | 6:04                      |
| 29                        | 20                       | S           | शनि     | 21 55 03                        | 27 40 02                     | 12 17                        | 26 10                        | 0 N 53                       | 02 45                        | 6:05                      |
| 30                        | 21                       | Su          | रवि     | 21 58 59                        | 28 37 47                     | 11 57                        | 10 30                        | 2 08                         | 02 N 18                      | 6:05                      |
| 31                        | 22                       | M           | सोम     | 22 02 56                        | 29 35 34                     | 11 37                        | 24 54                        | 3 15                         | 06 14                        | 6:06                      |
| 1                         | 23                       | Tu          | मंगल    | 22 06 52                        | 00 33 23                     | 11 17                        | 09 18                        | 4 11                         | 10 08                        | 6:06                      |
| 2                         | 24                       | W           | बुध     | 22 10 49                        | 01 31 13                     | 10 56                        | 23 37                        | 4 50                         | 13 44                        | 6:06                      |
| 3                         | 25                       | Th          | गुरु    | 22 14 45                        | 02 29 05                     | 10 35                        | 07 49                        | 5 11                         | 16 16                        | 6:06                      |
| 4                         | 26                       | F           | शुक्र   | 22 18 42                        | 03 26 59                     | 10 14                        | 21 35                        | 5 14                         | 17 53                        | 6:07                      |
| 5                         | 27                       | S           | शनि     | 22 22 39                        | 04 24 54                     | 09 53                        | 05 27                        | 4 S 57                       | 18 19                        | 6:07                      |
| 6                         | 28                       | Su          | रवि     | 22 26 35                        | 05 22 52                     | 09 32                        | 19 06                        | 4 26                         | 17 S 45                      | 6:07                      |
| 7                         | 29                       | m           | सोम     | 22 30 32                        | 06 20 51                     | 09 11                        | 02 34                        | 3 38                         | 16 09                        | 6:08                      |
| 8                         | 30                       | Tu          | मंगल    | 22 34 28                        | 07 18 51                     | 08 49                        | 15 46                        | 2 41                         | 13 55                        | 6:08                      |
| 9                         | 31                       | W           | बुध     | 22 38 25                        | 08 16 55                     | 08 28                        | 28 30                        | 1 35                         | 10 44                        | 6:09                      |

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श्रावण-भाद्र

| G<br>r<br>e<br>n.<br>Dt. | Longitudes भोग |               |          |           |           |            |          |                          |    |              |    |    | Ending<br>Moments<br>of Tithis |     | Equa-<br>tion of<br>Time |       | रवि<br>अस्त<br>Sun<br>Set<br>0 1 |      |       |      |
|--------------------------|----------------|---------------|----------|-----------|-----------|------------|----------|--------------------------|----|--------------|----|----|--------------------------------|-----|--------------------------|-------|----------------------------------|------|-------|------|
|                          | वरुण<br>♄      | प्रजापति<br>♁ | शनि<br>♄ | गुरु<br>♁ | मंगल<br>♂ | शुक्र<br>♀ | बुध<br>♁ | तिथ्यंकाल<br>Tithi Times |    | कला-<br>न्तर |    |    |                                |     |                          |       |                                  |      |       |      |
|                          | 0              | 1             | 0        | 1         | 0         | 1          | 0        | 1                        | 0  | 1            | 0  | 1  |                                |     |                          |       |                                  |      |       |      |
|                          | 11             | 28            | 24       | 30        | 09        | 26         | 54       | 22                       | 07 | 29           | 11 | 27 | 24                             | 38  | 02                       | 17    | K14                              | 3 15 | 06 17 | 7:09 |
| 2                        | R 27           |               | R 30     |           | R 53      |            | 18       |                          | 49 | 25           | 51 | 03 | 47                             | 15  | 2 15                     | 06 13 |                                  |      | 7:09  |      |
| 3                        | 25             |               | 30       |           | 52        |            | 29       | 00                       | 12 | 27           | 05 | 05 | 18                             | S16 | 1 47                     | 06 08 |                                  |      | 7:08  |      |
| 4                        | 24             |               | 30       |           | 51        |            | 41       |                          | 35 | 28           | 19 | 06 | 40                             | 17  | 1 55                     | 06 02 |                                  |      | 7:08  |      |
| 5                        | 23             |               | 30       |           | 50        |            | 52       |                          | 58 | 29           | 33 | 08 | 04                             | 18  | 2 42                     | 05 56 |                                  |      | 7:07  |      |
| 6                        | 21             |               | 29       |           | 49        | 23         | 03       | 01                       | 23 | 00           | 46 | 09 | 26                             | 19  | 4 05                     | 05 49 |                                  |      | 7:07  |      |
| 7                        | 20             |               | 29       |           | 49        |            | 14       |                          | 48 | 02           | 00 | 10 | 46                             | 20  | --                       | 05 42 |                                  |      | 7:06  |      |
| 8                        | 18             |               | 28       |           | 48        |            | 26       | 02                       | 13 | 03           | 14 | 12 | 04                             | 20  | 5 59                     | 05 34 |                                  |      | 7:05  |      |
| 9                        | 17             |               | 28       |           | 48        |            | 37       |                          | 38 | 04           | 27 | 13 | 20                             | 21  | 8 14                     | 05 26 |                                  |      | 7:04  |      |
| 10                       | 15             |               | 27       |           | 47        |            | 49       | 03                       | 04 | 05           | 41 | 14 | 34                             | 22  | 10 39                    | 05 16 |                                  |      | 7:03  |      |
| 11                       | 14             |               | 27       |           | 47        | 24         | 01       |                          | 30 | 06           | 55 | 15 | 46                             | 23  | 13 00                    | 05 07 |                                  |      | 7:03  |      |
| 12                       | 12             |               | 26       |           | 47        |            | 12       |                          | 56 | 08           | 08 | 16 | 46                             | 24  | 15 02                    | 04 56 |                                  |      | 7:02  |      |
| 13                       | 11             |               | 26       |           | 47        |            | 24       | 04                       | 24 | 09           | 22 | 18 | 04                             | 25  | 16 35                    | 04 46 |                                  |      | 7:01  |      |
| 14                       | 09             |               | 25       |           | 47        |            | 36       |                          | 52 | 10           | 36 | 19 | 08                             | 26  | 17 32                    | 04 34 |                                  |      | 7:01  |      |
| 15                       | 08             |               | 24       |           | 47        |            | 48       | 05                       | 20 | 11           | 49 | 20 | 11                             | 27  | 17 49                    | 04 22 |                                  |      | 7:00  |      |
| 16                       | 06             |               | 23       |           | 47        |            | 59       |                          | 48 | 13           | 03 | 21 | 11                             | 28  | 17 26                    | 04 10 |                                  |      | 6:59  |      |
| 17                       | 04             |               | 23       |           | 47        | 25         | 11       | 06                       | 16 | 14           | 17 | 22 | 08                             | 29  | 16 27                    | 03 57 |                                  |      | 6:59  |      |
| 18                       | 03             |               | 22       |           | 48        |            | 23       |                          | 45 | 15           | 30 | 23 | 03                             | 30  | 14 57                    | 03 43 |                                  |      | 6:58  |      |
| 19                       | 01             |               | 21       |           | 48        |            | 35       | 07                       | 14 | 16           | 44 |    | 54                             | K 1 | 13 00                    | 03 29 |                                  |      | 6:57  |      |
| 20                       | 10             | 59            |          | 20        | 49        |            | 48       |                          | 44 | 17           | 58 | 24 | 42                             | 2   | 10 45                    | 03 15 |                                  |      | 6:56  |      |
| 21                       | 58             |               | 19       |           | 50        | 26         | 00       | 08                       | 14 | 19           | 11 | 25 | 27                             | 3   | 8 18                     | 03 00 |                                  |      | 6:55  |      |
| 22                       | 56             |               | 18       |           | 50        |            | 12       |                          | 44 | 20           | 25 | 26 | 09                             | 4   | 5 44                     | 02 45 |                                  |      | 6:54  |      |
| 23                       | 55             |               | 17       |           | 51        |            | 24       | 09                       | 15 | 21           | 38 |    | 46                             | 6   | 0 39                     | 02 29 |                                  |      | 6:53  |      |
| 24                       | 53             |               | 15       |           | 52        |            | 36       |                          | 46 | 22           | 52 | 27 | 20                             | 7   | 22 17                    | 02 13 |                                  |      | 6:52  |      |
| 25                       | 51             |               | 14       |           | 53        |            | 49       | 10                       | 18 | 24           | 06 |    | 49                             | 8   | 20 08                    | 01 56 |                                  |      | 6:52  |      |
| 26                       | 50             |               | 13       |           | 54        | 27         | 01       |                          | 49 | 25           | 19 | 28 | 14                             | 9   | 18 14                    | 01 39 |                                  |      | 6:51  |      |
| 27                       | 48             |               | 12       |           | 56        |            | 14       | 11                       | 21 | 26           | 33 |    | 50                             | 10  | 16 38                    | 01 22 |                                  |      | 6:50  |      |
| 28                       | 46             |               | 10       |           | 57        |            | 26       |                          | 54 | 27           | 46 |    | 34                             | 11  | 15 22                    | 01 04 |                                  |      | 6:49  |      |
| 29                       | 45             |               | 09       |           | 59        |            | 38       | 12                       | 26 | 29           | 00 | 29 | 00                             | 12  | 14 30                    | 00 46 |                                  |      | 6:48  |      |
| 30                       | 43             |               | 08       | 10        | 01        |            | 51       |                          | 59 | 00           | 13 |    | 04                             | 13  | 14 03                    | 00 28 |                                  |      | 6:47  |      |
| 31                       | 41             |               | 06       |           | 02        | 28         | 04       | 13                       | 32 | 01           | 27 |    | R 02                           | 14  | 14 04                    | 00 09 |                                  |      | 6:46  |      |



| Bhadra-Qaur               |                          |             |         |                                 | SEPTEMBER 2016 |         |                   |        |             |      |            |   |                           |                   |       |
|---------------------------|--------------------------|-------------|---------|---------------------------------|----------------|---------|-------------------|--------|-------------|------|------------|---|---------------------------|-------------------|-------|
| भा<br>र<br>ती<br>य<br>दि. | G<br>r<br>e<br>n.<br>Dt. | D<br>a<br>y | वा<br>र | नाक्षत्रकाल<br>Sidereal<br>Time | ☉ सूर्य        |         |                   |        | ☾ चन्द्र    |      |            |   | रवि<br>उदय<br>Sun<br>Rise |                   |       |
|                           |                          |             |         |                                 | भोग<br>Long    |         | क्रान्ति<br>Decl. |        | भोग<br>Long |      | शर<br>Lat. |   |                           | क्रान्ति<br>Decl. |       |
|                           |                          |             |         | H. M. S                         | 0              | 1       | 0                 | 1      | 0           | 1    | 0          | 1 | 0                         | 1                 | H. M. |
| 10                        | 1                        | Th          | गुरु    | 22 42 21                        | 09 14 59       | 08 N 06 | 11 14 14          | 0 S 40 | 07 S 19     | 6:09 |            |   |                           |                   |       |
| 11                        | 2                        | F           | शुक्र   | 22 46 18                        | 10 13 05       | 07 44   | 23 46             | 0 N 43 | 03 35       | 6:09 |            |   |                           |                   |       |
| 12                        | 3                        | S           | शनि     | 22 50 14                        | 11 11 12       | 07 22   | 06 05             | 1 49   | 01 47       | 6:09 |            |   |                           |                   |       |
| 13                        | 4                        | Su          | रवि     | 22 54 11                        | 12 09 22       | 07 00   | 18 13             | 2 49   | 04 N 05     | 6:10 |            |   |                           |                   |       |
| 14                        | 5                        | M           | सोम     | 22 58 08                        | 13 07 33       | 06 38   | 29 56             | 3 40   | 07 43       | 6:10 |            |   |                           |                   |       |
| 15                        | 6                        | Tu          | मंगल    | 23 02 04                        | 14 05 46       | 06 15   | 11 49             | 4 22   | 11 03       | 6:10 |            |   |                           |                   |       |
| 16                        | 7                        | W           | बुध     | 23 06 01                        | 15 03 59       | 05 53   | 23 40             | 4 53   | 13 41       | 6:10 |            |   |                           |                   |       |
| 17                        | 8                        | Th          | गुरु    | 23 09 57                        | 16 02 15       | 05 31   | 05 33             | 5 10   | 15 46       | 6:11 |            |   |                           |                   |       |
| 18                        | 9                        | F           | शुक्र   | 23 13 54                        | 17 00 32       | 05 08   | 17 50             | 5 16   | 17 28       | 6:11 |            |   |                           |                   |       |
| 19                        | 10                       | S           | शनि     | 23 17 50                        | 17 58 50       | 04 45   | 00 00             | 5 S 07 | 18 11       | 6:11 |            |   |                           |                   |       |
| 20                        | 11                       | Su          | रवि     | 23 21 47                        | 18 57 11       | 04 22   | 12 25             | 4 43   | 18 18       | 6:12 |            |   |                           |                   |       |
| 21                        | 12                       | M           | सोम     | 23 25 43                        | 19 55 32       | 04 00   | 25 25             | 4 05   | 17 S 15     | 6:12 |            |   |                           |                   |       |
| 22                        | 13                       | Tu          | मंगल    | 23 29 40                        | 20 53 55       | 03 37   | 08 32             | 3 14   | 15 15       | 6:13 |            |   |                           |                   |       |
| 23                        | 14                       | W           | बुध     | 23 33 37                        | 21 52 20       | 03 14   | 22 03             | 2 10   | 12 20       | 6:13 |            |   |                           |                   |       |
| 24                        | 15                       | Th          | गुरु    | 23 37 33                        | 22 50 47       | 02 51   | 06 15             | 0 57   | 08 51       | 6:13 |            |   |                           |                   |       |
| 25                        | 16                       | F           | शुक्र   | 23 41 30                        | 23 49 15       | 02 27   | 20 32             | 0 N 22 | 04 28       | 6:13 |            |   |                           |                   |       |
| 26                        | 17                       | S           | शनि     | 23 45 26                        | 24 47 45       | 02 04   | 05 07             | 1 40   | 02 19       | 6:14 |            |   |                           |                   |       |
| 27                        | 18                       | Su          | रवि     | 23 49 23                        | 25 46 17       | 01 41   | 19 54             | 2 53   | 04 N 42     | 6:14 |            |   |                           |                   |       |
| 28                        | 19                       | M           | सोम     | 23 53 19                        | 26 44 51       | 01 18   | 04 44             | 3 55   | 09 08       | 6:14 |            |   |                           |                   |       |
| 29                        | 20                       | Tu          | मंगल    | 23 57 16                        | 27 43 27       | 00 55   | 19 31             | 4 40   | 12 47       | 6:15 |            |   |                           |                   |       |
| 30                        | 21                       | W           | बुध     | 00 01 12                        | 28 42 06       | 00 31   | 04 11             | 5 07   | 15 38       | 6:15 |            |   |                           |                   |       |
| 31                        | 22                       | Th          | गुरु    | 00 05 09                        | 29 40 47       | 00 N 12 | 18 30             | 5 14   | 17 29       | 6:16 |            |   |                           |                   |       |
| 1                         | 23                       | F           | शुक्र   | 00 09 06                        | 00 39 40       | 00 S 15 | 02 18             | 5 S 02 | 18 16       | 6:16 |            |   |                           |                   |       |
| 2                         | 24                       | S           | शनि     | 00 13 02                        | 01 38 15       | 00 39   | 16 02             | 4 33   | 18 S 11     | 6:16 |            |   |                           |                   |       |
| 3                         | 25                       | Su          | रवि     | 00 16 59                        | 02 37 03       | 01 02   | 29 28             | 3 49   | 16 50       | 6:16 |            |   |                           |                   |       |
| 4                         | 26                       | M           | सोम     | 00 20 55                        | 03 35 53       | 01 25   | 12 20             | 2 54   | 14 34       | 6:17 |            |   |                           |                   |       |
| 5                         | 27                       | Tu          | मंगल    | 00 24 52                        | 04 34 45       | 01 49   | 25 12             | 1 52   | 11 33       | 6:17 |            |   |                           |                   |       |
| 6                         | 28                       | W           | बुध     | 00 28 48                        | 05 33 39       | 02 12   | 07 50             | 0 47   | 08 17       | 6:17 |            |   |                           |                   |       |
| 7                         | 29                       | Th          | गुरु    | 00 32 45                        | 06 32 35       | 02 36   | 20 17             | 0 N 23 | 04 39       | 6:17 |            |   |                           |                   |       |
| 8                         | 30                       | F           | शुक्र   | 00 36 41                        | 07 31 33       | 02 59   | 02 33             | 1 29   | 02 01       | 6:17 |            |   |                           |                   |       |

| SEPTEMBER 2016           |                |               |          |           |           |            |          |                          |                                |    |                          |                           |              | भाद्र-क्वार |     |       |       |      |
|--------------------------|----------------|---------------|----------|-----------|-----------|------------|----------|--------------------------|--------------------------------|----|--------------------------|---------------------------|--------------|-------------|-----|-------|-------|------|
| G<br>r<br>e<br>n.<br>Dt. | Longitudes भोग |               |          |           |           |            |          |                          | Ending<br>Moments<br>of Tithis |    | Equa-<br>tion of<br>Time | रवि<br>अस्त<br>Sun<br>Set |              |             |     |       |       |      |
|                          | वरुण<br>♄      | प्रजापति<br>♃ | शनि<br>♄ | गुरु<br>♄ | मंगल<br>♂ | शुक्र<br>♀ | बुध<br>♂ | तिथ्यंकाल<br>Tithi Times | कला-<br>नर                     |    |                          |                           |              |             |     |       |       |      |
|                          | 0              | 1             | 0        | 1         | 0         | 1          | 0        | 1                        | 0                              | 1  |                          | H. M.                     | MS.          | H. M.       |     |       |       |      |
| 1                        | 10             | 40            | 24       | 04        | 10        | 04         | 28       | 16                       | 14                             | 05 | 02                       | 41                        | 28           | 55          | K15 | 14 33 | 01 50 | 6:45 |
| 2                        | R 38           | R 03          |          | 06        | 29        |            | 39       | 03                       | 54                             |    | R 42                     | S16                       | 15 33        | 01 31       |     | 6:44  |       |      |
| 3                        | 36             | 01            |          | 08        | 41        | 15         | 13       | 05                       | 08                             |    | 22                       | 17                        | 17 01        | 01 11       |     | 6:43  |       |      |
| 4                        | 35             | 23 59         |          | 10        | 54        |            | 47       | 06                       | 21                             | 27 | 56                       | 18                        | 18 55        | 02 51       |     | 6:42  |       |      |
| 5                        | 33             | 58            |          | 12        | 29 07     | 16         | 21       | 07                       | 35                             |    | 24                       | 19                        | 21 10        | 02 31       |     | 6:41  |       |      |
| 6                        | 32             | 56            |          | 15        | 19        |            | 56       | 08                       | 48                             | 26 | 46                       | 20                        | 23 36        | 02 11       |     | 6:41  |       |      |
| 7                        | 30             | 54            |          | 17        | 32        | 17         | 31       | 10                       | 02                             |    | 02                       | 21                        | 2 03         | 03 51       |     | 6:40  |       |      |
| 8                        | 28             | 52            |          | 19        | 45        | 18         | 07       | 11                       | 15                             | 25 | 13                       | 22                        | 4 19         | 03 30       |     | 6:39  |       |      |
| 9                        | 27             | 51            |          | 22        | 58        |            | 42       | 12                       | 28                             | 24 | 19                       | 23                        | -- --        | 03 09       |     | 6:38  |       |      |
| 10                       | 25             | 49            |          | 24        | 00 11     | 19         | 18       | 13                       | 42                             | 23 | 22                       | 23                        | 6 11         | 04 48       |     | 6:36  |       |      |
| 11                       | 23             | 47            |          | 27        | 23        |            | 54       | 14                       | 55                             | 22 | 22                       | 24                        | 7 29         | 04 27       |     | 6:35  |       |      |
| 12                       | 22             | 45            |          | 30        | 35        | 20         | 31       | 16                       | 09                             | 21 | 21                       | 25                        | 8 06         | 04 06       |     | 6:34  |       |      |
| 13                       | 20             | 43            |          | 33        | 49        | 21         | 07       | 17                       | 22                             | 20 | 20                       | 26                        | 7 57         | 05 45       |     | 6:33  |       |      |
| 14                       | 19             | 41            |          | 25        | 01 02     |            | 43       | 18                       | 35                             | 19 | 20                       | 27                        | 7 03         | 05 23       |     | 6:32  |       |      |
| 15                       | 17             | 39            |          | 38        | 15        | 22         | 20       | 19                       | 49                             | 18 | 24                       | 29                        | 3 16         | 05 02       |     | 6:31  |       |      |
| 16                       | 15             | 37            |          | 42        | 27        |            | 57       | 21                       | 02                             | 17 | 32                       | 30                        | 00 35        | 06 40       |     | 6:30  |       |      |
| 17                       | 14             | 35            |          | 45        | 41        | 23         | 34       | 22                       | 15                             | 16 | 45                       | K1                        | 21 34        | 06 19       |     | 6:29  |       |      |
| 18                       | 12             | 33            |          | 48        | 54        | 24         | 12       | 23                       | 29                             |    | 05                       | 2                         | 18 22        | 07 57       |     | 6:28  |       |      |
| 19                       | 11             | 31            |          | 51        | 02 07     |            | 49       | 24                       | 42                             | 15 | 33                       | 3                         | 15 07        | 07 36       |     | 6:27  |       |      |
| 20                       | 09             | 29            |          | 55        | 19        | 25         | 27       | 25                       | 55                             |    | 09                       | 4                         | 11 58        | 07 14       |     | 6:26  |       |      |
| 21                       | 08             | 27            |          | 58        | 32        | 26         | 05       | 27                       | 08                             | 14 | 55                       | 5                         | 9 02         | 08 53       |     | 6:25  |       |      |
| 22                       | 06             | 25            | 11       | 02        | 45        |            | 43       | 28                       | 21                             |    | 51                       | { 6 7                     | 6 28<br>4 29 | 08 32       |     | 6:24  |       |      |
| 23                       | 04             | 22            |          | 06        | 58        | 27         | 22       | 29                       | 35                             |    | 56                       | 8                         | 2 41         | 08 11       |     | 6:23  |       |      |
| 24                       | 03             | 20            |          | 09        | 03 11     | 28         | 01       | 00 48                    | 15                             | 11 |                          | 9                         | 1 36         | 09 50       |     | 6:22  |       |      |
| 25                       | 01             | 18            |          | 13        | 24        |            | 40       | 02                       | 02                             |    | 36                       | 10                        | 1 03         | 09 29       |     | 6:21  |       |      |
| 26                       | 00             | 16            |          | 17        | 37        | 29         | 19       | 03                       | 14                             | 16 | 10                       | 11                        | 1 03         | 09 09       |     | 6:20  |       |      |
| 27                       | 9 59           | 13            |          | 21        | 50        |            | 58       | 04                       | 27                             |    | 53                       | 12                        | 1 34         | 10 49       |     | 6:19  |       |      |
| 28                       | 57             | 11            |          | 25        | 04 03     | 00 37      | 05       | 40                       | 17                             | 44 |                          | 13                        | 2 32         | 10 29       |     | 6:18  |       |      |
| 29                       | 56             | 09            |          | 29        | 16        | 01 16      | 06       | 54                       | 18                             | 44 |                          | 14                        | 3 56         | 10 09       |     | 6:17  |       |      |
| 30                       | 54             | 07            |          | 34        | 29        |            | 56       | 08                       | 07                             | 19 | 50                       | 15                        | 4 41         | 11 49       |     | 6:16  |       |      |



| Qaur-Kartika              |                          |             |         | OCTOBER 2016                    |             |    |                   |         |             |    |            |        |                           |                   |   |       |
|---------------------------|--------------------------|-------------|---------|---------------------------------|-------------|----|-------------------|---------|-------------|----|------------|--------|---------------------------|-------------------|---|-------|
| भा<br>र<br>ती<br>य<br>दि. | G<br>r<br>e<br>n.<br>Dt. | D<br>a<br>y | वा<br>र | नाक्षत्रकाल<br>Sidereal<br>Time | ☉ सूर्य     |    |                   |         | ☾ चन्द्र    |    |            |        | रवि<br>उदय<br>Sun<br>Rise |                   |   |       |
|                           |                          |             |         |                                 | भोग<br>Long |    | क्रान्ति<br>Decl. |         | भोग<br>Long |    | शर<br>Lat. |        |                           | क्रान्ति<br>Decl. |   |       |
|                           |                          |             |         | H. M. S                         | 0           | 1  | 11                | 0       | 1           | 0  | 1          | 0      | 1                         | 0                 | 1 | H. M. |
| 9                         | 1                        | S           | शनि     | 0 40 38                         | 08          | 30 | 34                | 03 S 22 | 14          | 30 | 40         | 2 N 30 | 03 N 00                   | 6: 18             |   |       |
| 10                        | 2                        | Su          | रवि     | 0 44 35                         | 09          | 29 | 37                | 03 45   | 26          | 24 |            | 3 24   | 06 43                     | 6: 18             |   |       |
| 11                        | 3                        | M           | सोम     | 0 48 31                         | 10          | 28 | 42                | 04 09   | 08          | 19 |            | 4 08   | 10 09                     | 6: 19             |   |       |
| 12                        | 4                        | Tu          | मंगल    | 0 52 28                         | 11          | 27 | 48                | 04 32   | 20          | 11 |            | 4 42   | 12 56                     | 6: 19             |   |       |
| 13                        | 5                        | W           | बुध     | 0 56 24                         | 12          | 26 | 06                | 04 55   | 02          | 02 |            | 5 02   | 15 29                     | 6: 20             |   |       |
| 14                        | 6                        | Th          | गुरु    | 1 00 21                         | 13          | 26 | 06                | 05 18   | 13          | 54 |            | 5 11   | 17 07                     | 6: 20             |   |       |
| 15                        | 7                        | F           | शुक्र   | 1 04 17                         | 14          | 25 | 19                | 05 41   | 26          | 09 |            | 5 S 06 | 18 03                     | 6: 20             |   |       |
| 16                        | 8                        | S           | शनि     | 1 08 14                         | 15          | 24 | 32                | 06 04   | 08          | 16 |            | 4 46   | 18 27                     | 6: 20             |   |       |
| 17                        | 9                        | Su          | रवि     | 1 12 10                         | 16          | 23 | 48                | 06 27   | 20          | 37 |            | 4 15   | 17 S 44                   | 6: 20             |   |       |
| 18                        | 10                       | M           | सोम     | 1 16 07                         | 17          | 23 | 05                | 06 49   | 03          | 16 |            | 3 29   | 16 06                     | 6: 20             |   |       |
| 19                        | 11                       | Tu          | मंगल    | 1 20 04                         | 18          | 22 | 25                | 07 12   | 16          | 33 |            | 2 31   | 13 51                     | 6: 22             |   |       |
| 20                        | 12                       | W           | बुध     | 1 23 60                         | 19          | 21 | 46                | 07 35   | 00          | 01 |            | 1 24   | 10 28                     | 6: 22             |   |       |
| 21                        | 13                       | Th          | गुरु    | 1 27 57                         | 20          | 21 | 08                | 07 57   | 14          | 12 |            | 0 27   | 06 24                     | 6: 23             |   |       |
| 22                        | 14                       | F           | शुक्र   | 1 31 53                         | 21          | 20 | 33                | 08 19   | 28          | 34 |            | 1 N 07 | 02 11                     | 6: 23             |   |       |
| 23                        | 15                       | S           | शनि     | 1 35 50                         | 22          | 19 | 59                | 08 42   | 13          | 35 |            | 2 22   | 02 N 39                   | 6: 23             |   |       |
| 24                        | 16                       | Su          | रवि     | 1 39 46                         | 23          | 19 | 27                | 09 04   | 28          | 39 |            | 3 27   | 07 19                     | 6: 24             |   |       |
| 25                        | 17                       | M           | सोम     | 1 43 43                         | 24          | 18 | 58                | 09 26   | 13          | 51 |            | 4 20   | 11 21                     | 6: 24             |   |       |
| 26                        | 18                       | Tu          | मंगल    | 1 47 39                         | 25          | 18 | 30                | 09 47   | 29          | 00 |            | 4 53   | 14 40                     | 6: 25             |   |       |
| 27                        | 19                       | W           | बुध     | 1 51 36                         | 26          | 18 | 05                | 10 09   | 13          | 43 |            | 5 06   | 17 00                     | 6: 25             |   |       |
| 28                        | 20                       | Th          | गुरु    | 1 55 33                         | 27          | 17 | 42                | 10 30   | 28          | 23 |            | 4 S 59 | 18 11                     | 6: 25             |   |       |
| 29                        | 21                       | F           | शुक्र   | 1 59 29                         | 28          | 17 | 21                | 10 52   | 12          | 21 |            | 4 34   | 18 28                     | 6: 26             |   |       |
| 30                        | 22                       | S           | शनि     | 2 03 26                         | 29          | 17 | 03                | 11 13   | 26          | 09 |            | 3 52   | 17 S 20                   | 6: 26             |   |       |
| 1                         | 23                       | Su          | रवि     | 2 07 22                         | 00          | 16 | 46                | 11 34   | 09          | 31 |            | 2 59   | 15 14                     | 6: 27             |   |       |
| 2                         | 24                       | M           | सोम     | 2 11 19                         | 01          | 16 | 33                | 11 55   | 22          | 15 |            | 1 59   | 12 22                     | 6: 28             |   |       |
| 3                         | 25                       | Tu          | मंगल    | 2 15 15                         | 02          | 16 | 21                | 12 16   | 04          | 56 |            | 0 54   | 09 11                     | 6: 28             |   |       |
| 4                         | 26                       | W           | बुध     | 2 19 12                         | 03          | 16 | 11                | 12 36   | 17          | 20 |            | 0 20   | 05 38                     | 6: 29             |   |       |
| 5                         | 27                       | Th          | गुरु    | 2 23 08                         | 04          | 16 | 04                | 12 56   | 29          | 33 |            | 1 N 18 | 01 55                     | 6: 29             |   |       |
| 6                         | 28                       | F           | शुक्र   | 2 27 05                         | 05          | 15 | 58                | 13 16   | 11          | 20 |            | 2 17   | 02 N 00                   | 6: 29             |   |       |
| 7                         | 29                       | S           | शनि     | 2 34 02                         | 06          | 15 | 56                | 13 36   | 23          | 18 |            | 3 11   | 05 46                     | 6: 30             |   |       |
| 8                         | 30                       | Su          | रवि     | 2 34 58                         | 07          | 15 | 54                | 13 56   | 05          | 12 |            | 3 55   | 09 19                     | 6: 31             |   |       |
| 9                         | 31                       | M           | सोम     | 2 38 55                         | 08          | 15 | 54                | 14 15   | 17          | 04 |            | 4 30   | 12 14                     | 6: 31             |   |       |

| OCTOBER 2016             |                |               |          |           |           |            |          |                          |              |    |    |    |    | क्वार-कार्तिक                    |                          |                           |       |       |
|--------------------------|----------------|---------------|----------|-----------|-----------|------------|----------|--------------------------|--------------|----|----|----|----|----------------------------------|--------------------------|---------------------------|-------|-------|
| G<br>r<br>e<br>n.<br>Dt. | Longitudes भोग |               |          |           |           |            |          |                          |              |    |    |    |    | Ending<br>Moments<br>of Tithis   | Equa-<br>tion of<br>Time | रवि<br>अस्त<br>Sun<br>Set |       |       |
|                          | वरुण<br>卐      | प्रजापति<br>卐 | शनि<br>卐 | गुरु<br>卐 | मंगल<br>卐 | शुक्र<br>卐 | बुध<br>卐 | तिथ्यंकाल<br>Tithi Times | वला-<br>न्तर |    |    |    |    |                                  |                          |                           |       |       |
|                          | 0              | 1             | 0        | 1         | 0         | 1          | 0        | 1                        | 0            | 1  | 0  | 1  | 0  | 1                                |                          | H. M.                     | M.S.  | H. M. |
| 1                        | 09             | 53            | 23       | 04        | 11        | 38         | 04       | 42                       | 02           | 36 | 09 | 20 | 21 | 03                               | S 16                     | --                        | 11 30 | 6: 15 |
| 2                        | R 51           |               | R 02     |           | 42        |            | 55       | 03                       | 15           | 10 | 33 | 22 | 21 | 16                               | 7 46                     | 11 11                     | 6: 14 |       |
| 3                        | 50             |               | 00       |           | 47        | 05         | 08       |                          | 56           | 11 | 46 | 23 | 44 | 17                               | 10 05                    | 12 52                     | 6: 13 |       |
| 4                        | 49             | 22            | 57       |           | 51        | 21         | 04       | 36                       | 12           | 59 | 25 | 12 | 18 | 12 34                            | 12 34                    | 6: 12                     |       |       |
| 5                        | 47             |               | 55       |           | 56        | 34         | 05       | 16                       | 14           | 12 | 26 | 43 | 19 | 15 06                            | 12 16                    | 6: 11                     |       |       |
| 6                        | 46             |               | 52       | 12        | 01        | 47         |          | 57                       | 15           | 25 | 28 | 17 | 20 | 17 32                            | 13 59                    | 6: 10                     |       |       |
| 7                        | 45             |               | 50       |           | 05        | 06         | 00       | 06                       | 37           | 16 | 38 | 29 | 55 | 21                               | 19 42                    | 13 41                     | 6: 09 |       |
| 8                        | 44             |               | 48       |           | 10        | 13         | 07       | 18                       | 17           | 51 | 01 | 33 | 22 | 21 25                            | 13 25                    | 6: 08                     |       |       |
| 9                        | 43             |               | 45       |           | 15        | 26         |          | 59                       | 19           | 04 | 03 | 14 | 23 | 22 31                            | 13 08                    | 6: 07                     |       |       |
| 10                       | 41             |               | 43       |           | 20        | 38         | 08       | 40                       | 20           | 17 | 04 | 56 | 24 | 22 54                            | 14 52                    | 6: 06                     |       |       |
| 11                       | 40             |               | 40       |           | 25        | 51         | 09       | 21                       | 21           | 29 | 06 | 40 | 25 | 22 28                            | 14 37                    | 6: 05                     |       |       |
| 12                       | 39             |               | 38       |           | 30        | 07         | 04       | 10                       | 02           | 22 | 42 | 08 | 22 | 26                               | 21 14                    | 14 22                     | 6: 05 |       |
| 13                       | 38             |               | 35       |           | 35        | 17         |          | 44                       | 23           | 55 | 10 | 06 | 27 | 19 15                            | 14 07                    | 6: 04                     |       |       |
| 14                       | 37             |               | 33       |           | 41        | 30         | 11       | 25                       | 25           | 08 | 11 | 50 | 28 | 16 36                            | 15 53                    | 6: 03                     |       |       |
| 15                       | 35             |               | 31       |           | 46        | 42         | 12       | 07                       | 26           | 20 | 13 | 34 | 29 | 13 26                            | 15 40                    | 6: 02                     |       |       |
| 16                       | 34             |               | 28       |           | 52        | 55         |          | 49                       | 27           | 33 | 15 | 19 | 30 | 9 53                             | 15 27                    | 6: 01                     |       |       |
| 17                       | 33             |               | 26       |           | 57        | 08         | 08       | 13                       | 30           | 28 | 46 | 17 | 03 | K <sup>1</sup> <sub>2</sub> 6 09 | 15 15                    | 6: 01                     |       |       |
| 18                       | 32             |               | 23       | 13        | 03        | 21         | 14       | 13                       | 29           | 58 | 18 | 46 | 3  | 22 48                            | 15 03                    | 6: 00                     |       |       |
| 19                       | 31             |               | 21       |           | 08        | 33         |          | 56                       | 01           | 11 | 20 | 30 | 4  | 19 33                            | 16 52                    | 5: 59                     |       |       |
| 20                       | 30             |               | 18       |           | 14        | 46         | 15       | 37                       | 02           | 24 | 22 | 13 | 5  | 16 47                            | 16 42                    | 5: 58                     |       |       |
| 21                       | 29             |               | 16       |           | 19        | 58         | 16       | 19                       | 03           | 37 | 23 | 56 | 6  | 14 37                            | 16 32                    | 5: 57                     |       |       |
| 22                       | 28             |               | 13       |           | 25        | 09         | 11       | 17                       | 02           | 04 | 49 | 25 | 38 | 7                                | 13 11                    | 16 23                     | 5: 56 |       |
| 23                       | 28             |               | 11       |           | 31        | 23         |          | 45                       | 06           | 02 | 27 | 19 | 8  | 12 28                            | 16 15                    | 5: 55                     |       |       |
| 24                       | 27             |               | 09       |           | 37        | 36         | 18       | 27                       | 07           | 14 | 29 | 00 | 9  | 12 30                            | 16 08                    | 5: 55                     |       |       |
| 25                       | 26             |               | 06       |           | 43        | 48         | 19       | 10                       | 08           | 27 | 00 | 14 | 10 | 13 13                            | 16 01                    | 5: 54                     |       |       |
| 26                       | 25             |               | 04       |           | 49        | 10         | 01       |                          | 53           | 09 | 39 | 02 | 21 | 11                               | 14 31                    | 17 55                     | 5: 53 |       |
| 27                       | 24             |               | 01       |           | 55        | 13         | 20       | 36                       | 10           | 51 | 04 | 00 | 12 | 16 16                            | 17 49                    | 5: 53                     |       |       |
| 28                       | 23             | 21            | 59       | 14        | 01        | 26         | 21       | 19                       | 12           | 03 | 05 | 39 | 13 | 18 21                            | 17 45                    | 5: 52                     |       |       |
| 29                       | 23             |               | 57       |           | 07        | 38         | 22       | 02                       | 13           | 16 | 07 | 17 | 14 | 20 43                            | 17 41                    | 5: 51                     |       |       |
| 30                       | 22             |               | 54       |           | 13        | 50         |          | 45                       | 14           | 28 | 08 | 55 | 15 | 23 08                            | 17 38                    | 5: 50                     |       |       |
| 31                       | 21             |               | 52       |           | 19        | 11         | 02       | 23                       | 28           | 15 | 40 | 10 | 32 | S 16                             | 1 40                     | 17 36                     | 5: 50 |       |



| Kartika-Agrahayana        |                        |             |         | NOVEMBER 2016                   |             |                   |             |            |                   |    |                           |        |         |      |   |       |
|---------------------------|------------------------|-------------|---------|---------------------------------|-------------|-------------------|-------------|------------|-------------------|----|---------------------------|--------|---------|------|---|-------|
| भा<br>र<br>ती<br>य<br>दि. | G<br>r<br>e<br>n.<br>D | D<br>a<br>y | वा<br>र | नाक्षत्रकाल<br>Sidereal<br>Time | ☉ सूर्य     |                   |             | ☾ चन्द्र   |                   |    | रवि<br>उदय<br>Sun<br>Rise |        |         |      |   |       |
|                           |                        |             |         |                                 | भोग<br>Long | क्रान्ति<br>Decl. | भोग<br>Long | शर<br>Lat. | क्रान्ति<br>Decl. |    |                           |        |         |      |   |       |
|                           |                        |             |         | H. M. S                         | ०           | १                 | ॥           | ०          | १                 | ०  | १                         | ०      | १       | ०    | १ | H. M. |
| 10                        | 1                      | Tu          | मंगल    | 2 42 51                         | 09          | 15                | 57          | 14 S 35    | 28                | 15 | 55                        | 4 N 52 | 14 N 58 | 6:32 |   |       |
| 11                        | 2                      | W           | बुध     | 2 46 48                         | 10          | 16                | 02          | 14 54      | 10                | २० | 48                        | 5 02   | 16 48   | 6:33 |   |       |
| 12                        | 3                      | Th          | गुरु    | 2 50 44                         | 11          | 16                | 08          | 15 12      | 22                | 43 |                           | 4 S 58 | 17 58   | 6:33 |   |       |
| 13                        | 4                      | F           | शुक्र   | 2 54 41                         | 12          | 16                | 15          | 15 31      | 04                | ५० | 59                        | 4 42   | 18 38   | 6:34 |   |       |
| 14                        | 5                      | S           | शनि     | 2 58 37                         | 13          | 16                | 25          | 15 49      | 17                | 07 |                           | 4 13   | 18 S 25 | 6:34 |   |       |
| 15                        | 6                      | Su          | रवि     | 3 02 34                         | 14          | 16                | 36          | 16 07      | 29                | 26 |                           | 3 31   | 17 06   | 6:35 |   |       |
| 16                        | 7                      | M           | सोम     | 3 06 31                         | 15          | 16                | 49          | 16 25      | 12                | ०० |                           | 2 39   | 14 53   | 6:35 |   |       |
| 17                        | 8                      | Tu          | मंगल    | 3 10 27                         | 16          | 17                | 03          | 16 43      | 25                | 10 |                           | 1 37   | 11 52   | 6:36 |   |       |
| 18                        | 9                      | W           | बुध     | 3 14 24                         | 17          | 17                | 18          | 17 00      | 08                | २७ |                           | 0 42   | 08 24   | 6:37 |   |       |
| 19                        | 10                     | Th          | गुरु    | 3 18 20                         | 18          | 17                | 35          | 17 16      | 22                | 29 |                           | 0 N 45 | 04 04   | 6:37 |   |       |
| 20                        | 11                     | F           | शुक्र   | 3 22 17                         | 19          | 17                | 53          | 17 33      | 06                | ५२ |                           | 1 57   | 02 09   | 6:38 |   |       |
| 21                        | 12                     | S           | शनि     | 3 26 13                         | 20          | 18                | 14          | 17 50      | 21                | 22 |                           | 3 03   | 05 N 06 | 6:39 |   |       |
| 22                        | 13                     | Su          | रवि     | 3 30 10                         | 21          | 18                | 35          | 18 05      | 06                | ४४ |                           | 3 58   | 09 38   | 6:39 |   |       |
| 23                        | 14                     | M           | सोम     | 3 34 06                         | 22          | 18                | 57          | 18 21      | 21                | 58 |                           | 4 38   | 13 25   | 6:40 |   |       |
| 24                        | 15                     | Tu          | मंगल    | 3 38 03                         | 23          | 19                | 22          | 18 36      | 08                | ॥  | 19                        | 4 57   | 16 20   | 6:41 |   |       |
| 25                        | 16                     | W           | बुध     | 3 42 00                         | 24          | 19                | 48          | 18 51      | 22                | 31 |                           | 4 S 55 | 18 17   | 6:41 |   |       |
| 26                        | 17                     | Th          | गुरु    | 3 42 56                         | 20          | 20                | 16          | 19 06      | 07                | छ  | 10                        | 4 34   | 18 41   | 6:42 |   |       |
| 27                        | 18                     | F           | शुक्र   | 3 49 53                         | 26          | 20                | 46          | 19 20      | 21                | 38 |                           | 3 55   | 17 58   | 6:42 |   |       |
| 28                        | 19                     | S           | शनि     | 3 53 49                         | 27          | 21                | 18          | 19 34      | 05                | ०८ | 20                        | 3 03   | 16 08   | 6:43 |   |       |
| 29                        | 20                     | Su          | रवि     | 3 57 46                         | 28          | 21                | 51          | 19 48      | 18                | 49 |                           | 2 01   | 13 41   | 6:44 |   |       |
| 30                        | 21                     | M           | सोम     | 4 01 42                         | 29          | 22                | 26          | 20 01      | 01                | ॥  | 35                        | 0 57   | 10 18   | 6:45 |   |       |
| 1                         | 22                     | Tu          | मंगल    | 4 05 39                         | 00          | २३                | 02          | 20 14      | 14                | 13 |                           | 0 21   | 06 46   | 6:46 |   |       |
| 2                         | 23                     | W           | बुध     | 4 09 35                         | 01          | 23                | 41          | 20 26      | 26                | 33 |                           | 1 N 14 | 02 58   | 6:46 |   |       |
| 3                         | 24                     | Th          | गुरु    | 4 13 32                         | 02          | 24                | 21          | 20 38      | 08                | २३ |                           | 2 14   | 01 N 45 | 6:47 |   |       |
| 4                         | 25                     | F           | शुक्र   | 4 17 29                         | 03          | 25                | 03          | 20 50      | 20                | 21 |                           | 3 07   | 04 44   | 6:48 |   |       |
| 5                         | 26                     | S           | शनि     | 4 21 25                         | 04          | 25                | 46          | 21 01      | 02                | ॥  | 14                        | 3 51   | 08 22   | 6:48 |   |       |
| 6                         | 27                     | Su          | रवि     | 4 25 22                         | 05          | 26                | 03          | 21 12      | 14                | 04 |                           | 4 25   | 11 42   | 6:49 |   |       |
| 7                         | 28                     | M           | सोम     | 4 29 18                         | 06          | 27                | 17          | 21 23      | 25                | 55 |                           | 4 48   | 14 19   | 6:49 |   |       |
| 8                         | 29                     | Tu          | मंगल    | 4 33 15                         | 07          | 28                | 04          | 21 33      | 07                | २० | 49                        | 4 57   | 16 23   | 6:50 |   |       |
| 9                         | 30                     | W           | बुध     | 4 37 11                         | 08          | 28                | 54          | 21 43      | 20                | 03 |                           | 4 S 54 | 18 04   | 6:51 |   |       |

| NOVEMBER 2016 कार्तिक-अग्रहायण |                |               |          |           |           |            |          |                                |                          |                           |
|--------------------------------|----------------|---------------|----------|-----------|-----------|------------|----------|--------------------------------|--------------------------|---------------------------|
| G<br>r<br>e<br>n.<br>Dt.       | Longitudes भोग |               |          |           |           |            |          | Ending<br>Moments<br>of Tithis | Equa-<br>tion of<br>Time | रवि<br>अस्त<br>Sun<br>Set |
|                                | वरुण<br>☉      | प्रजापति<br>☽ | शनि<br>♄ | गुरु<br>♁ | मंगल<br>♂ | शुक्र<br>♀ | बुध<br>♂ | तिथ्यंका<br>Tithi Times        | कला-<br>न्तर             |                           |
|                                | 0 1            | 0 1           | 0 1      | 0 1       | 0 1       | 0 1        | 0 1      | H. M.                          | MS.                      | H. M.                     |
| 1                              | 09 21          | 21 50         | 14 25    | 11 15     | 24 12     | 16 52      | 12 09    | S 2                            | 4 11                     | 17 34                     |
| 2                              | R 20           | R 47          | 31       | 27        | 55        | 18 05      | 13 46    | 3 --                           | --                       | 17 33                     |
| 3                              | 19             | 45            | 38       | 39        | 25        | 39 19      | 18 15    | 3 6                            | 37                       | 17 34                     |
| 4                              | 19             | 43            | 44       | 51        | 26        | 22 29      | 16 58    | 4 8                            | 52                       | 17 35                     |
| 5                              | 18             | 41            | 50       | 12        | 03        | 27 06      | 21 41    | 5 10                           | 48                       | 17 36                     |
| 6                              | 18             | 38            | 51       | 15        | 50        | 22 53      | 20 07    | 6 12                           | 17                       | 17 39                     |
| 7                              | 17             | 36            | 15       | 03        | 27        | 28 33      | 24 05    | 7 13                           | 10                       | 17 42                     |
| 8                              | 17             | 34            | 10       | 38        | 29        | 17 25      | 17 23    | 8 13                           | 21                       | 17 47                     |
| 9                              | 17             | 32            | 16       | 50        | 00        | 01 26      | 29 24    | 9 12                           | 45                       | 17 52                     |
| 10                             | 16             | 30            | 23       | 13        | 02        | 45         | 27 41    | 10 11                          | 22                       | 17 58                     |
| 11                             | 16             | 28            | 29       | 14        | 01        | 29 28      | 53 27    | 11 9                           | 13                       | 16 04                     |
| 12                             | 16             | 26            | 36       | 25        | 02        | 13 00      | 00 04    | 12 6                           | 24                       | 16 12                     |
| 13                             | 15             | 24            | 42       | 37        | 58        | 01 17      | 01 01    | 13 3                           | 02                       | 16 20                     |
| 14                             | 15             | 22            | 49       | 48        | 03        | 42 02      | 28 02    | 14 23                          | 18                       | 16 29                     |
| 15                             | 15             | 20            | 56       | 14        | 00        | 04 26      | 03 39    | 15 19                          | 22                       | 16 40                     |
| 16                             | 15             | 18            | 16       | 03        | 11        | 05 10      | 04 51    | 16 11                          | 43                       | 16 50                     |
| 17                             | 15             | 16            | 09       | 22        | 55        | 06 02      | 07 08    | 17 8                           | 22                       | 15 02                     |
| 18                             | 15             | 14            | 16       | 34        | 06        | 39 07      | 14 08    | 18 5                           | 36                       | 15 15                     |
| 19                             | 14             | 12            | 23       | 45        | 07        | 24 08      | 25 10    | 19 2                           | 18                       | 15 28                     |
| 20                             | 14             | 10            | 30       | 56        | 08        | 08 09      | 36 11    | 20 1                           | 55                       | 15 43                     |
| 21                             | 14             | 09            | 37       | 15        | 07        | 53 10      | 47 13    | 21 2                           | 23                       | 15 58                     |
| 22                             | 15             | 07            | 43       | 18        | 09        | 37 11      | 59 14    | 22 3                           | 36                       | 14 14                     |
| 23                             | 15             | 05            | 50       | 29        | 10        | 22 13      | 10 16    | 23 5                           | 26                       | 14 30                     |
| 24                             | 15             | 04            | 57       | 39        | 11        | 07 14      | 21 17    | 24 --                          | --                       | 14 48                     |
| 25                             | 15             | 02            | 17       | 04        | 50        | 52 15      | 32 19    | 25 7                           | 41                       | 13 06                     |
| 26                             | 15             | 01            | 11       | 16        | 01        | 12 36      | 16 42    | 26 10                          | 11                       | 13 25                     |
| 27                             | 15             | 20            | 59       | 18        | 11        | 13 21      | 17 53    | 27 12                          | 47                       | 13 45                     |
| 28                             | 16             | 58            | 25       | 22        | 14        | 06 19      | 04 23    | 28 15                          | 21                       | 12 06                     |
| 29                             | 16             | 56            | 32       | 32        | 51        | 20 14      | 24 55    | 29 17                          | 48                       | 12 27                     |
| 30                             | 16             | 55            | 39       | 42        | 15        | 36 21      | 25 26    | S 1                            | 20 05                    | 12 49                     |



| Agrahayana-Pausa DECEMBER 2016 |     |    |       |             |          |          |           |         |          |       |
|--------------------------------|-----|----|-------|-------------|----------|----------|-----------|---------|----------|-------|
| भा                             | G   | D  | वा    | नाक्षत्रकाल | ☉ सूर्य  |          | ☾ चन्द्र  |         |          | रवि   |
| र                              | n.  | a  |       | Sidereal    | भोग      | क्रान्ति | भोग       | शर      | क्रान्ति | उदय   |
| ती                             | Dt. | y  |       | Time        | Long     | Decl.    | Long      | Lat.    | Decl.    | Sun   |
| थ                              |     |    |       |             |          |          |           |         |          | Rise  |
| दि.                            |     |    |       | H. M. S     | 0 1 2    | 0 1 2    | 0 1 2     | 0 1 2   | 0 1 2    | H. M. |
| 10                             | 1   | Th | गुरु  | 4 41 08     | 09 29 44 | 21 S 52  | 02 15 05  | 4 S 38  | 18 N 42  | 6:51  |
| 11                             | 2   | F  | शुक्र | 4 45 04     | 10 30 34 | 22 01 14 | 12 4 10   | 18 S 45 | 18 S 45  | 6:52  |
| 12                             | 3   | S  | शनि   | 4 49 01     | 11 31 26 | 22 09 26 | 27 3 29   | 17 39   | 17 39    | 6:53  |
| 13                             | 4   | Su | रवि   | 4 52 58     | 12 32 20 | 22 18 08 | 33 52     | 2 37    | 15 41    | 6:53  |
| 14                             | 5   | M  | सोम   | 4 56 54     | 13 33 14 | 22 25 21 | 29 1 37   | 12 56   | 12 56    | 6:54  |
| 15                             | 6   | Tu | मंगल  | 5 00 51     | 14 34 08 | 22 33 04 | 38 0 42   | 09 43   | 09 43    | 6:55  |
| 16                             | 7   | W  | बुध   | 5 04 47     | 15 35 03 | 22 40 17 | 50 0 N 38 | 05 39   | 05 39    | 6:55  |
| 17                             | 8   | Th | गुरु  | 5 08 44     | 16 35 59 | 22 46 01 | 24 1 47   | 02 22   | 02 22    | 6:56  |
| 18                             | 9   | F  | शुक्र | 5 12 40     | 17 36 56 | 22 51 15 | 40 2 51   | 03 N 06 | 03 N 06  | 6:57  |
| 19                             | 10  | S  | शनि   | 5 16 37     | 18 37 53 | 22 57 00 | 3 03      | 3 47    | 07 37    | 6:58  |
| 20                             | 11  | Su | रवि   | 5 20 33     | 19 38 51 | 23 02 15 | 06 4 29   | 11 35   | 11 35    | 6:58  |
| 21                             | 12  | M  | सोम   | 5 24 30     | 20 39 50 | 23 06 00 | 09 4 54   | 14 55   | 14 55    | 6:59  |
| 22                             | 13  | Tu | मंगल  | 5 28 27     | 21 40 49 | 23 10 15 | 21 4 58   | 17 19   | 17 19    | 7:00  |
| 23                             | 14  | W  | बुध   | 5 32 23     | 22 41 49 | 23 14 00 | 29 4 S 41 | 18 33   | 18 33    | 7:00  |
| 24                             | 15  | Th | गुरु  | 5 36 20     | 23 42 50 | 23 17 15 | 09 4 05   | 18 44   | 18 44    | 7:01  |
| 25                             | 16  | F  | शुक्र | 5 40 16     | 24 43 51 | 23 20 29 | 44 3 14   | 17 S 23 | 17 S 23  | 7:02  |
| 26                             | 17  | S  | शनि   | 5 44 13     | 25 44 53 | 23 22 13 | 34 2 12   | 14 58   | 14 58    | 7:02  |
| 27                             | 18  | Su | रवि   | 5 48 09     | 26 45 57 | 23 24 27 | 11 1 04   | 11 44   | 11 44    | 7:03  |
| 28                             | 19  | M  | सोम   | 5 52 06     | 27 47 01 | 23 25 10 | 05 0 25   | 08 13   | 08 13    | 7:03  |
| 29                             | 20  | Tu | मंगल  | 5 56 02     | 28 48 06 | 23 25 12 | 49 1 N 11 | 04 24   | 04 24    | 7:04  |
| 30                             | 21  | W  | बुध   | 5 59 59     | 29 49 12 | 23 26 05 | 12 2 13   | 02 09   | 02 09    | 7:04  |
| 1                              | 22  | Th | गुरु  | 6 03 56     | 00 50 19 | 23 25 17 | 02 3 07   | 03 N 27 | 03 N 27  | 7:05  |
| 2                              | 23  | F  | शुक्र | 6 07 52     | 01 51 26 | 23 25 28 | 59 3 52   | 07 12   | 07 12    | 7:05  |
| 3                              | 24  | S  | शनि   | 6 11 49     | 02 52 33 | 23 24 10 | 52 4 27   | 10 40   | 10 40    | 7:06  |
| 4                              | 25  | Su | रवि   | 6 15 45     | 03 53 43 | 23 22 22 | 42 4 51   | 13 28   | 13 28    | 7:06  |
| 5                              | 26  | M  | सोम   | 6 19 42     | 04 54 51 | 23 20 04 | 34 5 01   | 16 01   | 16 01    | 7:07  |
| 6                              | 27  | Tu | मंगल  | 6 23 38     | 05 56 11 | 23 18 16 | 48 4 S 59 | 17 38   | 17 38    | 7:07  |
| 7                              | 28  | W  | बुध   | 6 27 35     | 06 57 11 | 23 15 28 | 52 4 43   | 18 32   | 18 32    | 7:07  |
| 8                              | 29  | Th | गुरु  | 6 31 31     | 07 58 21 | 23 12 11 | 04 4 15   | 18 52   | 18 52    | 7:08  |
| 9                              | 30  | F  | शुक्र | 6 35 28     | 08 59 31 | 23 08 13 | 24 3 33   | 18 S 02 | 18 S 02  | 7:08  |
| 10                             | 31  | S  | शनि   | 6 39 25     | 09 00 42 | 23 04 05 | 54 2 41   | 16 19   | 16 19    | 7:09  |

| DECEMBER 2016 कार्तिक - पौष |                |          |       |       |       |       |       |             |              |       |
|-----------------------------|----------------|----------|-------|-------|-------|-------|-------|-------------|--------------|-------|
| G                           | Longitudes भोग |          |       |       |       |       |       | Ending      | Equa-        | रवि   |
|                             | वरुण           | प्रजापति | शनि   | गुरु  | मंगल  | शुक्र | बुध   | Moments     | tion of      |       |
| Dt.                         | ॐ              | ॐ        | ॐ     | ॐ     | ॐ     | ॐ     | ॐ     | of Tithis   | Time         | Sun   |
|                             |                |          |       |       |       |       |       | Tithi Times | कला-<br>न्तर | Set   |
|                             | 0 1 2          | 0 1 2    | 0 1 2 | 0 1 2 | 0 1 2 | 0 1 2 | 0 1 2 | H. M.       | MS.          | H. M. |
| 1                           | 09 16          | 20 53    | 17 46 | 16 52 | 16 21 | 22 35 | 27 45 | S 2         | 22 09        | 11 11 |
| 2                           | 17             | R 52     | 53    | 17 02 | 17 06 | 23 46 | 29 09 | 3           | 23 57        | 11 34 |
| 3                           | 17             | 51       | 18 00 | 12    | 51    | 24 56 | 00 31 | 4           | 1 25         | 11 58 |
| 4                           | 18             | 50       | 07    | 22 18 | 36    | 26 06 | 01 53 | 5           | 2 26         | 10 23 |
| 5                           | 18             | 49       | 15    | 32 19 | 21    | 27 16 | 03 12 | 6           | 2 57         | 10 47 |
| 6                           | 19             | 47       | 22    | 41 20 | 06    | 28 26 | 04 29 | 7           | 2 51         | 09 13 |
| 7                           | 19             | 46       | 29    | 51    | 51    | 29 35 | 05 45 | 8           | 2 05         | 09 39 |
| 8                           | 20             | 45       | 36    | 18 00 | 21    | 37 00 | 45 06 | 9           | 0 37         | 08 05 |
| 9                           | 21             | 44       | 43    | 09 22 | 22    | 01 54 | 08 08 | 10          | 22 29        | 08 32 |
| 10                          | 21             | 43       | 50    | 18 23 | 07    | 03 04 | 09 16 | 11          | 19 45        | 08 59 |
| 11                          | 22             | 42       | 57    | 27    | 52    | 04 13 | 10 19 | 12          | 16 32        | 07 27 |
| 12                          | 23             | 41       | 19 04 | 36 24 | 37    | 05 22 | 11 18 | 13          | 12 59        | 07 54 |
| 13                          | 23             | 40       | 11    | 45 25 | 23    | 06 31 | 12 12 | 14          | 9 17         | 06 23 |
| 14                          | 24             | 40       | 18    | 54 26 | 08    | 07 40 | 13 00 | K 16        | 2 08         | 06 51 |
| 15                          | 25             | 39       | 25 19 | 03    | 53    | 08 48 | 42    | 17          | 23 04        | 05 20 |
| 16                          | 26             | 38       | 33    | 11 27 | 38    | 09 57 | 14 16 | 18          | 20 36        | 05 49 |
| 17                          | 27             | 37       | 40    | 20 28 | 24    | 11 05 | 42    | 19          | 18 51        | 04 18 |
| 18                          | 28             | 37       | 47    | 28 29 | 09    | 12 13 | 15 00 | 20          | 17 57        | 04 48 |
| 19                          | 29             | 36       | 54    | 36    | 54    | 13 21 | 07    | 21          | 17 55        | 03 17 |
| 20                          | 30             | 36       | 20 01 | 44 00 | 40    | 14 29 | R 03  | 22          | 18 44        | 03 47 |
| 21                          | 31             | 35       | 08    | 52 01 | 25    | 15 37 | 14 49 | 23          | 20 18        | 02 17 |
| 22                          | 32             | 35       | 15 20 | 00 02 | 10    | 16 44 | 22    | 24          | 22 25        | 02 47 |
| 23                          | 33             | 35       | 22    | 08    | 55    | 17 52 | 13 44 | 25          | 00 55        | 01 17 |
| 24                          | 34             | 34       | 29    | 15 03 | 41    | 18 59 | 12 56 | 26          | 3 32         | 01 47 |
| 25                          | 35             | 34       | 36    | 23 04 | 26    | 20 06 | 11 54 | 27          | 6 07         | 00 16 |
| 26                          | 36             | 34       | 43    | 30 05 | 11    | 21 12 | 10 46 | 28          | -- --        | 00 46 |
| 27                          | 38             | 34       | 50    | 37    | 57    | 22 18 | 09 31 | 28          | 8 30         | 01 16 |
| 28                          | 39             | 33       | 57    | 44 06 | 42    | 23 24 | 08 11 | 29          | 10 37        | 01 45 |
| 29                          | 40             | 33       | 21 04 | 51 07 | 27    | 24 31 | 06 49 | 30          | 12 23        | 02 14 |
| 30                          | 41             | 33       | 10    | 58 08 | 13    | 25 36 | 05 28 | S 1         | 13 49        | 02 43 |
| 31                          | 43             | 34       | 17 21 | 04    | 58    | 26 40 | 04 10 | 2           | 14 52        | 03 12 |



## JANUARY 2016

|     | ॐ      |          | ॐ      |          | ॐ      |          | ॐ      |          |
|-----|--------|----------|--------|----------|--------|----------|--------|----------|
| दि. | शर     | क्रान्ति | शर     | क्रान्ति | शर     | क्रान्ति | शर     | क्रान्ति |
| Dt. | Lat.   | Decl.    | Lat.   | Decl.    | Lat.   | Decl.    | Lat.   | Decl.    |
|     | 0      | 1        | 0      | 1        | 0      | 1        | 0      | 1        |
| 1   | 0 S 38 | 20 S 51  | 1 S 59 | 18 N 45  | 1 N 30 | 9 N 40   | 1 N 14 | 3 S 51   |
| 3   | 0 17   | 20 09    | 1 55   | 19 16    | 30     | 10 03    | 15     | 51       |
| 5   | 0 N 26 | 19 31    | 1 51   | 19 44    | 30     | 10 26    | 16     | 51       |
| 7   | 1 03   | 19 00    | 1 47   | 20 11    | 30     | 10 49    | 16     | N 51     |
| 9   | 1 41   | 18 38    | 1 43   | 20 35    | S 30   | 11 11    | 17     | 51       |
| 11  | 2 17   | 18 24    | 1 38   | 20 57    | 30     | 11 33    | 17     | 52       |
| 13  | 2 48   | 18 N 21  | 1 33   | 21 17    | 30     | 11 55    | 18     | 53       |
| 15  | 3 10   | 18 24    | 1 28   | 21 35    | 30     | 12 16    | 18     | 55       |
| 17  | 3 24   | 18 35    | 1 23   | 21 50    | 30     | 12 37    | 19     | 57       |
| 19  | 3 27   | 18 49    | 1 17   | 22 03    | 29     | 12 57    | 19     | 59       |
| 21  | 3 S 21 | 19 06    | 1 12   | 22 12    | 29     | 13 17    | 20     | 4 02     |
| 23  | 3 10   | 19 24    | 1 06   | 22 20    | 29     | 13 36    | 20     | 04       |
| 25  | 2 53   | 19 43    | 1 00   | 22 25    | 29     | 13 56    | 21     | 07       |
| 27  | 2 34   | 20 02    | 0 54   | 22 21    | 29     | 14 15    | 22     | 10       |
| 29  | 2 13   | 20 18    | 0 48   | 22 S 26  | 28     | 14 33    | 22     | 14       |
| 31  | 1 51   | 20 32    | 0 42   | 22 23    | 28     | 14 51    | 23     | 17       |

## JANUARY 2016

|     | ॐ      |          | ॐ      |          | ॐ      |          | ॐ         |       |
|-----|--------|----------|--------|----------|--------|----------|-----------|-------|
| दि. | शर     | क्रान्ति | शर     | क्रान्ति | शर     | क्रान्ति | मध्यम भोग |       |
| Dt. | Lat.   | Decl.    | Lat.   | Decl.    | Lat.   | Decl.    | M. Long.  |       |
|     | 0      | 1        | 0      | 1        | 0      | 1        | 0         | 1     |
| 1   | 1 N 38 | 20 S 30  | 0 S 38 | 5 N 56   | 0 S 48 | 9 S 28   | 12        | 11 11 |
| 3   | 38     | 31       | 38     | 56       | 48     | 27       | 12        | 04 50 |
| 5   | 38     | 33       | 38     | 56       | 48     | 26       | 11        | 57 29 |
| 7   | 38     | 35       | 38     | 57       | 48     | 25       | 11        | 51 08 |
| 9   | 38     | 37       | 38     | 57       | 48     | 24       | 11        | 45 46 |
| 11  | 38     | 38       | 38     | 58       | 48     | 23       | 11        | 39 25 |
| 13  | 38     | 40       | 38     | 59       | 48     | 21       | 11        | 33 04 |
| 15  | 38     | 41       | 38     | 6 00     | 48     | 20       | 11        | 26 43 |
| 17  | 38     | 42       | 37     | 01       | 47     | 18       | 11        | 20 21 |
| 19  | 39     | 44       | 37     | 02       | 47     | 17       | 11        | 14 00 |
| 21  | 39     | 45       | 37     | 03       | 47     | 15       | 11        | 07 39 |
| 23  | 39     | 46       | 37     | 04       | 47     | 14       | 11        | 01 18 |
| 25  | 39     | 47       | 37     | 05       | 47     | 12       | 10        | 54 56 |
| 27  | 39     | 48       | 37     | 06       | 47     | 11       | 10        | 48 35 |
| 29  | 39     | 49       | 37     | 07       | 47     | 09       | 10        | 42 14 |
| 31  | 39     | 50       | 37     | 09       | 47     | 08       | 10        | 35 53 |

## FEBRUARY 2016

|     | ॐ      |          | ॐ      |          | ॐ      |          | ॐ      |          |
|-----|--------|----------|--------|----------|--------|----------|--------|----------|
| दि. | शर     | क्रान्ति | शर     | क्रान्ति | शर     | क्रान्ति | शर     | क्रान्ति |
| Dt. | Lat.   | Decl.    | Lat.   | Decl.    | Lat.   | Decl.    | Lat.   | Decl.    |
|     | 0      | 1        | 0      | 1        | 0      | 1        | 0      | 1        |
| 2   | 1 S 29 | 20 N 43  | 0 S 36 | 22 S 17  | 1 S 28 | 15 N 09  | 1 N 23 | 4 N 21   |
| 4   | 1 08   | 20 51    | 30     | 22 09    | 28     | 15 26    | 23     | 26       |
| 6   | 0 47   | 20 55    | 24     | 21 57    | 27     | 15 42    | 24     | 30       |
| 8   | 0 27   | 20 S 55  | 18     | 21 44    | 27     | 15 58    | 24     | 35       |
| 10  | 0 11   | 20 50    | 12     | 21 27    | 26     | 16 14    | 25     | 40       |
| 12  | 0 N 11 | 20 40    | 07     | 21 08    | 26     | 16 30    | 25     | 45       |
| 14  | 0 28   | 20 26    | 03     | 20 47    | 25     | 16 45    | 26     | 51       |
| 16  | 0 44   | 20 07    | N 05   | 20 23    | 25     | 17 00    | 26     | 56       |
| 18  | 0 59   | 19 42    | 10     | 19 56    | 24     | 17 14    | 26     | 5 01     |
| 20  | 1 12   | 19 13    | 16     | 19 28    | 23     | 17 28    | 27     | 07       |
| 22  | 1 24   | 18 39    | 21     | 18 57    | 23     | 17 41    | 27     | 13       |
| 24  | 1 36   | 17 59    | 26     | 18 24    | 22     | 17 53    | 27     | 19       |
| 26  | 1 45   | 17 15    | 31     | 17 49    | 21     | 18 06    | 27     | 25       |
| 28  | 1 53   | 16 25    | 36     | 17 11    | 20     | 18 18    | 28     | 31       |

## FEBRUARY 2016

|     | ॐ      |          | ॐ      |          | ॐ      |          | ॐ         |       |
|-----|--------|----------|--------|----------|--------|----------|-----------|-------|
| दि. | शर     | क्रान्ति | शर     | क्रान्ति | शर     | क्रान्ति | मध्यम भोग |       |
| Dt. | Lat.   | Decl.    | Lat.   | Decl.    | Lat.   | Decl.    | M. Long.  |       |
|     | 0      | 1        | 0      | 1        | 0      | 1        | 0         | 1     |
| 2   | 1 N 40 | 20 N 51  | 0 S 37 | 6 N 11   | 0 S 47 | 9 S 06   | 10        | 29 31 |
| 4   | 40     | 52       | 37     | 12       | 47     | 05       | 10        | 23 10 |
| 6   | 40     | 53       | 37     | 14       | 47     | 03       | 10        | 16 49 |
| 8   | 40     | 54       | 37     | 16       | 47     | 01       | 10        | 10 28 |
| 10  | 40     | 55       | 37     | 18       | 47     | 00       | 10        | 04 06 |
| 12  | 40     | 55       | 37     | 19       | 47     | 8 58     | 9         | 57 45 |
| 14  | 41     | 56       | 37     | 21       | 47     | 56       | 9         | 51 24 |
| 16  | 41     | 57       | 36     | 23       | 47     | 55       | 9         | 45 03 |
| 18  | 41     | 57       | 36     | 25       | 47     | 53       | 9         | 38 41 |
| 20  | 41     | 58       | 36     | 27       | 47     | 51       | 9         | 32 20 |
| 22  | 41     | 58       | 36     | 29       | 47     | 50       | 9         | 26 17 |
| 24  | 42     | 59       | 36     | 31       | 47     | 48       | 9         | 19 56 |
| 26  | 42     | 59       | 36     | 33       | 47     | 46       | 9         | 13 35 |
| 28  | 42     | 59       | 36     | 36       | 47     | 45       | 9         | 07 14 |



## MARCH 2016

| दि. | शर     | क्रान्ति | शर     | क्रान्ति | शर     | क्रान्ति | शर     | क्रान्ति |
|-----|--------|----------|--------|----------|--------|----------|--------|----------|
| Dt. | Lat.   | Decl.    | Lat.   | Decl.    | Lat.   | Decl.    | Lat.   | Decl.    |
|     | 0      | 1        | 0      | 1        | 0      | 1        | 0      | 1        |
| 1   | 2 N 00 | 15 S 20  | 0 N 41 | 16 S 32  | 1 S 19 | 13 N 29  | 1 N 28 | 5 N 39   |
| 3   | 2 05   | 14 30    | 46     | 15 51    | 18     | 18 41    | 28     | 44       |
| 5   | 2 09   | 13 25    | 50     | 15 08    | 17     | 18 51    | 28     | 50       |
| 7   | 2 11   | 12 15    | 55     | 14 24    | 16     | 19 02    | 28     | 56       |
| 9   | 2 12   | 11 00    | 59     | 13 37    | 14     | 19 42    | 29     | 0 03     |
| 11  | 2 S 10 | 9 40     | 1 03   | 12 50    | 13     | 19 22    | 29     | 09       |
| 13  | 2 07   | 8 24     | 06     | 12 01    | 11     | 19 30    | 29     | 15       |
| 15  | 2 01   | 6 44     | 10     | 11 11    | 10     | 19 39    | 29     | 21       |
| 17  | 1 54   | 5 19     | 13     | 10 19    | 08     | 19 48    | 29     | 27       |
| 19  | 1 44   | 3 31     | 16     | 9 26     | 06     | 19 56    | S 29   | 33       |
| 21  | 1 33   | 1 48     | 19     | 8 32     | 04     | 20 04    | 29     | 38       |
| 23  | 1 20   | 0 01     | 21     | 7 38     | 02     | 20 11    | 29     | 44       |
| 25  | 1 03   | 1 N 49   | 23     | 6 43     | 00     | 20 19    | 29     | 50       |
| 27  | 0 46   | 3 41     | 25     | 5 47     | 0 58   | 20 26    | 28     | 54       |
| 29  | 0 26   | 5 34     | 26     | 4 50     | 58     | 20 32    | 28     | 59       |
| 31  | 0 11   | 7 27     | 27     | 3 52     | 53     | 20 39    | 28     | 7 04     |

## MARCH 2016

| दि. | शर   | क्रान्ति | शर     | क्रान्ति | शर     | क्रान्ति | मध्यम भोग |
|-----|------|----------|--------|----------|--------|----------|-----------|
| Dt. | Lat. | Decl.    | Lat.   | Decl.    | Lat.   | Decl.    | M. Long.  |
|     | 0    | 1        | 0      | 1        | 0      | 1        | 0         |
| 1   | 1 42 | 21 N 00  | 0 S 36 | 6 N 38   | 0 N 48 | 8 43     | 8 00 13   |
| 3   | 43   | 00       | 36     | 40       | 48     | 41       | 8 54 32   |
| 5   | 43   | 00       | 36     | 42       | 48     | 396      | 8 48 11   |
| 7   | 43   | 00       | 36     | 45       | 48     | 38       | 8 41 50   |
| 9   | 43   | 00       | 36     | 47       | 48     | 36       | 8 34 29   |
| 11  | 43   | 00       | 36     | 49       | 48     | 34       | 8 28 08   |
| 13  | 44   | 00       | 36     | 52       | 48     | 33       | 8 21 47   |
| 15  | 44   | 00       | 36     | 54       | 48     | 31       | 8 15 27   |
| 17  | 44   | S 00     | 36     | 57       | 48     | 30       | 8 09 06   |
| 19  | 44   | 00       | 36     | 59       | 48     | 28       | 8 02 45   |
| 21  | 45   | 00       | 36     | 7 02     | 48     | 26       | 7 56 21   |
| 23  | 45   | 00       | 36     | 04       | 48     | 25       | 7 50 03   |
| 25  | 45   | 00       | 36     | 07       | 48     | 23       | 7 43 42   |
| 27  | 45   | 00       | 36     | 09       | 48     | 22       | 7 37 21   |
| 29  | 46   | 20 59    | 36     | 12       | 48     | 20       | 7 31 00   |
| 31  | 46   | 59       | 36     | 15       | 48     | 19       | 7 24 39   |

## APRIL 2016

| दि. | शर     | क्रान्ति | शर     | क्रान्ति | शर     | क्रान्ति | शर     | क्रान्ति |
|-----|--------|----------|--------|----------|--------|----------|--------|----------|
| Dt. | Lat.   | Decl.    | Lat.   | Decl.    | Lat.   | Decl.    | Lat.   | Decl.    |
|     | 0      | 1        | 0      | 1        | 0      | 1        | 0      | 1        |
| 2   | 0 N 17 | 9 N 18   | 1 N 28 | 2 S 54   | 0 S 50 | 20 N 45  | 1 S 28 | 7 N 09   |
| 4   | 0 39   | 11 06    | 29     | 1 56     | 48     | 20 50    | 28     | 14       |
| 6   | 1 03   | 12 49    | 30     | 0 57     | 45     | 20 56    | 28     | 18       |
| 8   | 1 25   | 14 24    | 30     | 0 N 23   | 42     | 21 01    | 27     | 22       |
| 10  | 1 46   | 15 52    | S 30   | 1 00     | 38     | 21 06    | 27     | 26       |
| 12  | 2 06   | 17 10    | 30     | 1 59     | 35     | 21 10    | 27     | 30       |
| 14  | 2 22   | 18 18    | 29     | 2 57     | 32     | 21 15    | 26     | 33       |
| 16  | 2 35   | 19 14    | 28     | 3 56     | 28     | 21 19    | 26     | 36       |
| 18  | 2 45   | 20 00    | 27     | 4 54     | 24     | 21 23    | 26     | 39       |
| 20  | 2 51   | 20 35    | 26     | 5 51     | 20     | 21 27    | 26     | 41       |
| 22  | 2 52   | 20 58    | 24     | 6 48     | 15     | 21 31    | 25     | 44       |
| 24  | 2 S 49 | 21 10    | 22     | 7 45     | 11     | 21 34    | 25     | 45       |
| 26  | 2 41   | 21 S 11  | 20     | 8 41     | 06     | 21 37    | 25     | 47       |
| 28  | 2 27   | 21 02    | 18     | 9 37     | 02     | 21 39    | 24     | 48       |
| 30  | 2 09   | 20 42    | 15     | 10 31    | N 04   | 21 41    | 24     | 49       |

## APRIL 2016

| दि. | शर     | क्रान्ति | शर     | क्रान्ति | शर     | क्रान्ति | मध्यम भोग |
|-----|--------|----------|--------|----------|--------|----------|-----------|
| Dt. | Lat.   | Decl.    | Lat.   | Decl.    | Lat.   | Decl.    | M. Long.  |
|     | 0      | 1        | 0      | 1        | 0      | 1        | 0         |
| 2   | 1 N 46 | 20 S 59  | 0 S 36 | 7 N 17   | 0 N 48 | 8 S 17   | 7 18 18   |
| 4   | 46     | 58       | 36     | 20       | 48     | 16       | 7 10 57   |
| 6   | 46     | 58       | 36     | 22       | 48     | 14       | 7 04 36   |
| 8   | 47     | 57       | 36     | 25       | 48     | 13       | 6 58 15   |
| 10  | 47     | 57       | 36     | 27       | 48     | 12       | 6 51 54   |
| 12  | 47     | 56       | 36     | 30       | 48     | 10       | 6 44 33   |
| 14  | 47     | 56       | 36     | 33       | 48     | 09       | 6 38 12   |
| 16  | 47     | 55       | 36     | 35       | 48     | 08       | 6 31 51   |
| 18  | 47     | 55       | 35     | 38       | 48     | 07       | 6 24 30   |
| 20  | 48     | 54       | 35     | 40       | 49     | 05       | 6 18 09   |
| 22  | 48     | 53       | 35     | 43       | 49     | 04       | 6 11 48   |
| 24  | 48     | 53       | 35     | 45       | 49     | 03       | 6 05 27   |
| 26  | 48     | 52       | 35     | 48       | 49     | 02       | 5 59 06   |
| 28  | 48     | 51       | 35     | 50       | 49     | 01       | 5 52 42   |
| 30  | 48     | 50       | 35     | 53       | 49     | 00       | 5 46 24   |



## MAY 2016

| दि. | शर     | क्रान्ति | शर     | क्रान्ति | शर     | क्रान्ति | शर     | क्रान्ति |
|-----|--------|----------|--------|----------|--------|----------|--------|----------|
| Dt. | Lat.   | Decl.    | Lat.   | Decl.    | Lat.   | Decl.    | Lat.   | Decl.    |
|     | 0      | 1        | 0      | 1        | 0      | 1        | 0      | 1        |
| 2   | 1 S 46 | 20 S 12  | 1 S 13 | 11 N 24  | 0 N 10 | 21 N 43  | 1 S 23 | 7 N 50   |
| 4   | 1 18   | 19 34    | 10     | 12 16    | 15     | 21 44    | 23     | 50       |
| 6   | 0 50   | 18 49    | 07     | 13 08    | 21     | 21 45    | 23     | 51       |
| 8   | 0 20   | 17 59    | 03     | 13 57    | 27     | 21 46    | 22     | 51       |
| 10  | 0 N 21 | 17 05    | 00     | 14 46    | 33     | 21 46    | 22     | S 50     |
| 12  | 0 56   | 16 12    | 0 56   | 15 33    | 39     | 21 S 46  | 21     | 50       |
| 14  | 1 29   | 15 22    | 53     | 16 19    | 45     | 21 46    | 21     | 49       |
| 16  | 2 00   | 14 37    | 49     | 17 03    | 51     | 21 44    | 21     | 48       |
| 18  | 2 28   | 13 58    | 45     | 17 45    | 58     | 21 43    | 20     | 46       |
| 20  | 2 51   | 13 28    | 40     | 18 25    | 1 04   | 21 41    | 20     | 44       |
| 22  | 3 10   | 13 07    | 36     | 19 03    | 10     | 21 39    | 19     | 42       |
| 24  | 3 25   | 12 55    | 32     | 19 39    | 16     | 21 36    | 19     | 39       |
| 26  | 3 36   | 12 N 52  | 27     | 20 14    | 22     | 21 33    | 19     | 37       |
| 28  | 3 43   | 12 59    | 23     | 20 46    | 28     | 21 30    | 18     | 34       |
| 30  | 3 46   | 13 13    | 18     | 21 16    | 34     | 21 27    | 18     | 31       |

## MAY 2016

| दि. | शर     | क्रान्ति | शर     | क्रान्ति | शर     | क्रान्ति | मध्यम भोग |
|-----|--------|----------|--------|----------|--------|----------|-----------|
| Dt. | Lat.   | Decl.    | Lat.   | Decl.    | Lat.   | Decl.    | M. Long.  |
|     | 0      | 1        | 0      | 1        | 0      | 1        | 0         |
| 2   | 1 N 48 | 20 S 50  | 0 N 36 | 7 N 55   | 0 N 49 | 7 S 59   | 5 40 03   |
| 4   | 49     | 49       | 36     | 58       | 49     | 58       | 5 33 42   |
| 6   | 49     | 48       | 36     | 8 00     | 49     | 57       | 5 27 21   |
| 8   | 49     | 47       | 36     | 03       | 49     | 56       | 5 21 00   |
| 10  | 49     | 46       | 36     | 05       | 49     | 56       | 5 14 39   |
| 12  | 49     | 45       | 36     | 07       | 49     | 55       | 5 08 18   |
| 14  | 49     | 44       | 36     | 09       | 49     | 54       | 5 01 57   |
| 16  | 49     | 44       | 36     | 12       | 49     | 53       | 4 54 36   |
| 18  | 49     | 43       | 36     | 14       | 49     | 53       | 4 48 15   |
| 20  | 49     | 42       | 36     | 16       | 50     | 52       | 4 40 54   |
| 22  | 49     | 41       | 36     | 18       | 50     | 52       | 4 35 33   |
| 24  | S 49   | 40       | 36     | 20       | 50     | 51       | 4 29 12   |
| 26  | 49     | 39       | 36     | 22       | 50     | 51       | 4 22 51   |
| 28  | 49     | 38       | 36     | 24       | 50     | 50       | 4 16 30   |
| 30  | 49     | 37       | 36     | 26       | 50     | 50       | 4 10 09   |

## JUNE 2016

| दि. | शर     | क्रान्ति | शर     | क्रान्ति | शर     | क्रान्ति | शर     | क्रान्ति |
|-----|--------|----------|--------|----------|--------|----------|--------|----------|
| Dt. | Lat.   | Decl.    | Lat.   | Decl.    | Lat.   | Decl.    | Lat.   | Decl.    |
|     | 0      | 1        | 0      | 1        | 0      | 1        | 0      | 1        |
| 1   | 3 S 45 | 13 N 35  | 0 S 13 | 21 N 44  | 1 N 40 | 21 S 24  | 1 S 17 | 7 S 28   |
| 3   | 3 41   | 14 04    | 09     | 22 08    | 45     | 21 20    | 17     | 24       |
| 5   | 3 34   | 14 40    | 04     | 22 31    | 51     | 21 17    | 17     | 21       |
| 7   | 3 32   | 15 20    | N 01   | 22 51    | 55     | 21 13    | 16     | 17       |
| 9   | 3 11   | 16 05    | 06     | 23 08    | 2 00   | 21 10    | 16     | 12       |
| 11  | 2 56   | 16 53    | 10     | 23 23    | 05     | 21 07    | 15     | 08       |
| 13  | 2 39   | 17 43    | 15     | 23 35    | 09     | 21 05    | 15     | 03       |
| 15  | 2 20   | 18 35    | 20     | 23 44    | 13     | 21 02    | 15     | 6 58     |
| 17  | 1 59   | 19 28    | 24     | 23 50    | 17     | 21 01    | 14     | 59       |
| 19  | 1 38   | 20 20    | 29     | 23 54    | 21     | 21 00    | 14     | 47       |
| 21  | 1 15   | 21 10    | 34     | 23 55    | 25     | 20 59    | 14     | 41       |
| 23  | 0 52   | 21 57    | 38     | 23 S 53  | 28     | 20 N 59  | 13     | 35       |
| 25  | 0 29   | 22 39    | 42     | 23 48    | 31     | 21 59    | 13     | 29       |
| 27  | 0 11   | 23 14    | 46     | 23 40    | 33     | 21 01    | 13     | 23       |
| 29  | 0 N 17 | 23 42    | 50     | 23 29    | 36     | 21 03    | 12     | 17       |

## JUNE 2016

| दि. | शर     | क्रान्ति | शर     | क्रान्ति | शर     | क्रान्ति | मध्यम भोग |
|-----|--------|----------|--------|----------|--------|----------|-----------|
| Dt. | Lat.   | Decl.    | Lat.   | Decl.    | Lat.   | Decl.    | M. Long.  |
|     | 0      | 1        | 0      | 1        | 0      | 1        | 0         |
| 1   | 1 S 48 | 20 S 36  | 0 N 36 | 8 N 28   | 0 N 50 | 7 S 50   | 04 03 48  |
| 3   | 48     | 35       | 36     | 30       | 50     | 50       | 03 57 27  |
| 5   | 48     | 34       | 36     | 31       | 50     | 49       | 03 51 06  |
| 7   | 48     | 33       | 36     | 33       | 50     | 49       | 03 44 45  |
| 9   | 48     | 32       | 36     | 35       | 50     | 49       | 03 38 24  |
| 11  | 48     | 31       | 36     | 36       | 50     | 49       | 03 32 03  |
| 13  | 47     | 30       | 36     | 38       | 50     | 49       | 03 25 42  |
| 15  | 47     | 29       | 36     | 39       | 51     | 49       | 03 19 21  |
| 17  | 47     | 28       | 36     | 40       | 51     | N 49     | 03 13 00  |
| 19  | 47     | 27       | 36     | 42       | 51     | 50       | 03 06 39  |
| 21  | 46     | 27       | 36     | 43       | 51     | 50       | 03 00 18  |
| 23  | 46     | 26       | 36     | 44       | 51     | 50       | 02 53 57  |
| 25  | 46     | 25       | 36     | 45       | 51     | 50       | 02 47 36  |
| 27  | 46     | 24       | 36     | 46       | 51     | 51       | 02 41 15  |
| 29  | 45     | 24       | 36     | 47       | 51     | 51       | 02 34 54  |



## JULY 2016

| दि. | शर   | क्रान्ति | शर   | क्रान्ति | शर   | क्रान्ति | शर   | क्रान्ति |
|-----|------|----------|------|----------|------|----------|------|----------|
| Dt. | Lat. | Decl.    | Lat. | Decl.    | Lat. | Decl.    | Lat. | Decl.    |
|     | 0    | 1        | 0    | 1        | 0    | 1        | 0    | 1        |
| 1   | 0    | N 36     | 24   | N 00     | 0    | N 54     | 23   | S 16     |
| 3   | 0    | 56       | 24   | 08       | 58   | 23       | 00   | 40       |
| 5   | 1    | 12       | 24   | S 05     | 1    | 02       | 22   | 41       |
| 7   | 1    | 25       | 23   | 50       | 05   | 22       | 20   | 44       |
| 9   | 1    | 36       | 23   | 25       | 08   | 21       | 56   | 45       |
| 11  | 1    | 43       | 22   | 51       | 11   | 21       | 29   | 46       |
| 13  | 1    | 48       | 22   | 06       | 14   | 21       | 00   | 47       |
| 15  | 1    | 49       | 21   | 15       | 17   | 20       | 28   | 48       |
| 17  | 1    | S 48     | 20   | 16       | 19   | 19       | 55   | 49       |
| 19  | 1    | 44       | 19   | 12       | 22   | 19       | 19   | 50       |
| 21  | 1    | 38       | 18   | 03       | 23   | 18       | 49   | 50       |
| 23  | 1    | 30       | 16   | 51       | 25   | 18       | 00   | 51       |
| 25  | 1    | 20       | 15   | 36       | 26   | 17       | 18   | 51       |
| 27  | 1    | 08       | 14   | 19       | 27   | 16       | 34   | 52       |
| 29  | 0    | 54       | 1    | 00       | 28   | 15       | 18   | 52       |
| 31  | 0    | 40       | 11   | 41       | 29   | 15       | 00   | 52       |

## JULY 2016

| दि. | शर   | क्रान्ति | शर   | क्रान्ति | शर   | क्रान्ति | मध्यम भोग |
|-----|------|----------|------|----------|------|----------|-----------|
| Dt. | Lat. | Decl.    | Lat. | Decl.    | Lat. | Decl.    | M. Long.  |
|     | 0    | 1        | 0    | 1        | 0    | 1        | 0         |
| 1   | 1    | 36       | 20   | S 23     | 0    | N 36     | 8         |
| 3   | 45   | 22       | 36   | 49       | 51   | 52       | 02        |
| 5   | 44   | 22       | 37   | 50       | 51   | 53       | 02        |
| 7   | 44   | 21       | 37   | 51       | 51   | 53       | 02        |
| 9   | 43   | 20       | 37   | 52       | 51   | 54       | 02        |
| 11  | 43   | 20       | 37   | 52       | 51   | 55       | 01        |
| 13  | 43   | 19       | 37   | 53       | 52   | 55       | 01        |
| 15  | 43   | 19       | 37   | 54       | 52   | 56       | 01        |
| 17  | 42   | 19       | 37   | 54       | 52   | 57       | 01        |
| 19  | 42   | 18       | 37   | 54       | 52   | 58       | 01        |
| 21  | 41   | 18       | 37   | 55       | 52   | 59       | 01        |
| 23  | 41   | 18       | 37   | 55       | 52   | 59       | 01        |
| 25  | 41   | 18       | 37   | 55       | 52   | 60       | 01        |
| 27  | 40   | 18       | 37   | 55       | 52   | 01       | 01        |
| 29  | 40   | 18       | 37   | 55       | 52   | 02       | 01        |
| 31  | 39   | 18       | 37   | 55       | 52   | 03       | 00        |

## AUGUST 2016

| दि. | शर   | क्रान्ति | शर   | क्रान्ति | शर   | क्रान्ति | शर   | क्रान्ति |
|-----|------|----------|------|----------|------|----------|------|----------|
| Dt. | Lat. | Decl.    | Lat. | Decl.    | Lat. | Decl.    | Lat. | Decl.    |
|     | 0    | 1        | 0    | 1        | 0    | 1        | 0    | 1        |
| 1   | 1    | 36       | 10   | S 21     | 1    | N 29     | 14   | S 10     |
| 4   | 0    | 10       | 9    | 02       | 29   | 13       | 20   | 52       |
| 6   | 0    | 11       | 8    | 07       | 29   | 12       | 28   | 52       |
| 8   | 0    | 30       | 6    | 27       | 29   | 11       | 34   | 52       |
| 10  | 0    | 50       | 5    | 17       | 28   | 10       | 40   | 51       |
| 12  | 1    | 11       | 3    | 58       | 27   | 9        | 44   | 51       |
| 14  | 1    | 22       | 2    | 48       | 25   | 8        | 47   | 50       |
| 16  | 1    | 53       | 1    | 41       | 24   | 7        | 49   | 50       |
| 18  | 2    | 3        | 0    | N 20     | 20   | 5        | 52   | 49       |
| 20  | 2    | 34       | 0    | N 20     | 20   | 5        | 52   | 49       |
| 22  | 3    | 14       | 1    | 58       | 15   | 3        | 51   | 47       |
| 24  | 3    | 14       | 1    | 58       | 15   | 3        | 51   | 47       |
| 26  | 3    | 33       | 4    | 36       | 12   | 2        | 50   | 47       |
| 28  | 3    | 49       | 3    | 03       | 09   | 1        | 48   | 46       |
| 30  | 3    | 54       | 3    | 00       | 08   | 0        | 47   | 45       |

## AUGUST 2016

| दि. | शर   | क्रान्ति | शर   | क्रान्ति | शर   | क्रान्ति | मध्यम भोग |
|-----|------|----------|------|----------|------|----------|-----------|
| Dt. | Lat. | Decl.    | Lat. | Decl.    | Lat. | Decl.    | M. Long.  |
|     | 0    | 1        | 0    | 1        | 0    | 1        | 0         |
| 1   | 1    | 36       | 20   | N 18     | 0    | N 37     | 8         |
| 4   | 39   | 18       | 37   | 55       | 52   | 06       | 00        |
| 6   | 38   | 18       | 37   | 55       | 52   | 07       | 00        |
| 8   | 38   | 18       | 37   | 54       | 52   | 08       | 00        |
| 10  | 37   | 19       | 37   | 54       | 52   | 09       | 00        |
| 12  | 37   | 19       | 37   | 53       | 52   | 10       | 00        |
| 14  | 36   | 19       | 38   | 53       | 52   | 11       | 00        |
| 16  | 36   | 20       | 38   | 52       | 52   | 13       | 00        |
| 18  | 35   | 20       | 38   | 51       | 52   | 14       | 29        |
| 20  | 35   | 21       | 38   | 51       | 52   | 15       | 29        |
| 22  | 35   | 22       | 38   | 50       | 53   | 16       | 29        |
| 24  | 34   | 22       | 38   | 49       | 53   | 18       | 29        |
| 26  | 34   | 23       | 38   | 48       | 53   | 19       | 29        |
| 28  | 33   | 24       | 38   | 47       | 53   | 20       | 29        |
| 30  | 33   | 25       | 38   | 46       | 53   | 22       | 29        |



## SEPTEMBER 2016

| दि. | शर     | क्रान्ति | शर     | क्रान्ति | शर     | क्रान्ति | शर     | क्रान्ति |
|-----|--------|----------|--------|----------|--------|----------|--------|----------|
| Dt. | Lat.   | Decl.    | Lat.   | Decl.    | Lat.   | Decl.    | Lat.   | Decl.    |
| 1   | 4 N 14 | 3 S 26   | 1 S 02 | 0 N 18   | 2 S 44 | 25 N 13  | 1 S 06 | 1 S 40   |
| 3   | 4 21   | 3 17     | 0 58   | 1 17     | 43     | 25 20    | 06     | 30       |
| 5   | 4 S 21 | 2 53     | 54     | 2 19     | 42     | 25 26    | 06     | 20       |
| 7   | 4 16   | 2 14     | 50     | 3 20     | 41     | 25 31    | 06     | 10       |
| 9   | 4 03   | 1 21     | 46     | 4 22     | 39     | 25 36    | 06     | 00       |
| 11  | 3 42   | 0 36     | 41     | 5 23     | 38     | 25 41    | 06     | 50       |
| 13  | 3 14   | 0 N 56   | 36     | 6 24     | 37     | 25 45    | 06     | 39       |
| 15  | 2 41   | 2 12     | 31     | 7 24     | 36     | 25 49    | 06     | 29       |
| 17  | 2 03   | 3 24     | 25     | 8 23     | 34     | 25 52    | 06     | 19       |
| 19  | 1 23   | 4 26     | 20     | 9 23     | 33     | 25 53    | 06     | 08       |
| 21  | 0 45   | 5 15     | 14     | 10 20    | 31     | 25 54    | 06     | N 03     |
| 23  | 0 17   | 5 47     | 09     | 11 17    | 30     | 25 55    | N 06   | 12       |
| 25  | 0 N 25 | 5 59     | 04     | 12 14    | 28     | 25 S 54  | 06     | 22       |
| 27  | 0 52   | 5 S 53   | N 03   | 13 10    | 27     | 25 53    | 06     | 33       |
| 29  | 1 15   | 5 29     | 08     | 14 03    | 25     | 25 51    | 06     | 43       |

## SEPTEMBER 2016

| दि. | शर     | क्रान्ति | शर     | क्रान्ति | शर     | क्रान्ति | मध्यम भोग |
|-----|--------|----------|--------|----------|--------|----------|-----------|
| Dt. | Lat.   | Decl.    | Lat.   | Decl.    | Lat.   | Decl.    | M. Long.  |
| 1   | 1 S 33 | 20 N 26  | 0 N 38 | 8 S 45   | 0 N 53 | 8 N 23   | 29 12 26  |
| 3   | 32     | 27       | 38     | 44       | 53     | 24       | 29 06 05  |
| 5   | 32     | 28       | 38     | 43       | 53     | 25       | 28 59 44  |
| 7   | 31     | 29       | 38     | 41       | 53     | 27       | 28 53 23  |
| 9   | 31     | 30       | 38     | 40       | 53     | 28       | 28 47 02  |
| 11  | 30     | 31       | 38     | 38       | 53     | 29       | 28 40 41  |
| 13  | 30     | 32       | 38     | 37       | 53     | 30       | 28 34 20  |
| 15  | 29     | 34       | 38     | 35       | 53     | 32       | 28 27 59  |
| 17  | 29     | 35       | 38     | 34       | 53     | 33       | 28 21 38  |
| 19  | 29     | 36       | 38     | 32       | 53     | 34       | 28 15 17  |
| 21  | 28     | 38       | 38     | 31       | 53     | 35       | 28 08 56  |
| 23  | 28     | 39       | 38     | 29       | 53     | 36       | 28 02 35  |
| 25  | 28     | 40       | 38     | 27       | 53     | 37       | 27 49 53  |
| 27  | 27     | 42       | 38     | 26       | 53     | 38       | 27 43 32  |
| 29  | 27     | 43       | 38     | 24       | 53     | 39       | 27 37 11  |

## OCTOBER 2016

| दि. | शर     | क्रान्ति | शर     | क्रान्ति | शर     | क्रान्ति | शर     | क्रान्ति |
|-----|--------|----------|--------|----------|--------|----------|--------|----------|
| Dt. | Lat.   | Decl.    | Lat.   | Decl.    | Lat.   | Decl.    | Lat.   | Decl.    |
| 1   | 1 N 33 | 4 S 49   | 0 N 15 | 14 N 56  | 2 S 24 | 25 S 48  | 1 N 06 | 0 53     |
| 3   | 1 44   | 3 55     | 21     | 15 48    | 22     | 25 44    | 06     | 1 04     |
| 5   | 1 52   | 2 51     | 27     | 16 37    | 20     | 25 40    | 06     | 14       |
| 7   | 1 26   | 1 38     | 33     | 17 26    | 19     | 25 34    | 06     | 24       |
| 9   | 1 S 55 | 0 41     | 39     | 18 12    | 17     | 25 28    | 06     | 34       |
| 11  | 1 53   | 1 N 05   | 46     | 18 57    | 15     | 25 21    | 06     | 44       |
| 13  | 1 47   | 2 32     | 52     | 19 39    | 13     | 25 13    | 06     | 54       |
| 15  | 1 41   | 4 00     | 58     | 20 20    | 12     | 25 03    | 06     | 2 04     |
| 17  | 1 31   | 5 28     | 1 04   | 20 59    | 10     | 24 53    | 06     | 14       |
| 19  | 1 21   | 6 55     | 10     | 21 35    | 08     | 24 42    | 06     | 24       |
| 21  | 1 10   | 8 22     | 15     | 22 10    | 06     | 24 30    | 07     | 34       |
| 23  | 0 57   | 9 46     | 21     | 22 41    | 04     | 24 17    | 07     | 43       |
| 25  | 0 44   | 11 10    | 26     | 23 11    | 02     | 24 03    | 07     | 53       |
| 27  | 0 31   | 12 30    | 32     | 23 38    | 00     | 23 49    | 07     | 3 02     |
| 29  | 0 18   | 13 47    | 37     | 24 02    | 1 58   | 23 33    | 07     | 12       |
| 31  | 0 08   | 15 02    | 42     | 24 23    | 56     | 23 17    | 07     | 21       |

## OCTOBER 2016

| दि. | शर     | क्रान्ति | शर     | क्रान्ति | शर     | क्रान्ति | मध्यम भोग |
|-----|--------|----------|--------|----------|--------|----------|-----------|
| Dt. | Lat.   | Decl.    | Lat.   | Decl.    | Lat.   | Decl.    | M. Long.  |
| 1   | 1 S 26 | 20 N 45  | 0 N 38 | 8 S 22   | 0 S 53 | 8 N 40   | 27 30 50  |
| 3   | 26     | 46       | 38     | 20       | 53     | 41       | 27 24 29  |
| 5   | 26     | 48       | 38     | 19       | 53     | 42       | 27 18 08  |
| 7   | 25     | 49       | 38     | 17       | 53     | 43       | 27 11 47  |
| 9   | 25     | 51       | 38     | 15       | 53     | 44       | 27 05 36  |
| 11  | 25     | 59       | S 38   | 13       | 53     | 45       | 26 59 05  |
| 13  | 24     | 54       | 38     | 11       | 53     | 46       | 26 52 44  |
| 15  | 24     | 56       | 38     | 10       | 53     | 47       | 26 46 23  |
| 17  | 24     | 58       | 38     | 08       | 53     | 48       | 26 40 02  |
| 19  | 23     | 21 00    | 38     | 06       | 53     | 49       | 26 33 41  |
| 21  | 23     | 02       | 38     | 04       | 53     | 49       | 26 27 20  |
| 23  | 23     | 03       | 38     | 02       | 53     | 50       | 26 20 59  |
| 25  | 22     | 05       | 38     | 01       | 52     | 51       | 26 14 38  |
| 27  | 22     | 07       | 38     | 7 59     | 52     | 51       | 26 08 17  |
| 29  | 22     | 08       | 38     | 57       | 52     | 52       | 26 01 56  |
| 31  | 22     | 10       | 38     | 56       | 52     | 52       | 25 55 35  |



## NOVEMBER 2016

| दि. | शर     | क्रान्ति | शर     | क्रान्ति | शर     | क्रान्ति | शर     | क्रान्ति |
|-----|--------|----------|--------|----------|--------|----------|--------|----------|
| Dt. | Lat.   | Decl.    | Lat.   | Decl.    | Lat.   | Decl.    | Lat.   | Decl.    |
|     | 0      | 1        | 0      | 1        | 0      | 1        | 0      | 1        |
| 2   | 0 N 09 | 16 N 13  | 1 N 47 | 24 N 50  | 1 S 54 | 22 S 59  | 1 N 07 | 3 N 31   |
| 4   | 0 22   | 17 22    | 51 24  | 58       | 52 22  | 41       | 08     | 40       |
| 6   | 0 36   | 18 27    | 56 25  | 11       | 50 22  | 22       | 08     | 49       |
| 8   | 0 48   | 19 28    | 2 00   | 25 21    | 48 22  | 01       | 08     | 58       |
| 10  | 1 00   | 20 25    | 04 25  | 29       | 46 21  | 40       | 08     | 4 07     |
| 12  | 1 12   | 21 18    | 08 25  | 34       | 44 21  | 19       | 08     | 16       |
| 14  | 1 24   | 22 07    | 11 25  | 35       | 42 20  | 56       | 09     | 24       |
| 16  | 1 35   | 22 51    | 14 25  | S 34     | 40 20  | 32       | 09     | 33       |
| 18  | 1 45   | 23 32    | 17 25  | 39       | 38 20  | 08       | 09     | 41       |
| 20  | 1 54   | 24 07    | 20 25  | 22       | 36 19  | 43       | 09     | 50       |
| 22  | 2 03   | 24 37    | 21 25  | 12       | 34 19  | 18       | 10     | 58       |
| 24  | 2 10   | 25 03    | 23 24  | 59       | 32 18  | 52       | 10     | 5 06     |
| 26  | 2 15   | 25 22    | 24 24  | 43       | 30 18  | 25       | 10     | 14       |
| 28  | 2 20   | 25 37    | 24 24  | 25       | 28 17  | 55       | 11     | 22       |
| 30  | 2 23   | 25 46    | 25 24  | 04       | 25 17  | 27       | 11     | 29       |

## NOVEMBER 2016

| दि. | शर     | क्रान्ति | शर     | क्रान्ति | शर     | क्रान्ति | मध्यम भोग |
|-----|--------|----------|--------|----------|--------|----------|-----------|
| Dt. | Lat.   | Decl.    | Lat.   | Decl.    | Lat.   | Decl.    | M. Long.  |
|     | 0      | 1        | 0      | 1        | 0      | 1        | 0         |
| 2   | 1 S 21 | 21 N 12  | 0 S 38 | 7 S 54   | 0 S 52 | 8 N 53   | 25 49 14  |
| 4   | 21     | 13       | 38     | 52       | 52     | 53       | 25 42 53  |
| 6   | 21     | 15       | 38     | 51       | 52     | 53       | 25 36 32  |
| 8   | 21     | 17       | 38     | 49       | 52     | 54       | 25 30 14  |
| 10  | 20     | 18       | 38     | 48       | 52     | 54       | 25 23 50  |
| 12  | 20     | 20       | 38     | 46       | 52     | 54       | 25 17 39  |
| 14  | 20     | 22       | 38     | 45       | 52     | 54       | 25 11 18  |
| 16  | 20     | 23       | 38     | 43       | 52     | 54       | 25 05 57  |
| 18  | 20     | 25       | 38     | 42       | 52     | 54       | 24 59 36  |
| 20  | 19     | 26       | 38     | 41       | 52     | 54       | 24 53 15  |
| 22  | 19     | 28       | 38     | 39       | 52     | S 54     | 24 46 54  |
| 24  | 19     | 29       | 37     | 38       | 52     | 54       | 24 40 33  |
| 26  | 19     | 31       | 37     | 37       | 52     | 54       | 24 34 12  |
| 28  | 19     | 32       | 37     | 36       | 52     | 54       | 24 27 51  |
| 30  | 18     | 34       | 37     | 35       | 52     | 54       | 24 21 30  |

## DECEMBER 2016

| दि. | शर     | क्रान्ति | शर     | क्रान्ति | शर     | क्रान्ति | शर     | क्रान्ति |
|-----|--------|----------|--------|----------|--------|----------|--------|----------|
| Dt. | Lat.   | Decl.    | Lat.   | Decl.    | Lat.   | Decl.    | Lat.   | Decl.    |
|     | 0      | 1        | 0      | 1        | 0      | 1        | 0      | 1        |
| 2   | 2 S 24 | 25 S 50  | 2 S 25 | 23 S 40  | 1 S 23 | 16 S 58  | 1 N 11 | 5 N 37   |
| 4   | 2 23   | 25 47    | 25 23  | 13       | 21 16  | 29       | 12     | 44       |
| 6   | 2 19   | 25 40    | 23 22  | 45       | 19 15  | 68       | 12     | 81       |
| 8   | 2 13   | 25 26    | 22 22  | 13       | 17 15  | 23       | 12     | 58       |
| 10  | 2 02   | 24 07    | 20 21  | 40       | 15 14  | 55       | 13     | 8 05     |
| 12  | 1 48   | 24 44    | 17 21  | 04       | 13 14  | 23       | 13     | 11       |
| 14  | 1 30   | 24 17    | 16 20  | 26       | 11 13  | 51       | 13     | 18       |
| 16  | 1 08   | 23 47    | 11 19  | 46       | 08 13  | 18       | 14     | 24       |
| 18  | 0 40   | 23 15    | 08 19  | 04       | 06 12  | 14       | 14     | 30       |
| 20  | 0 18   | 22 42    | 03 18  | 21       | 04 12  | 10       | 14     | 35       |
| 22  |        |          | 58 17  | 38       | 02 11  | 36       | 15     | 40       |
| 24  | 1 10   | 21 41    | 52 16  | 49       | 00 11  | 02       | 15     | 46       |
| 26  | 1 48   | 21 14    | 46 16  | 00       | 0 58   | 10 26    | 16     | 51       |
| 28  | 2 22   | 20 51    | 39 15  | 10       | 56 9   | 50       | 16     | 55       |
| 30  | 2 38   | 20 12    | 32 14  | 20       | 54 9   | 15       | 16     | 7 00     |

## DECEMBER 2016

| दि. | शर     | क्रान्ति | शर     | क्रान्ति | शर     | क्रान्ति | मध्यम भोग |
|-----|--------|----------|--------|----------|--------|----------|-----------|
| Dt. | Lat.   | Decl.    | Lat.   | Decl.    | Lat.   | Decl.    | M. Long.  |
|     | 0      | 1        | 0      | 1        | 0      | 1        | 0         |
| 2   | 1 S 18 | 21 35    | 0 S 37 | 7 S 34   | 0 S 52 | 8 S 53   | 24 15 09  |
| 4   | 18     | 37       | 37     | 33       | 52     | 53       | 24 08 48  |
| 6   | 18     | 38       | 37     | 32       | 52     | 52       | 24 02 27  |
| 8   | 18     | 39       | 37     | 32       | 52     | 52       | 23 56 06  |
| 10  | 18     | 40       | 37     | 31       | 52     | 51       | 23 49 45  |
| 12  | 18     | 42       | 37     | 30       | 52     | 51       | 23 43 24  |
| 14  | 18     | 43       | 37     | 30       | 52     | 50       | 23 37 03  |
| 16  | 17     | 44       | 37     | 29       | 52     | 50       | 23 30 42  |
| 18  | 17     | 45       | 37     | 29       | 51     | 49       | 23 24 21  |
| 20  | 17     | 46       | 37     | 29       | 51     | 48       | 23 18 00  |
| 22  | 17     | 47       | 37     | 28       | 51     | 47       | 23 11 39  |
| 24  | 17     | 49       | 37     | 28       | 51     | 46       | 23 05 18  |
| 26  | 17     | 50       | 36     | 28       | 51     | 46       | 22 58 57  |
| 28  | 17     | 51       | 36     | 28       | 51     | 45       | 22 52 36  |
| 30  | 17     | 52       | 36     | 28       | 51     | 44       | 22 46 15  |



| JANUARY-16 |             |                         | { PHENOMENA } |             |                         | FEBRUARY-16 |  |  |
|------------|-------------|-------------------------|---------------|-------------|-------------------------|-------------|--|--|
| दि.<br>Dt. | समय<br>Time | दृष्टिविषय<br>Phenomena | दि.<br>Dt.    | समय<br>Time | दृष्टिविषय<br>Phenomena |             |  |  |
|            | H. M.       |                         |               | H. M.       |                         |             |  |  |
| 2          | 11 00       | Last Quarter            | 1             | 8 58        | Last Quarter            |             |  |  |
| 2          | 17 23       | ☾ at apogee             |               |             |                         |             |  |  |
| 2          | 4 31        | ☼ at perihelion         | 8             | 20 09       | New Moon                |             |  |  |
| 4          | 7 08        | ☿ in Ω                  | 10            | 2 15        | ☾ in ☾                  |             |  |  |
| 8          | 23 04       | ☿ in perihelion         |               |             |                         |             |  |  |
| 10         | 7 01        | New Moon                | 11            | 8 10        | ☾ at Perigee            |             |  |  |
| 14         | 21 17       | ☾ in ☾                  | 15            | 13 16       | First Quarter           |             |  |  |
| 15         | 7 43        | ☾ at apogee             |               |             |                         |             |  |  |
| 16         | 4 33        | First Quarter           | 22            | 23 50       | Full Moon               |             |  |  |
| 24         | 7 16        | Full Moon               |               |             |                         |             |  |  |
| 24         | 1 26        | ☉ inters ♈              | 24            | 11 41       | ☾ in ☾                  |             |  |  |
| 27         | 5 28        | ☾ in Ω                  | 24            | 14 25       | ☉ inters ♋              |             |  |  |
| 30         | 14 40       | ☾ at apogee             | 27            | 8 59        | ☾ at apogee             |             |  |  |
| MARCH-16   |             |                         | APRIL-16      |             |                         |             |  |  |
| दि.<br>Dt. | समय<br>Time | दृष्टिविषय<br>Phenomena | दि.<br>Dt.    | समय<br>Time | दृष्टिविषय<br>Phenomena |             |  |  |
|            | H. M.       |                         |               | H. M.       |                         |             |  |  |
| 1          | 4 41        | Last Quarter            | 5             | 22 50       | ☾ in ☾                  |             |  |  |
| 8          | 16 27       | ☿ ☉                     | 7             | 16 54       | New Moon                |             |  |  |
| 9          | 7 24        | New Moon                | 7             | 23 05       | ☾ at Perigee            |             |  |  |
| 9          | 11 53       | ☾ in ☾                  | 14            | 9 29        | First Quarter           |             |  |  |
| 10         | 12 33       | ☾ at Perigee            | 18            | 23 35       | ☾ in Ω                  |             |  |  |
| 15         | 22 33       | First Quarter           | 21            | 21 34       | ☾ at apogee             |             |  |  |
| 22         | 18 30       | ☾ in Ω                  |               |             |                         |             |  |  |
| 23         | 17 31       | Full Moon               | 22            | 10 54       | Full Moon               |             |  |  |
| 24         | 11 18       | ☉ enter ♋               | 24            | 19 48       | ☉ enter ♊               |             |  |  |
| 25         | 19 17       | ☾ at apogee             | 30            | 8 59        | Last Quarter            |             |  |  |
| 31         | 20 47       | Last Quarter            |               |             |                         |             |  |  |

| MAY -16    |             |                         | { PHENOMENA } |             |                         | JUNE-16 |  |  |
|------------|-------------|-------------------------|---------------|-------------|-------------------------|---------|--|--|
| दि.<br>Dt. | समय<br>Time | दृष्टिविषय<br>Phenomena | दि.<br>Dt.    | समय<br>Time | दृष्टिविषय<br>Phenomena |         |  |  |
|            | H. M.       |                         |               | H. M.       |                         |         |  |  |
| 3          | 6 55        | ☾ in ☾                  | 3             | 16 25       | ☾ at Perigee            |         |  |  |
|            |             |                         | 5             | 8 30        | New Moon                |         |  |  |
| 6          | 9 44        | ☾ at Perigee            | 11            | 3 50        | ☾ in Ω                  |         |  |  |
| 6          | 0 59        | New Moon                | 12            | 13 40       | First Quarter           |         |  |  |
| 9          | 20 41       | Transit of ♃            |               |             |                         |         |  |  |
| 13         | 22 32       | First Quarter           | 15            | 17 31       | ☾ at apogee             |         |  |  |
| 15         | 2 10        | ☾ in Ω                  | 20            | 16 32       | Full Moon               |         |  |  |
| 18         | 3 36        | ☾ at apogee             |               |             |                         |         |  |  |
|            |             |                         | 26            | 10 57       | ☾ in ☾                  |         |  |  |
| 21         | 2 44        | Full Moon               | 24            | 23 20       | ☉ enters ♊              |         |  |  |
| 22         | 16 47       | ☿ ☉                     | 27            | 23 49       | Last Quarter            |         |  |  |
| 24         | 16 42       | ☉ enters ♋              |               |             |                         |         |  |  |
| 29         | 17 42       | Last Quarter            |               |             |                         |         |  |  |
| 30         | 3 06        | ☿ enters ☌              |               |             |                         |         |  |  |
| 30         | 10 13       | ☾ in ☾                  |               |             |                         |         |  |  |
| JULY-16    |             |                         | AUGUST-16     |             |                         |         |  |  |
| दि.<br>Dt. | समय<br>Time | दृष्टिविषय<br>Phenomena | दि.<br>Dt.    | समय<br>Time | दृष्टिविषय<br>Phenomena |         |  |  |
|            | H. M.       |                         |               | H. M.       |                         |         |  |  |
| 1          | 12 11       | ☾ at Perigee            | 2             | 2 15        | New Moon                |         |  |  |
| 4          | 16 31       | New Moon                | 5             | 13 19       | ☾ in Ω                  |         |  |  |
|            |             |                         | 10            | 5 35        | ☾ at apogee             |         |  |  |
| 4          | 21 44       | ☼ at abhalion           | 10            | 23 51       | First Quarter           |         |  |  |
| 9          | 7 11        | ☾ in Ω                  |               |             |                         |         |  |  |
|            |             |                         | 18            | 14 57       | Full moon               |         |  |  |
| 12         | 6 22        | First Quarter           |               |             |                         |         |  |  |
| 13         | 10 55       | ☾ at apogee             | 19            | 19 44       | ☾ in ☾                  |         |  |  |
| 19         | 4 27        | Full Moon               | 22            | 6 48        | ☾ at Perigee            |         |  |  |
|            |             |                         | 25            | 18 40       | ☉ enters Ω              |         |  |  |
| 23         | 13 18       | ☾ in ☾                  | 25            | 9 11        | Last Quarter            |         |  |  |
| 25         | 10 15       | ☉ enters ☌              |               |             |                         |         |  |  |
| 26         | 4 30        | Last quarter            |               |             |                         |         |  |  |
| 27         | 17 04       | ☾ at Perigee            |               |             |                         |         |  |  |



| SEPTEMBER-16 |             |                         | { PHENOMENA } |             |                         | OCTOBER-16 |  |  |
|--------------|-------------|-------------------------|---------------|-------------|-------------------------|------------|--|--|
| दि.<br>Dt.   | समय<br>Time | दृष्टिविषय<br>Phenomena | दि.<br>Dt.    | समय<br>Time | दृष्टिविषय<br>Phenomena |            |  |  |
|              | H. M.       |                         |               | H. M.       |                         |            |  |  |
| 1            | 14 33       | New Moon                | 1             | 5 41        | New Moon                |            |  |  |
| 1            | 20 58       | ☾ in ♍                  | 4             | 16 33       | ☾ at apogee             |            |  |  |
| 6            | 0 14        | ☾ at apogee             | 9             | 10 03       | First Quarter           |            |  |  |
| 9            | 17 19       | First Quarter           | 13            | 15 10       | ☾ in ♍                  |            |  |  |
| 15           | 5 25        | ☾ in ♍                  | 16            | 9 53        | Full Moon               |            |  |  |
| 16           | 0 35        | Full Moon               | 16            | 5 05        | ☾ at Perigee            |            |  |  |
| 18           | 22 31       | ☾ at Perigee            | 22            | 0 44        | Last Quarter            |            |  |  |
| 23           | 15 26       | Last Quarter            | 25            | 6 31        | ☉ enters ♍              |            |  |  |
| 24           | 7 39        | ☉ enters ♍              | 26            | 7 15        | ☾ in ♍                  |            |  |  |
| 26           | 12 30       | ☾ ☉                     | 30            | 23 08       | New Moon                |            |  |  |
| NOVEMBER-16  |             |                         | DECEMBER-16   |             |                         |            |  |  |
| दि.<br>Dt.   | समय<br>Time | दृष्टिविषय<br>Phenomena | दि.<br>Dt.    | समय<br>Time | दृष्टिविषय<br>Phenomena |            |  |  |
|              | H. M.       |                         |               | H. M.       |                         |            |  |  |
| 1            | 11 58       | ☾ in ♍                  | 6             | 23 05       | ☾ in ♍                  |            |  |  |
| 7            | 1 21        | First Quarter           | 7             | 14 33       | First Quarter           |            |  |  |
| 9            | 21 25       | ☾ in ♍                  | 12            | 4 59        | ☾ at Perigee            |            |  |  |
| 14           | 16 52       | ☾ at Perigee            | 14            | 5 36        | Full Moon               |            |  |  |
| 14           | 19 22       | Full Moon               | 19            | 10 16       | ☾ in ♍                  |            |  |  |
| 21           | 14 03       | Last Quarter            |               |             |                         |            |  |  |
| 22           | 8 19        | ☾ in ♍                  | 21            | 7 26        | Last Quarter            |            |  |  |
| 25           | 6 18        | ☉ enters ♍              | 24            | 20 55       | ☉ enters ♍              |            |  |  |
| 27           | 1 38        | ☾ at apogee             | 25            | 11 24       | ☾ at apogee             |            |  |  |
| 29           | 17 48       | New Moon                | 29            | 12 23       | New Moon                |            |  |  |

| Months<br>and<br>Dates | सूर्योदय SUN RISE (Upeer Limb) 2016 |      |      |      |      |      |      |      |      |      |      |    |
|------------------------|-------------------------------------|------|------|------|------|------|------|------|------|------|------|----|
|                        | Latitudes                           |      |      |      |      |      |      |      |      |      |      |    |
|                        | +5°                                 | +8°  | +11° | +14° | +17° | +20° | +23° | +26° | +29° | +32° | +35° |    |
| Jan. 1                 | 6 8                                 | 6 13 | 6 19 | 6 24 | 6 30 | 6 35 | 6 41 | 6 47 | 6 54 | 7 1  | 7 08 |    |
| 8                      | 11                                  | 16   | 22   | 27   | 32   | 37   | 43   | 49   | 55   | 2    | 09   |    |
| 15                     | 13                                  | 18   | 23   | 28   | 33   | 38   | 44   | 50   | 56   | 2    | 08   |    |
| 22                     | 15                                  | 19   | 24   | 28   | 33   | 38   | 44   | 50   | 55   | 1    | 06   |    |
| 29                     | 16                                  | 20   | 24   | 28   | 32   | 36   | 41   | 46   | 51   | 6    | 56   | 05 |
| Feb. 5                 | 16                                  | 20   | 23   | 27   | 31   | 35   | 39   | 43   | 48   | 52   | 6    | 51 |
| 12                     | 16                                  | 19   | 22   | 25   | 28   | 32   | 35   | 38   | 42   | 46   | 57   |    |
| 19                     | 15                                  | 17   | 19   | 22   | 25   | 28   | 31   | 34   | 37   | 40   | 40   |    |
| 26                     | 13                                  | 15   | 17   | 19   | 21   | 23   | 25   | 28   | 30   | 33   | 33   |    |
| Mar. 5                 | 11                                  | 12   | 13   | 15   | 17   | 18   | 20   | 21   | 23   | 24   | 25   |    |
| 12                     | 8                                   | 9    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 15   | 16   |    |
| 19                     | 5                                   | 5    | 5    | 5    | 6    | 6    | 6    | 7    | 7    | 7    | 6    |    |
| 26                     | 2                                   | 1    | 1    | 1    | 0    | 0    | 5    | 5    | 5    | 5    | 5    | 57 |
| Apr. 2                 | 5 59                                | 5 58 | 5 57 | 5 56 | 5 55 | 5 54 | 5 53 | 5 52 | 5 50 | 49   | 47   |    |
| 9                      | 56                                  | 54   | 53   | 51   | 50   | 48   | 46   | 44   | 42   | 40   | 37   |    |
| 16                     | 54                                  | 51   | 50   | 47   | 45   | 42   | 39   | 37   | 34   | 30   | 28   |    |
| 23                     | 51                                  | 48   | 45   | 43   | 40   | 37   | 34   | 30   | 27   | 24   | 28   |    |
| 30                     | 49                                  | 45   | 42   | 39   | 35   | 32   | 29   | 23   | 20   | 16   | 10   |    |
| May 7                  | 47                                  | 43   | 40   | 36   | 31   | 28   | 24   | 19   | 14   | 9    | 1    |    |
| 14                     | 46                                  | 42   | 38   | 33   | 29   | 25   | 20   | 15   | 10   | 4    | 4    | 54 |
| 21                     | 45                                  | 41   | 37   | 32   | 27   | 22   | 17   | 12   | 6    | 0    | 57   |    |
| 28                     | 45                                  | 41   | 37   | 31   | 26   | 20   | 14   | 9    | 3    | 4    | 56   | 43 |
| June 4                 | 46                                  | 41   | 37   | 31   | 25   | 20   | 14   | 8    | 1    | 54   | 49   |    |
| 11                     | 47                                  | 42   | 37   | 31   | 25   | 20   | 14   | 7    | 0    | 53   | 46   |    |
| 18                     | 48                                  | 43   | 38   | 32   | 26   | 20   | 14   | 8    | 0    | 53   | 45   |    |
| 25                     | 49                                  | 44   | 39   | 33   | 27   | 22   | 14   | 8    | 2    | 55   | 45   |    |
| July 2                 | 51                                  | 46   | 41   | 36   | 30   | 24   | 17   | 10   | 4    | 57   | 47   |    |
| 9                      | 52                                  | 47   | 41   | 36   | 31   | 26   | 19   | 13   | 7    | 5    | 0    | 49 |
| 16                     | 54                                  | 49   | 44   | 39   | 34   | 27   | 23   | 17   | 11   | 4    | 53   |    |
| 23                     | 55                                  | 51   | 46   | 42   | 37   | 32   | 27   | 21   | 15   | 9    | 5    | 07 |
| 30                     | 56                                  | 52   | 48   | 43   | 39   | 34   | 29   | 24   | 19   | 13   | 02   |    |
| Aug. 6                 | 56                                  | 53   | 49   | 44   | 40   | 36   | 31   | 27   | 22   | 17   | 17   |    |
| 13                     | 56                                  | 53   | 50   | 46   | 43   | 39   | 35   | 31   | 26   | 22   | 12   |    |
| 20                     | 56                                  | 53   | 50   | 47   | 44   | 41   | 38   | 34   | 30   | 26   | 27   |    |
| 27                     | 54                                  | 52   | 50   | 48   | 46   | 43   | 40   | 37   | 34   | 31   | 23   |    |
| Sept. 3                | 53                                  | 52   | 50   | 48   | 46   | 44   | 42   | 40   | 38   | 36   | 38   |    |
| 10                     | 52                                  | 51   | 50   | 49   | 47   | 46   | 45   | 43   | 42   | 40   | 33   |    |
| 17                     | 51                                  | 50   | 50   | 49   | 49   | 48   | 47   | 46   | 45   | 44   | 48   |    |
| 24                     | 49                                  | 49   | 49   | 49   | 49   | 49   | 49   | 49   | 49   | 48   | 43   |    |
| Oct. 1                 | 48                                  | 49   | 49   | 50   | 50   | 51   | 51   | 52   | 53   | 53   | 58   |    |
| 8                      | 47                                  | 48   | 49   | 50   | 5    | 52   | 54   | 56   | 57   | 58   | 54   |    |
| 15                     | 45                                  | 47   | 48   | 50   | 52   | 54   | 56   | 58   | 6    | 1    | 6    | 3  |
| 22                     | 45                                  | 47   | 50   | 52   | 54   | 57   | 6    | 0    | 6    | 3    | 6    | 8  |
| 29                     | 45                                  | 48   | 51   | 54   | 57   | 6    | 0    | 3    | 6    | 9    | 13   | 11 |
| Nov. 5                 | 45                                  | 48   | 52   | 56   | 6    | 0    | 2    | 7    | 11   | 15   | 19   | 27 |
| 12                     | 47                                  | 51   | 54   | 58   | 2    | 6    | 10   | 15   | 21   | 26   | 34   |    |
| 19                     | 49                                  | 53   | 57   | 6    | 1    | 6    | 11   | 16   | 21   | 26   | 31   | 31 |
| 26                     | 51                                  | 56   | 6    | 1    | 5    | 10   | 15   | 20   | 26   | 32   | 38   | 47 |
| Dec. 3                 | 54                                  | 59   | 4    | 9    | 14   | 20   | 26   | 32   | 38   | 44   | 54   |    |
| 10                     | 57                                  | 6    | 2    | 7    | 12   | 18   | 24   | 30   | 36   | 42   | 49   | 51 |
| 17                     | 6                                   | 1    | 6    | 12   | 17   | 22   | 28   | 34   | 40   | 47   | 54   | 7  |
| 24                     | 4                                   | 9    | 15   | 20   | 26   | 32   | 38   | 44   | 51   | 58   | 1    |    |
| 31                     | 7                                   | 12   | 18   | 23   | 29   | 35   | 41   | 47   | 54   | 7    | 01   | 5  |



| Months<br>and<br>Dates | सूर्योस्त SUN SET (Upeer Limb) 2016 |       |       |       |       |       |       |       |       |       |       |  |
|------------------------|-------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
|                        | Latitudes                           |       |       |       |       |       |       |       |       |       |       |  |
|                        | +5°                                 | +8°   | +11°  | +14°  | +17°  | +20°  | +23°  | +26°  | +29°  | +32°  | +35°  |  |
| Jan. 1                 | 17 59                               | 17 54 | 17 48 | 17 43 | 17 38 | 17 32 | 17 26 | 17 20 | 17 13 | 17 06 | 16 59 |  |
| 8                      | 18 2                                | 18 58 | 18 53 | 18 48 | 18 42 | 18 36 | 18 30 | 18 24 | 18 18 | 18 11 | 17 04 |  |
| 15                     | 18 5                                | 18 1  | 18 56 | 18 51 | 18 46 | 18 41 | 18 36 | 18 30 | 18 24 | 18 18 | 17 11 |  |
| 22                     | 18 8                                | 18 4  | 18 0  | 17 55 | 17 50 | 17 45 | 17 40 | 17 35 | 17 30 | 17 24 | 17 18 |  |
| 29                     | 18 11                               | 18 7  | 18 3  | 17 59 | 17 55 | 17 50 | 17 46 | 17 41 | 17 36 | 17 31 | 17 25 |  |
| Feb. 5                 | 18 12                               | 18 8  | 18 5  | 18 1  | 17 57 | 17 54 | 17 50 | 17 46 | 17 42 | 17 37 | 17 32 |  |
| 12                     | 18 13                               | 18 10 | 18 7  | 18 4  | 18 1  | 17 58 | 17 55 | 17 52 | 17 48 | 17 44 | 17 39 |  |
| 19                     | 18 14                               | 18 11 | 18 9  | 18 6  | 18 4  | 18 1  | 17 59 | 17 56 | 17 53 | 17 50 | 17 46 |  |
| 26                     | 18 14                               | 18 12 | 18 10 | 18 9  | 18 6  | 18 4  | 18 2  | 18 0  | 17 57 | 17 55 | 17 52 |  |
| Mar. 5                 | 18 13                               | 18 12 | 18 10 | 18 9  | 18 8  | 18 6  | 18 5  | 18 3  | 18 2  | 18 0  | 17 58 |  |
| 12                     | 18 12                               | 18 11 | 18 10 | 18 10 | 18 9  | 18 8  | 18 7  | 18 6  | 18 5  | 18 4  | 18 3  |  |
| 19                     | 18 11                               | 18 11 | 18 11 | 18 11 | 18 11 | 18 11 | 18 11 | 18 10 | 18 10 | 18 10 | 18 10 |  |
| 26                     | 18 10                               | 18 10 | 18 11 | 18 11 | 18 12 | 18 12 | 18 13 | 18 14 | 18 15 | 18 16 | 18 17 |  |
| Apr. 2                 | 18 9                                | 18 10 | 18 11 | 18 12 | 18 13 | 18 14 | 18 16 | 18 18 | 18 19 | 18 20 | 18 21 |  |
| 9                      | 18 8                                | 18 9  | 18 10 | 18 12 | 18 14 | 18 16 | 18 18 | 18 20 | 18 23 | 18 25 | 18 27 |  |
| 16                     | 18 6                                | 18 8  | 18 11 | 18 13 | 18 15 | 18 18 | 18 20 | 18 23 | 18 26 | 18 29 | 18 32 |  |
| 23                     | 18 7                                | 18 9  | 18 12 | 18 14 | 18 17 | 18 20 | 18 23 | 18 26 | 18 30 | 18 34 | 18 38 |  |
| 30                     | 18 6                                | 18 9  | 18 13 | 18 16 | 18 19 | 18 23 | 18 27 | 18 31 | 18 35 | 18 40 | 18 44 |  |
| May 7                  | 18 6                                | 18 9  | 18 13 | 18 17 | 18 21 | 18 25 | 18 29 | 18 34 | 18 39 | 18 44 | 18 49 |  |
| 14                     | 18 6                                | 18 10 | 18 14 | 18 18 | 18 23 | 18 28 | 18 33 | 18 38 | 18 43 | 18 49 | 18 55 |  |
| 21                     | 18 7                                | 18 11 | 18 15 | 18 20 | 18 25 | 18 31 | 18 36 | 18 42 | 18 48 | 18 54 | 19 0  |  |
| 28                     | 18 9                                | 18 13 | 18 18 | 18 23 | 18 28 | 18 34 | 18 40 | 18 46 | 18 52 | 18 58 | 19 5  |  |
| June 4                 | 18 10                               | 18 14 | 18 19 | 18 24 | 18 30 | 18 36 | 18 42 | 18 49 | 18 56 | 19 3  | 19 10 |  |
| 11                     | 18 11                               | 18 16 | 18 22 | 18 27 | 18 33 | 18 39 | 18 45 | 18 52 | 18 59 | 19 6  | 19 13 |  |
| 18                     | 18 13                               | 18 18 | 18 24 | 18 29 | 18 35 | 18 41 | 18 47 | 18 54 | 19 1  | 19 8  | 19 16 |  |
| 25                     | 18 15                               | 18 20 | 18 26 | 18 31 | 18 36 | 18 42 | 18 48 | 18 55 | 19 2  | 19 10 | 19 18 |  |
| July 2                 | 18 16                               | 18 21 | 18 27 | 18 32 | 18 37 | 18 43 | 18 49 | 18 56 | 19 3  | 19 10 | 19 18 |  |
| 9                      | 18 16                               | 18 21 | 18 27 | 18 32 | 18 37 | 18 43 | 18 49 | 18 55 | 19 2  | 19 9  | 19 17 |  |
| 16                     | 18 17                               | 18 22 | 18 27 | 18 32 | 18 37 | 18 42 | 18 48 | 18 54 | 19 0  | 19 7  | 19 14 |  |
| 23                     | 18 17                               | 18 22 | 18 27 | 18 32 | 18 37 | 18 41 | 18 46 | 18 52 | 18 57 | 19 3  | 19 10 |  |
| 30                     | 18 16                               | 18 20 | 18 24 | 18 28 | 18 33 | 18 38 | 18 43 | 18 48 | 18 54 | 18 59 | 19 5  |  |
| Aug. 6                 | 18 15                               | 18 19 | 18 23 | 18 27 | 18 31 | 18 35 | 18 39 | 18 44 | 18 49 | 18 54 | 18 59 |  |
| 13                     | 18 13                               | 18 16 | 18 20 | 18 23 | 18 26 | 18 30 | 18 34 | 18 38 | 18 43 | 18 47 | 18 52 |  |
| 20                     | 18 11                               | 18 14 | 18 17 | 18 20 | 18 23 | 18 26 | 18 29 | 18 32 | 18 36 | 18 40 | 18 44 |  |
| 27                     | 18 8                                | 18 10 | 18 13 | 18 15 | 18 17 | 18 20 | 18 22 | 18 25 | 18 28 | 18 31 | 18 35 |  |
| Sept. 3                | 18 6                                | 18 7  | 18 8  | 18 10 | 18 12 | 18 14 | 18 16 | 18 18 | 18 20 | 18 23 | 18 26 |  |
| 10                     | 18 2                                | 18 3  | 18 4  | 18 5  | 18 6  | 18 8  | 18 9  | 18 10 | 18 12 | 18 14 | 18 16 |  |
| 17                     | 17 59                               | 17 50 | 17 40 | 17 31 | 17 22 | 17 13 | 17 4  | 17 5  | 17 16 | 17 27 | 17 38 |  |
| 24                     | 17 55                               | 17 55 | 17 55 | 17 55 | 17 55 | 17 55 | 17 55 | 17 55 | 17 56 | 17 56 | 17 56 |  |
| Oct. 1                 | 17 52                               | 17 51 | 17 50 | 17 49 | 17 48 | 17 47 | 17 46 | 17 45 | 17 44 | 17 43 | 17 42 |  |
| 8                      | 17 49                               | 17 48 | 17 47 | 17 46 | 17 45 | 17 44 | 17 43 | 17 42 | 17 41 | 17 40 | 17 39 |  |
| 15                     | 17 46                               | 17 44 | 17 42 | 17 41 | 17 39 | 17 37 | 17 35 | 17 33 | 17 31 | 17 29 | 17 27 |  |
| 22                     | 17 44                               | 17 42 | 17 39 | 17 37 | 17 35 | 17 32 | 17 30 | 17 27 | 17 24 | 17 21 | 17 18 |  |
| 29                     | 17 43                               | 17 40 | 17 37 | 17 34 | 17 31 | 17 28 | 17 25 | 17 21 | 17 17 | 17 14 | 17 10 |  |
| Nov. 5                 | 17 42                               | 17 39 | 17 35 | 17 32 | 17 28 | 17 24 | 17 20 | 17 16 | 17 12 | 17 8  | 17 3  |  |
| 12                     | 17 42                               | 17 38 | 17 34 | 17 30 | 17 26 | 17 21 | 17 17 | 17 12 | 17 7  | 17 2  | 16 57 |  |
| 19                     | 17 42                               | 17 38 | 17 33 | 17 29 | 17 24 | 17 20 | 17 15 | 17 10 | 17 5  | 16 59 | 16 53 |  |
| 26                     | 17 43                               | 17 39 | 17 34 | 17 29 | 17 24 | 17 19 | 17 14 | 17 9  | 17 3  | 16 57 | 16 50 |  |
| Dec. 3                 | 17 45                               | 17 40 | 17 35 | 17 30 | 17 25 | 17 20 | 17 14 | 17 8  | 17 2  | 16 55 | 16 48 |  |
| 10                     | 17 48                               | 17 43 | 17 38 | 17 33 | 17 27 | 17 21 | 17 15 | 17 9  | 17 2  | 16 55 | 16 48 |  |
| 17                     | 17 51                               | 17 46 | 17 40 | 17 35 | 17 30 | 17 24 | 17 18 | 17 11 | 17 4  | 16 57 | 16 50 |  |
| 24                     | 17 55                               | 17 49 | 17 44 | 17 39 | 17 33 | 17 27 | 17 21 | 17 15 | 17 8  | 17 1  | 16 58 |  |
| 31                     | 17 58                               | 17 53 | 17 47 | 17 42 | 17 36 | 17 31 | 17 25 | 17 19 | 17 12 | 17 5  | 16 58 |  |

| चन्द्रोदयकाल 2016 Timings of Moonrise 2016<br>For the Central Meridian of India (82½°E) |         |       |       |          |       |       |       |       |       |
|-----------------------------------------------------------------------------------------|---------|-------|-------|----------|-------|-------|-------|-------|-------|
| मास<br>Month                                                                            | JANUARY |       |       | FEBRUARY |       |       | MARCH |       |       |
| अक्षांश<br>Lat.                                                                         | 10°     | 20°   | 30°   | 10°      | 20°   | 30°   | 10°   | 20°   | 30°   |
| Ex.                                                                                     | H. M.   | H. M. | H. M. | H. M.    | H. M. | H. M. | H. M. | H. M. | H. M. |
| 1                                                                                       | 5 45    | 6 02  | 6 21  | -- --    | -- -- | 0 08  | -- -- | -- -- | -- -- |
| 2                                                                                       | -- --   | -- -- | -- -- | 0 37     | 0 48  | 1 00  | 0 07  | 0 21  | 0 36  |
| 3                                                                                       | 0 25    | 0 29  | 0 34  | 1 26     | 1 39  | 1 53  | 0 57  | 1 12  | 1 28  |
| 4                                                                                       | 1 11    | 1 18  | 1 26  | 2 17     | 2 31  | 2 47  | 1 49  | 2 04  | 2 20  |
| 5                                                                                       | 1 58    | 2 07  | 2 18  | 3 09     | 3 24  | 3 41  | 2 41  | 2 55  | 3 11  |
| 6                                                                                       | 2 47    | 2 58  | 3 12  | 4 02     | 4 17  | 4 34  | 3 34  | 3 47  | 4 01  |
| 7                                                                                       | 3 37    | 3 50  | 4 06  | 4 56     | 5 09  | 5 25  | 4 27  | 4 37  | 4 48  |
| 8                                                                                       | 4 29    | 4 44  | 5 01  | 5 50     | 6 01  | 6 14  | 5 19  | 5 26  | 5 34  |
| 9                                                                                       | 5 22    | 5 37  | 5 54  | 6 42     | 6 51  | 7 00  | 6 11  | 6 15  | 6 19  |
| 10                                                                                      | 6 16    | 6 30  | 6 47  | 7 34     | 7 39  | 7 45  | 7 03  | 7 03  | 7 02  |
| 11                                                                                      | 7 09    | 7 22  | 7 36  | 8 25     | 8 26  | 8 28  | 7 55  | 7 51  | 7 46  |
| 12                                                                                      | 8 02    | 8 12  | 8 23  | 9 15     | 9 13  | 9 10  | 8 48  | 8 40  | 8 31  |
| 13                                                                                      | 8 52    | 8 59  | 9 07  | 10 05    | 9 59  | 9 53  | 9 41  | 9 30  | 9 18  |
| 14                                                                                      | 9 42    | 9 45  | 9 49  | 10 56    | 10 47 | 10 37 | 10 35 | 10 22 | 10 07 |
| 15                                                                                      | 10 30   | 10 30 | 10 30 | 11 47    | 11 36 | 11 23 | 11 30 | 11 15 | 10 59 |
| 16                                                                                      | 11 19   | 11 15 | 11 11 | 12 40    | 12 27 | 12 11 | 12 24 | 12 09 | 11 53 |
| 17                                                                                      | 12 08   | 12 01 | 11 53 | 13 34    | 13 19 | 13 03 | 13 18 | 13 04 | 12 47 |
| 18                                                                                      | 12 58   | 12 48 | 12 37 | 14 28    | 14 13 | 13 56 | 14 10 | 13 57 | 13 43 |
| 19                                                                                      | 13 50   | 13 38 | 13 24 | 15 21    | 15 07 | 14 51 | 15 01 | 14 50 | 14 38 |
| 20                                                                                      | 14 44   | 14 30 | 14 14 | 16 14    | 16 01 | 15 47 | 15 50 | 15 42 | 15 32 |
| 21                                                                                      | 15 38   | 15 24 | 15 07 | 17 05    | 16 55 | 16 43 | 16 38 | 16 32 | 16 26 |
| 22                                                                                      | 16 33   | 16 19 | 16 02 | 17 54    | 17 46 | 17 38 | 17 24 | 17 22 | 17 19 |
| 23                                                                                      | 17 28   | 17 14 | 16 59 | 18 42    | 18 37 | 18 32 | 18 10 | 18 10 | 18 11 |
| 24                                                                                      | 18 21   | 18 09 | 17 56 | 19 28    | 19 26 | 19 25 | 18 55 | 18 59 | 19 02 |
| 25                                                                                      | 19 12   | 19 03 | 18 52 | 20 14    | 20 15 | 20 17 | 19 41 | 19 47 | 19 54 |
| 26                                                                                      | 20 01   | 19 54 | 19 47 | 20 59    | 21 03 | 21 08 | 20 27 | 20 36 | 20 46 |
| 27                                                                                      | 20 48   | 20 44 | 20 41 | 21 45    | 21 52 | 22 00 | 21 14 | 21 25 | 21 37 |
| 28                                                                                      | 21 34   | 21 33 | 21 33 | 22 31    | 22 41 | 22 52 | 22 02 | 22 15 | 22 29 |
| 29                                                                                      | 22 19   | 22 22 | 22 25 | 23 18    | 23 30 | 23 44 | 22 51 | 23 05 | 23 21 |
| 30                                                                                      | 23 04   | 23 10 | 23 16 |          |       |       | 23 40 | 23 55 | -- -- |
| 31                                                                                      | 23 50   | 23 59 | -- -- |          |       |       | -- -- | -- -- | -- -- |



चन्द्रोदयकाल 2016 Timings of Moonrise 2016  
For the Central Meridian of India (82½°E)

| मास<br>Month    | APRIL |       |       | MAY   |       |       | JUNE  |       |       |
|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| अक्षांश<br>Lat. | 10°   | 20°   | 30°   | 10°   | 20°   | 30°   | 10°   | 20°   | 30°   |
|                 | H. M. | H. M. | H. M. | H. M. | H. M. | H. M. | H. M. | H. M. | H. M. |
| दि. 1           | 0 31  | 0 46  | 1 02  | 0 56  | 1 06  | 1 17  | 2 05  | 2 03  | 2 01  |
| Dt. 2           | 1 22  | 1 35  | 1 51  | 1 46  | 1 52  | 2 00  | 2 56  | 2 50  | 2 44  |
| 3               | 2 13  | 2 25  | 2 38  | 2 34  | 2 38  | 2 42  | 3 49  | 3 40  | 3 30  |
| 4               | 3 04  | 3 13  | 3 23  | 3 24  | 3 24  | 3 24  | 4 44  | 4 32  | 4 19  |
| 5               | 3 55  | 4 01  | 4 07  | 4 16  | 4 12  | 4 08  | 5 42  | 5 28  | 5 12  |
| 6               | 4 47  | 4 49  | 4 51  | 5 09  | 5 02  | 4 53  | 6 41  | 6 26  | 6 09  |
| 7               | 5 39  | 5 37  | 5 35  | 6 05  | 5 54  | 5 42  | 7 40  | 7 25  | 7 08  |
| 8               | 6 32  | 6 26  | 6 20  | 7 02  | 6 49  | 6 34  | 8 37  | 8 24  | 8 08  |
| 9               | 7 27  | 7 17  | 7 07  | 8 01  | 7 46  | 7 29  | 9 32  | 9 21  | 9 08  |
| 10              | 8 23  | 8 11  | 7 57  | 8 59  | 8 44  | 8 27  | 10 24 | 10 15 | 10 05 |
| 11              | 9 19  | 9 05  | 8 49  | 9 56  | 9 42  | 9 25  | 11 14 | 11 08 | 11 01 |
| 12              | 10 16 | 10 01 | 9 44  | 10 50 | 10 38 | 10 24 | 11 01 | 11 58 | 11 54 |
| 13              | 11 12 | 10 57 | 10 40 | 11 43 | 11 32 | 11 20 | 12 47 | 12 47 | 12 47 |
| 14              | 12 06 | 11 52 | 11 37 | 12 32 | 12 24 | 12 16 | 12 32 | 12 35 | 13 39 |
| 15              | 12 58 | 12 46 | 12 33 | 13 19 | 13 15 | 13 09 | 14 17 | 14 23 | 14 30 |
| 16              | 13 48 | 13 38 | 13 28 | 14 05 | 14 04 | 14 02 | 15 03 | 15 12 | 15 22 |
| 17              | 14 36 | 14 29 | 14 22 | 14 51 | 14 52 | 14 53 | 16 51 | 16 02 | 16 14 |
| 18              | 15 22 | 15 19 | 15 14 | 15 36 | 15 40 | 15 45 | 16 39 | 16 52 | 17 07 |
| 19              | 16 08 | 16 07 | 16 06 | 16 21 | 16 28 | 16 36 | 17 29 | 17 43 | 18 00 |
| 20              | 16 53 | 16 55 | 16 58 | 17 08 | 17 17 | 17 28 | 18 19 | 18 34 | 18 52 |
| 21              | 17 38 | 17 43 | 17 49 | 17 55 | 18 07 | 18 21 | 19 10 | 19 25 | 19 42 |
| 22              | 18 24 | 18 32 | 18 41 | 18 44 | 18 58 | 19 13 | 20 01 | 20 15 | 20 30 |
| 23              | 19 11 | 19 21 | 19 33 | 19 34 | 19 48 | 20 05 | 21 51 | 21 03 | 21 16 |
| 24              | 19 58 | 20 11 | 20 25 | 20 24 | 20 39 | 20 56 | 21 40 | 21 49 | 21 59 |
| 25              | 20 47 | 21 01 | 21 17 | 21 14 | 21 28 | 21 45 | 22 27 | 22 34 | 22 41 |
| 26              | 21 37 | 21 51 | 22 08 | 22 04 | 22 17 | 22 32 | 23 15 | 23 17 | 23 21 |
| 27              | 22 27 | 22 41 | 22 58 | 22 53 | 23 04 | 23 16 | -- -- | -- -- | -- -- |
| 28              | 23 16 | 23 30 | 23 46 | 23 41 | 23 49 | 23 58 | 0 02  | 0 01  | 0 01  |
| 29              | -- -- | -- -- | -- -- | -- -- | -- -- | -- -- | 0 50  | 0 46  | 0 41  |
| 30              | 0 06  | 0 18  | 0 33  | 0 29  | 0 34  | 0 39  | 1 41  | 1 33  | 1 24  |
| 31              |       |       |       | 1 17  | 1 18  | 1 20  |       |       |       |

चन्द्रोदयकाल 2016 Timings of Moonrise 2016  
For the Central Meridian of India (82½°E)

| मास<br>Month    | JULY  |       |       | AUGUST |       |       | SEPTEMBER |       |       |
|-----------------|-------|-------|-------|--------|-------|-------|-----------|-------|-------|
| अक्षांश<br>Lat. | 10°   | 20°   | 30°   | 10°    | 20°   | 30°   | 10°       | 20°   | 30°   |
|                 | H. M. | H. M. | H. M. | H. M.  | H. M. | H. M. | H. M.     | H. M. | H. M. |
| दि. 1           | 2 33  | 2 22  | 2 10  | 4 10   | 3 55  | 3 38  | 5 37      | 5 29  | 5 21  |
| Dt. 2           | 3 28  | 3 15  | 3 00  | 5 06   | 4 53  | 4 37  | 6 26      | 6 21  | 6 17  |
| 3               | 4 25  | 4 11  | 3 54  | 6 01   | 5 50  | 5 37  | 7 13      | 7 12  | 7 11  |
| 4               | 5 24  | 5 09  | 4 52  | 6 54   | 6 45  | 6 35  | 8 00      | 8 02  | 8 04  |
| 5               | 6 22  | 6 08  | 5 51  | 7 44   | 7 38  | 7 32  | 8 46      | 8 51  | 8 56  |
| 6               | 7 19  | 7 06  | 6 51  | 8 33   | 8 30  | 8 27  | 9 31      | 9 39  | 9 48  |
| 7               | 8 13  | 8 03  | 7 51  | 9 20   | 9 20  | 9 20  | 10 18     | 10 28 | 10 42 |
| 8               | 9 04  | 8 57  | 8 48  | 10 06  | 10 09 | 10 13 | 11 05     | 11 17 | 11 32 |
| 9               | 9 53  | 9 49  | 9 44  | 10 52  | 10 58 | 11 05 | 11 53     | 11 07 | 12 23 |
| 10              | 10 41 | 10 39 | 10 38 | 11 38  | 11 47 | 11 57 | 12 43     | 12 57 | 13 14 |
| 11              | 11 27 | 11 28 | 11 30 | 12 25  | 12 36 | 12 59 | 13 33     | 13 47 | 14 04 |
| 12              | 12 12 | 12 17 | 12 22 | 13 13  | 13 26 | 13 41 | 14 23     | 14 37 | 14 53 |
| 13              | 12 58 | 13 05 | 13 14 | 14 02  | 14 16 | 14 33 | 15 14     | 15 26 | 15 41 |
| 14              | 13 44 | 13 54 | 14 06 | 14 52  | 15 07 | 15 25 | 16 05     | 16 15 | 16 26 |
| 15              | 14 32 | 14 44 | 14 58 | 15 44  | 15 58 | 16 15 | 16 55     | 16 02 | 17 10 |
| 16              | 15 21 | 15 35 | 15 51 | 16 35  | 16 49 | 17 04 | 17 45     | 17 49 | 17 53 |
| 17              | 16 12 | 16 26 | 16 44 | 17 27  | 17 38 | 17 51 | 18 36     | 18 36 | 18 35 |
| 18              | 17 03 | 17 18 | 17 35 | 18 17  | 18 26 | 18 36 | 19 27     | 19 23 | 19 19 |
| 19              | 17 54 | 18 09 | 18 25 | 19 07  | 19 12 | 19 19 | 20 19     | 20 11 | 20 03 |
| 20              | 18 46 | 18 58 | 19 13 | 19 56  | 19 58 | 20 00 | 21 12     | 21 05 | 20 50 |
| 21              | 19 36 | 19 46 | 19 58 | 20 46  | 20 44 | 20 42 | 22 07     | 22 54 | 21 39 |
| 22              | 20 25 | 20 32 | 20 41 | 21 35  | 21 30 | 21 24 | 23 03     | 23 48 | 22 32 |
| 23              | 21 13 | 21 17 | 21 22 | 22 26  | 22 17 | 22 08 | 23 59     | 23 44 | 23 27 |
| 24              | 22 01 | 22 01 | 22 02 | 23 18  | 23 07 | 22 54 | -- --     | -- -- | -- -- |
| 25              | 22 49 | 22 46 | 22 42 | -- --  | 23 59 | 23 43 | 0 55      | 0 40  | 0 24  |
| 26              | 23 38 | 23 31 | 23 24 | 0 12   | -- -- | -- -- | 1 49      | 1 36  | 1 21  |
| 27              | -- -- | -- -- | -- -- | 1 07   | 0 53  | 0 36  | 2 41      | 2 31  | 2 18  |
| 28              | 0 29  | 0 19  | 0 08  | 2 03   | 1 48  | 1 31  | 3 32      | 3 24  | 3 15  |
| 29              | 1 21  | 1 09  | 0 55  | 2 59   | 2 45  | 2 29  | 4 21      | 4 16  | 4 10  |
| 30              | 2 16  | 2 02  | 1 46  | 3 33   | 3 41  | 3 27  | 5 08      | 5 06  | 5 07  |
| 31              | 3 13  | 2 58  | 2 41  | 4 46   | 4 36  | 4 24  |           |       |       |



चन्द्रोदयकाल 2016 Timings of Moonrise 2016  
For the Central Meridian of India (82½°E)

| मास<br>Month    | OCTOBER |       |       | NOVEMBER |       |       | DECEMBER |       |       |
|-----------------|---------|-------|-------|----------|-------|-------|----------|-------|-------|
| अक्षांश<br>Lat. | 10°     | 20°   | 30°   | 10°      | 20°   | 30°   | 10°      | 20°   | 30°   |
|                 | H. M.   | H. M. | H. M. | H. M.    | H. M. | H. M. | H. M.    | H. M. | H. M. |
| 1               | 5 55    | 5 56  | 5 57  | 6 57     | 7 08  | 7 20  | 7 18     | 7 33  | 7 50  |
| 2               | 6 41    | 6 45  | 6 49  | 7 44     | 7 57  | 8 12  | 8 07     | 8 22  | 8 39  |
| 3               | 7 27    | 7 34  | 7 42  | 8 32     | 8 46  | 9 03  | 8 55     | 9 10  | 9 27  |
| 4               | 8 13    | 8 23  | 8 33  | 9 20     | 9 35  | 9 53  | 9 43     | 9 56  | 10 11 |
| 5               | 8 59    | 9 12  | 9 25  | 10 09    | 10 24 | 10 41 | 10 30    | 10 41 | 10 54 |
| 6               | 9 47    | 10 01 | 10 16 | 10 57    | 11 11 | 11 28 | 11 17    | 11 25 | 11 34 |
| 7               | 10 35   | 10 50 | 11 07 | 11 45    | 11 58 | 12 12 | 12 04    | 12 08 | 12 14 |
| 8               | 11 25   | 11 40 | 11 57 | 12 33    | 12 43 | 12 54 | 12 49    | 12 51 | 12 53 |
| 9               | 12 14   | 12 28 | 12 45 | 13 21    | 13 28 | 13 36 | 13 37    | 13 35 | 13 33 |
| 10              | 13 03   | 13 16 | 13 32 | 14 08    | 14 12 | 14 16 | 14 26    | 14 21 | 14 70 |
| 11              | 13 52   | 14 04 | 14 17 | 14 57    | 14 57 | 14 57 | 15 19    | 15 10 | 15 00 |
| 12              | 14 42   | 14 50 | 15 00 | 15 48    | 15 44 | 15 40 | 16 14    | 16 02 | 15 49 |
| 13              | 15 31   | 15 37 | 15 45 | 16 41    | 16 33 | 16 25 | 17 13    | 16 59 | 16 43 |
| 14              | 16 21   | 16 23 | 16 25 | 17 36    | 17 26 | 17 13 | 18 14    | 17 59 | 17 41 |
| 15              | 17 12   | 17 10 | 17 08 | 18 35    | 18 21 | 18 06 | 19 15    | 19 00 | 18 43 |
| 16              | 18 05   | 17 59 | 17 52 | 19 35    | 19 20 | 19 03 | 20 15    | 20 01 | 19 46 |
| 17              | 18 59   | 18 50 | 18 39 | 20 35    | 20 20 | 20 02 | 21 13    | 21 01 | 20 48 |
| 18              | 19 55   | 19 43 | 19 29 | 21 34    | 21 20 | 21 03 | 22 07    | 21 58 | 21 48 |
| 19              | 20 53   | 20 39 | 20 23 | 22 31    | 22 18 | 22 04 | 22 58    | 22 52 | 22 45 |
| 20              | 21 51   | 21 36 | 21 19 | 23 24    | 23 14 | 23 03 | 23 46    | 23 43 | 23 41 |
| 21              | 22 49   | 22 34 | 22 17 | -- --    | -- -- | -- -- | -- --    | -- -- | -- -- |
| 22              | 23 45   | 23 31 | 23 15 | 0 15     | 0 08  | -- -- | 0 33     | 0 33  | 0 34  |
| 23              | -- --   | -- -- | -- -- | 1 04     | 0 59  | 0 55  | 1 19     | 1 22  | 1 27  |
| 24              | 0 38    | 0 27  | 0 13  | 1 50     | 1 49  | 1 48  | 2 04     | 2 11  | 2 18  |
| 25              | 1 29    | 1 20  | 1 10  | 2 36     | 2 38  | 2 40  | 2 50     | 2 59  | 3 10  |
| 26              | 2 19    | 2 12  | 2 05  | 3 22     | 3 27  | 3 32  | 3 37     | 3 49  | 4 02  |
| 27              | 3 06    | 3 03  | 2 59  | 4 07     | 4 15  | 4 24  | 4 25     | 4 38  | 4 54  |
| 28              | 3 52    | 3 52  | 3 52  | 4 54     | 5 04  | 5 16  | 5 13     | 5 28  | 5 45  |
| 29              | 4 38    | 4 41  | 4 45  | 5 41     | 5 53  | 6 08  | 6 03     | 6 18  | 6 36  |
| 30              | 5 24    | 5 30  | 5 37  | 6 29     | 6 43  | 6 59  | 6 52     | 7 07  | 7 24  |
| 31              | 6 10    | 6 19  | 6 28  | -- --    | -- -- | -- -- | 7 41     | 7 55  | 8 11  |

अभीष्ट याम्योत्तर के स्थानीय चन्द्रोदय काल के लिये संस्कार पत्रक  
Table for correction to L, M, T, of Moonrise for the desired mentdion

| Daily<br>Variation<br>in rising | West Longitude in time<br>Minutes |     |     |     | C.<br>M. | East Longitude in time |     |     |     |
|---------------------------------|-----------------------------------|-----|-----|-----|----------|------------------------|-----|-----|-----|
|                                 | 58                                | 42  | 26  | 10  | 0        | 6                      | 22  | 38  | 54  |
| M.                              | M.                                | M.  | M.  | M.  |          | M.                     | M.  | M.  | M.  |
| 28                              | 1.1                               | 0.8 | 0.5 | 0.2 |          | 1.1                    | 0.4 | 0.7 | 1.1 |
| 29                              | 1.2                               | 0.8 | 0.5 | 0.2 |          | 0.1                    | 0.4 | 0.8 | 1.1 |
| 30                              | 1.2                               | 0.9 | 0.5 | 0.2 |          | 0.1                    | 0.5 | 0.8 | 1.1 |
| 31                              | 1.2                               | 0.9 | 0.6 | 0.2 |          | 0.1                    | 0.5 | 0.8 | 1.1 |
| 32                              | 1.3                               | 0.9 | 0.6 | 0.2 |          | 0.1                    | 0.5 | 0.8 | 1.2 |
| 33                              | 1.3                               | 1.0 | 0.6 | 0.2 |          | 0.1                    | 0.5 | 0.9 | 1.2 |
| 34                              | 1.4                               | 1.0 | 0.6 | 0.2 |          | 0.1                    | 0.5 | 0.9 | 1.2 |
| 35                              | 1.4                               | 1.0 | 0.6 | 0.2 |          | 0.1                    | 0.5 | 0.9 | 1.3 |
| 36                              | 1.5                               | 1.0 | 0.6 | 0.2 |          | 0.1                    | 0.5 | 0.9 | 1.3 |
| 37                              | 1.5                               | 1.1 | 0.7 | 0.3 |          | 0.2                    | 0.6 | 1.0 | 1.4 |
| 38                              | 1.6                               | 1.1 | 0.7 | 0.3 |          | 0.2                    | 0.6 | 1.0 | 1.4 |
| 39                              | 1.6                               | 1.1 | 0.7 | 0.3 |          | 0.2                    | 0.6 | 1.0 | 1.4 |
| 40                              | 1.6                               | 1.2 | 0.7 | 0.3 |          | 0.2                    | 0.6 | 1.1 | 1.5 |
| 41                              | 1.7                               | 1.2 | 0.7 | 0.3 |          | 0.2                    | 0.6 | 1.1 | 1.5 |
| 42                              | 1.7                               | 1.2 | 0.8 | 0.3 |          | 0.2                    | 0.6 | 1.1 | 1.5 |
| 43                              | 1.7                               | 1.3 | 0.8 | 0.3 |          | 0.2                    | 0.7 | 1.1 | 1.6 |
| 44                              | 1.8                               | 1.3 | 0.8 | 0.3 |          | 0.2                    | 0.7 | 1.2 | 1.6 |
| 45                              | 1.8                               | 1.3 | 0.8 | 0.3 |          | 0.2                    | 0.7 | 1.2 | 1.7 |
| 46                              | 1.9                               | 1.3 | 0.8 | 0.3 |          | 0.2                    | 0.7 | 1.2 | 1.7 |
| 47                              | 1.9                               | 1.4 | 0.8 | 0.3 |          | 0.2                    | 0.5 | 1.2 | 1.7 |
| 48                              | 1.9                               | 1.4 | 0.9 | 0.3 |          | 0.2                    | 0.5 | 1.3 | 1.8 |
| 49                              | 2.0                               | 1.4 | 0.9 | 0.3 |          | 0.2                    | 0.5 | 1.3 | 1.8 |
| 50                              | 2.0                               | 1.5 | 0.9 | 0.3 |          | 0.2                    | 0.8 | 1.3 | 1.8 |



अभीष्ट याम्योत्तर के स्थानीय चन्द्रोदय काल के लिये संस्कार पत्रक  
Table for correction to L, M, T, of Moonrise for the desired mentdion

| Daily Variation in rising | West Longitude in time Minutes |      |      |      | C. M. | East Longitude in time |      |      |      |
|---------------------------|--------------------------------|------|------|------|-------|------------------------|------|------|------|
|                           | 58                             | 42   | 26   | 10   | 0     | 6                      | 22   | 38   | 54   |
| M.                        | M.                             | M.   | M.   | M.   |       | M.                     | M.   | M.   | M.   |
| 51                        | +2.1                           | +1.5 | +0.9 | +0.4 |       | -0.2                   | -0.8 | -1.3 | -1.9 |
| 52                        | 2.1                            | 1.5  | 0.9  | 0.4  |       | 0.2                    | 0.8  | 1.4  | 2.0  |
| 53                        | 2.1                            | 1.5  | 1.0  | 0.4  |       | 0.2                    | 0.8  | 1.4  | 2.0  |
| 54                        | 2.2                            | 1.6  | 1.0  | 0.4  |       | 0.2                    | 0.8  | 1.4  | 2.0  |
| 55                        | 2.2                            | 1.6  | 1.0  | 0.4  |       | 0.2                    | 0.8  | 1.5  | 2.1  |
| 56                        | 2.3                            | 1.6  | 1.0  | 0.4  |       | 0.2                    | 0.9  | 1.5  | 2.1  |
| 57                        | 2.3                            | 1.7  | 1.0  | 0.4  |       | 0.2                    | 0.9  | 1.5  | 2.1  |
| 58                        | 2.3                            | 1.7  | 1.0  | 0.4  |       | 0.2                    | 0.9  | 1.5  | 2.2  |
| 59                        | 2.4                            | 1.7  | 1.1  | 0.4  |       | 0.2                    | 0.9  | 1.6  | 2.3  |
| 60                        | 2.4                            | 1.7  | 1.1  | 0.4  |       | 0.2                    | 0.9  | 1.6  | 2.3  |
| 61                        | 2.5                            | 1.8  | 1.1  | 0.4  |       | 0.3                    | 0.9  | 1.6  | 2.3  |
| 62                        | 2.5                            | 1.8  | 1.1  | 0.4  |       | 0.3                    | 0.9  | 1.6  | 2.3  |
| 63                        | 2.5                            | 1.8  | 1.1  | 0.4  |       | 0.3                    | 1.0  | 1.7  | 2.4  |
| 64                        | 2.6                            | 1.9  | 1.2  | 0.4  |       | 0.3                    | 1.0  | 1.7  | 2.4  |
| 65                        | 2.6                            | 1.9  | 1.2  | 0.5  |       | 0.3                    | 1.0  | 1.7  | 2.4  |
| 66                        | 2.7                            | 1.9  | 1.2  | 0.5  |       | 0.3                    | 1.0  | 1.7  | 2.5  |
| 67                        | 2.7                            | 2.0  | 1.2  | 0.5  |       | 0.3                    | 1.0  | 1.8  | 2.5  |
| 68                        | 2.7                            | 2.0  | 1.2  | 0.5  |       | 0.3                    | 1.0  | 1.8  | 2.6  |
| 69                        | 2.8                            | 2.0  | 1.2  | 0.5  |       | 0.3                    | 1.1  | 1.8  | 2.6  |
| 70                        | 2.8                            | 2.0  | 1.3  | 0.5  |       | 0.3                    | 1.1  | 1.8  | 2.6  |
| 71                        | 2.9                            | 2.1  | 1.3  | 0.5  |       | 0.3                    | 1.1  | 1.9  | 2.7  |
| 72                        | 2.9                            | 2.1  | 1.3  | 0.5  |       | 0.3                    | 1.1  | 1.9  | 2.7  |
| 73                        | 2.9                            | 2.1  | 1.3  | 0.5  |       | 0.3                    | 1.1  | 1.9  | 2.7  |
| 74                        | 3.0                            | 2.2  | 1.3  | 0.5  |       | 0.3                    | 1.1  | 2.0  | 2.8  |

ग्रहों के मध्यम भोग 2016  
Mean Longitudes of Planets in 2016

| मास दि.  | वरुण    | प्रजापति | शनि      | गुरु    | मंगल   | शुक्र  | बुध     |
|----------|---------|----------|----------|---------|--------|--------|---------|
| Month D. | Neptune | Uranus   | Saturn   | Jupiter | Mars   | Venus  | Mercury |
|          | 0 1     | 0 1      | 0 1      | 0 1     | 0 1    | 0 1    | 0 1     |
| Jan. 1   | 343 04  | 23 24.6  | 111 23.9 | 180 41  | 225 15 | 32 16  | 265 54  |
| 11       | 08      | 31.7     | 44.0     | 181 31  | 230 29 | 48 17  | 306 49  |
| 21       | 12      | 38.8     | 112 04.1 | 182 21  | 235 43 | 54 18  | 347 39  |
| 31       | 16      | 45.9     | 24.2     | 182 11  | 240 57 | 80 19  | 28 29   |
| Feb. 10  | 20      | 53.0     | 44.3     | 184 01  | 246 11 | 96 20  | 69 24   |
| 20       | 24      | 24 00.1  | 113 4.4  | 51      | 251 25 | 112 21 | 110 19  |
| Mar. 1   | 28      | 7.2      | 24.5     | 185 41  | 256 39 | 128 22 | 151 14  |
| 11       | 32      | 14.3     | 44.6     | 186 31  | 261 53 | 144 23 | 192 09  |
| 21       | 36      | 21.4     | 114 4.7  | 187 21  | 267 07 | 160 24 | 233 04  |
| 31       | 40      | 28.5     | 24.8     | 188 11  | 272 21 | 174 25 | 273 59  |
| Apr. 10  | 44      | 35.6     | 44.9     | 189 01  | 277 35 | 190 26 | 314 54  |
| 20       | 48      | 42.7     | 115 6.0  | 51      | 282 49 | 206 27 | 355 49  |
| 30       | 52      | 49.8     | 26.1     | 190 41  | 288 03 | 222 28 | 36 44   |
| May 10   | 56      | 56.9     | 46.2     | 191 31  | 293 17 | 238 29 | 75 99   |
| 20       | 344 00  | 25 4.0   | 116 6.3  | 192 21  | 298 31 | 254 30 | 117 34  |
| 30       | 04      | 11.1     | 26.4     | 193 11  | 303 45 | 270 31 | 158 29  |
| June 9   | 08      | 18.2     | 46.5     | 194 01  | 308 59 | 286 32 | 199 24  |
| 19       | 12      | 25.3     | 117 6.6  | 51      | 314 13 | 302 33 | 240 19  |
| 29       | 16      | 32.4     | 26.7     | 195 41  | 319 27 | 318 34 | 281 14  |
| July 9   | 20      | 39.5     | 46.8     | 196 31  | 324 41 | 334 35 | 322 09  |
| 19       | 24      | 46.6     | 118 26.9 | 197 21  | 329 55 | 350 36 | 03 14   |
| 29       | 28      | 53.7     | 47.0     | 198 11  | 335 09 | 06 37  | 43 09   |
| Aug. 8   | 32      | 26 00.8  | 119 7.1  | 199 01  | 340 23 | 22 38  | 84 04   |
| 18       | 36      | 7.9      | 27.2     | 51      | 344 37 | 38 39  | 125 59  |
| 28       | 40      | 15.0     | 47.3     | 200 41  | 349 51 | 54 40  | 166 54  |
| Sept. 7  | 44      | 22.1     | 120 7.4  | 201 31  | 355 05 | 70 41  | 207 49  |
| 17       | 48      | 29.2     | 27.5     | 202 21  | 00 19  | 86 42  | 248 44  |
| 27       | 52      | 36.3     | 47.6     | 203 11  | 05 33  | 102 43 | 289 39  |
| Oct. 7   | 56      | 43.4     | 121 7.7  | 204 01  | 10 47  | 118 44 | 330 24  |
| 17       | 345 00  | 50.5     | 27.8     | 51      | 16 01  | 134 45 | 10 79   |
| 27       | 04      | 57.6     | 47.9     | 205 41  | 21 15  | 150 46 | 52 14   |
| Nov. 6   | 08      | 27 4.7   | 122 8.0  | 206 31  | 26 29  | 166 47 | 93 09   |
| 16       | 12      | 11.8     | 28.1     | 207 21  | 31 43  | 182 48 | 134 04  |
| 26       | 16      | 18.9     | 48.2     | 208 11  | 36 57  | 198 49 | 174 59  |
| Dec. 6   | 20      | 26.0     | 123 8.3  | 209 01  | 42 11  | 214 50 | 215 54  |
| 16       | 24      | 33.1     | 28.4     | 51      | 47 25  | 230 51 | 256 49  |
| 26       | 28      | 40.2     | 48.5     | 210 41  | 52 39  | 246 52 | 297 44  |
| 31       | 345 30  | 27 44.2  | 123 58.6 | 211 06  | 55 46  | 254 52 | 318 11  |



**Geocentric Position of the Pluto and Mean Longitudes  
of the Sun and the Moon in 2016**

| Month<br>and<br>Date | Pluto यम |        |          | Sun सूर्य |           | Moon चन्द्र   |               |  |  |
|----------------------|----------|--------|----------|-----------|-----------|---------------|---------------|--|--|
|                      | भोग      | शर     | क्रान्ति | म. भोग    | म. भोग    | लम्बन         | अ. व्यास      |  |  |
|                      | Long.    | Late.  | Decl.    | M.Long.   | M.Long.   | Hor.<br>Long. | Semii<br>Dia. |  |  |
|                      | 0 1      | 0 1    | 0 1      | 0 1 11    | 0 1 11    | 1 11          | 1 11          |  |  |
| Jan. 1               | 15 02 54 | 1 S 35 | 21 S 00  | 280 05 48 | 174 35 22 | 54 26         | 14 50         |  |  |
| 11                   | 15 23 40 | 1 34   | 20 59    | 289 57 12 | 306 21 12 | 58 29         | 15 53         |  |  |
| 21                   | 15 44 12 | 1 33   | 20 57    | 299 48 35 | 78 07 02  | 58 03         | 15 49         |  |  |
| 31                   | 16 03 59 | 1 32   | 20 56    | 309 39 58 | 209 52 53 | 54 14         | 14 46         |  |  |
| Feb. 10              | 16 22 36 | 1 31   | 20 54    | 319 31 22 | 341 38 43 | 60 03         | 16 21         |  |  |
| 20                   | 16 39 34 | 1 31   | 20 53    | 329 22 45 | 113 24 33 | 56 20         | 15 21         |  |  |
| Mar. 1               | 16 54 29 | 1 30   | 20 52    | 339 14 08 | 245 10 24 | 54 42         | 14 54         |  |  |
| 11                   | 17 07 03 | 1 30   | 20 51    | 349 05 31 | 16 56 14  | 60 55         | 16 36         |  |  |
| 21                   | 17 16 57 | 1 29   | 20 50    | 358 56 55 | 14 24 04  | 54 53         | 14 58         |  |  |
| 31                   | 17 26 24 | 1 29   | 20 49    | 8 48 18   | 28 27 54  | 55 48         | 15 12         |  |  |
| Apr. 10              | 17 28 03 | 1 28   | 20 49    | 18 39 42  | 52 13 45  | 60 35         | 16 30         |  |  |
| 20                   | 17 29 04 | 1 28   | 20 N 50  | 28 31 04  | 183 59 35 | 54 06         | 14 44         |  |  |
| 30                   | 17 23 01 | 1 27   | 20 51    | 38 22 28  | 315 46 25 | 57 42         | 15 50         |  |  |
| May 10               | 17 22 16 | 1 26   | 20 52    | 48 13 51  | 87 31 15  | 59 12         | 16 08         |  |  |
| 20                   | 17 14 47 | 1 26   | 20 53    | 58 05 15  | 219 17 06 | 54 05         | 14 44         |  |  |
| 30                   | 17 05 00 | 1 25   | 20 55    | 67 56 38  | 351 02 56 | 58 44         | 16 00         |  |  |
| June 9               | 16 53 14 | 1 25   | 20 57    | 77 48 01  | 122 48 46 | 57 23         | 15 38         |  |  |
| 19                   | 16 39 57 | 1 24   | 21 00    | 87 39 25  | 254 34 37 | 54 53         | 14 57         |  |  |
| 29                   | 16 25 40 | 1 23   | 21 03    | 97 30 48  | 26 20 27  | 59 31         | 16 13         |  |  |
| July 9               | 16 10 53 | 1 22   | 21 05    | 107 22 11 | 158 06 17 | 55 43         | 15 11         |  |  |
| 19                   | 15 56 09 | 1 21   | 21 08    | 117 13 35 | 289 52 07 | 56 25         | 15 22         |  |  |
| 29                   | 15 42 01 | 1 20   | 21 11    | 127 04 58 | 61 37 58  | 59 13         | 16 08         |  |  |
| Aug. 8               | 15 29 00 | 1 18   | 21 13    | 136 56 21 | 192 23 48 | 54 34         | 14 52         |  |  |
| 18                   | 15 17 36 | 1 17   | 21 16    | 146 47 44 | 325 09 38 | 58 22         | 15 54         |  |  |
| 28                   | 15 08 14 | 1 16   | 21 18    | 156 39 08 | 96 55 28  | 57 58         | 15 47         |  |  |
| Sept. 7              | 15 01 16 | 1 15   | 21 20    | 166 30 31 | 228 41 19 | 54 08         | 14 45         |  |  |
| 17                   | 14 57 01 | 1 13   | 21 22    | 176 21 54 | 0 27 09   | 60 13         | 16 24         |  |  |
| 27                   | 14 55 38 | 1 12   | 21 24    | 186 13 18 | 132 12 59 | 56 21         | 15 21         |  |  |
| Oct. 7               | 14 57 16 | 1 11   | 21 25    | 196 04 41 | 263 58 50 | 54 26         | 14 50         |  |  |
| 17                   | 15 01 56 | 1 09   | 21 25    | 205 56 04 | 35 44 40  | 61 16         | 16 41         |  |  |
| 27                   | 15 09 34 | 1 08   | 21 26    | 215 47 28 | 167 30 30 | 54 56         | 14 58         |  |  |
| Nov. 6               | 15 20 01 | 1 07   | 21 26    | 225 38 51 | 299 16 20 | 55 23         | 15 05         |  |  |
| 16                   | 15 33 03 | 1 06   | 21 26    | 235 30 14 | 71 02 11  | 61 06         | 16 39         |  |  |
| 26                   | 15 48 22 | 1 04   | 21 S 25  | 245 21 38 | 202 48 01 | 54 07         | 14 44         |  |  |
| Dec. 6               | 16 05 39 | 1 03   | 21 24    | 255 13 01 | 334 33 51 | 56 47         | 15 28         |  |  |
| 16                   | 16 24 26 | 1 02   | 21 23    | 265 04 24 | 106 19 41 | 59 49         | 16 18         |  |  |
| 26                   | 16 44 18 | 1 S 01 | 21 22    | 274 55 47 | 238 05 32 | 54 04         | 14 44         |  |  |
| 31                   | 16 54 30 | 1 01   | 21 21    | 280 47 10 | 9 51 22   | 55 35         | 15 08         |  |  |

**चन्द्र का राशि प्रवेशकाल 2016  
Time when the Moon enters the Zodiacal Signs in 2016**

| JANUARY |      |       | FEBRUARY |      |       | MARCH  |      |       |
|---------|------|-------|----------|------|-------|--------|------|-------|
| दिनांक  | राशि | समय   | दिनांक   | राशि | समय   | दिनांक | राशि | समय   |
| Date    | Sign | Time  | Date     | Sign | Time  | Date   | Sign | Time  |
|         |      | H. M. |          |      | H. M. |        |      | H. M. |
| 1       | ♈    | 22 05 | 1        | ♉    | 8 33  | 2      | ♊    | 5 28  |
| 3       | ♈    | 0 46  | 3        | ♉    | 14 03 | 5      | ♊    | 16 21 |
| 5       | ♈    | 5 18  | 5        | ♉    | 21 54 | 7      | ♊    | 4 54  |
| 8       | ♈    | 13 03 | 8        | ♉    | 8 37  | 10     | ♊    | 17 38 |
| 10      | ♈    | 0 13  | 10       | ♉    | 21 19 | 12     | ♊    | 4 20  |
| 13      | ♈    | 13 07 | 13       | ♉    | 9 41  | 15     | ♊    | 11 27 |
| 15      | ♈    | 0 57  | 15       | ♉    | 18 18 | 17     | ♊    | 14 61 |
| 18      | ♈    | 9 47  | 17       | ♉    | 1 14  | 19     | ♊    | 15 41 |
| 20      | ♈    | 16 33 | 19       | ♉    | 4 42  | 21     | ♊    | 15 42 |
| 22      | ♈    | 19 18 | 21       | ♉    | 5 41  | 23     | ♊    | 16 40 |
| 24      | ♈    | 22 16 | 24       | ♉    | 7 13  | 25     | ♊    | 19 58 |
| 26      | ♈    | 1 13  | 26       | ♉    | 9 53  | 27     | ♊    | 2 20  |
| 28      | ♈    | 4 31  | 28       | ♉    | 14 19 | 30     | ♊    | 11 35 |
|         |      |       | 30       | ♉    | 20 47 |        |      |       |
| APRIL   |      |       | MAY      |      |       | JUNE   |      |       |
| दिनांक  | राशि | समय   | दिनांक   | राशि | समय   | दिनांक | राशि | समय   |
| Date    | Sign | Time  | Date     | Sign | Time  | Date   | Sign | Time  |
|         |      | H. M. |          |      | H. M. |        |      | H. M. |
| 2       | ♈    | 23 00 | 1        | ♉    | 17 47 | 2      | ♊    | 23 37 |
| 5       | ♈    | 11 38 | 4        | ♉    | 6 25  | 5      | ♊    | 8 54  |
| 7       | ♈    | 0 24  | 6        | ♉    | 27 54 | 7      | ♊    | 16 01 |
| 10      | ♈    | 11 49 | 8        | ♉    | 3 17  | 9      | ♊    | 20 36 |
| 12      | ♈    | 20 23 | 11       | ♉    | 9 43  | 11     | ♊    | 22 39 |
| 14      | ♈    | 01 16 | 13       | ♉    | 12 50 | 13     | ♊    | 23 02 |
| 16      | ♈    | 02 47 | 15       | ♉    | 13 18 | 15     | ♊    | 23 28 |
| 18      | ♈    | 2 22  | 17       | ♉    | 12 41 | 17     | ♊    | 01 56 |
| 20      | ♈    | 1 55  | 19       | ♉    | 13 03 | 20     | ♊    | 8 05  |
| 22      | ♈    | 3 28  | 21       | ♉    | 16 26 | 22     | ♊    | 18 14 |
| 25      | ♈    | 8 28  | 23       | ♉    | 23 56 | 25     | ♊    | 6 48  |
| 27      | ♈    | 17 17 | 26       | ♉    | 11 06 | 27     | ♊    | 19 19 |
| 29      | ♈    | 4 57  | 28       | ♉    | 23 59 | 30     | ♊    | 6 05  |
|         |      |       | 31       | ♉    | 12 31 |        |      |       |



चन्द्र का राशि प्रवेशकाल 2016  
Time when the Moon enters the Zodiacal Signs in 2016

| JULY           |              |             | AUGUST         |              |             | SEPTEMBER      |              |             |
|----------------|--------------|-------------|----------------|--------------|-------------|----------------|--------------|-------------|
| दिनांक<br>Date | राशि<br>Sign | समय<br>Time | दिनांक<br>Date | राशि<br>Sign | समय<br>Time | दिनांक<br>Date | राशि<br>Sign | समय<br>Time |
|                |              | H. M.       |                |              | H. M.       |                |              | H. M.       |
| 1              | ♊            | 14 43       | 2              | ♋            | 7 53        | 2              | ♌            | 8 06        |
| 3              | ♋            | 21 26       | 4              | ♌            | 11 06       | 4              | ♍            | 20 52       |
| 5              | ♌            | 2 24        | 6              | ♍            | 13 48       | 7              | ♎            | 9 01        |
| 8              | ♌            | 5 38        | 8              | ♍            | 16 34       | 9              | ♏            | 19 38       |
| 10             | ♍            | 7 30        | 10             | ♎            | 20 17       | 11             | ♏            | 4 29        |
| 12             | ♍            | 8 59        | 12             | ♏            | 2 07        | 14             | ♐            | 11 18       |
| 14             | ♎            | 11 41       | 15             | ♏            | 10 54       | 16             | ♑            | 16 45       |
| 16             | ♏            | 17 12       | 17             | ♐            | 22 25       | 18             | ♑            | 17 56       |
| 18             | ♏            | 2 23        | 20             | ♑            | 11 02       | 20             | ♒            | 18 44       |
| 21             | ♐            | 14 24       | 22             | ♑            | 22 20       | 22             | ♒            | 19 47       |
| 23             | ♑            | 2 57        | 25             | ♒            | 6 39        | 24             | ♓            | 22 55       |
| 26             | ♑            | 13 46       | 27             | ♒            | 11 53       | 26             | ♓            | 5 33        |
| 28             | ♒            | 21 54       | 29             | ♓            | 14 54       | 29             | ♓            | 15 51       |
| 30             | ♒            | 3 42        | 31             | ♓            | 16 58       |                |              |             |
| OCTOBER        |              |             | NOVEMBER       |              |             | DECEMBER       |              |             |
| दिनांक<br>Date | राशि<br>Sign | समय<br>Time | दिनांक<br>Date | राशि<br>Sign | समय<br>Time | दिनांक<br>Date | राशि<br>Sign | समय<br>Time |
|                |              | H. M.       |                |              | H. M.       |                |              | H. M.       |
| 1              | ♓            | 3 03        | 2              | ♈            | 21 32       | 2              | ♈            | 13 31       |
| 3              | ♓            | 8 36        | 5              | ♈            | 7 38        | 4              | ♉            | 1 34        |
| 5              | ♈            | 16 00       | 7              | ♉            | 19 35       | 7              | ♊            | 14 20       |
| 7              | ♈            | 1 46        | 10             | ♊            | 8 15        | 9              | ♋            | 2 37        |
| 10             | ♉            | 13 19       | 12             | ♋            | 20 46       | 12             | ♌            | 13 46       |
| 12             | ♊            | 1 57        | 15             | ♌            | 8 01        | 14             | ♍            | 23 03       |
| 15             | ♋            | 14 25       | 17             | ♍            | 16 33       | 16             | ♎            | 5 27        |
| 17             | ♌            | 0 55        | 19             | ♎            | 21 18       | 19             | ♏            | 8 29        |
| 20             | ♍            | 7 52        | 21             | ♏            | 22 30       | 21             | ♐            | 8 51        |
| 22             | ♎            | 10 57       | 23             | ♐            | 21 39       | 23             | ♑            | 8 14        |
| 24             | ♏            | 11 14       | 25             | ♑            | 20 56       | 25             | ♒            | 8 51        |
| 26             | ♐            | 10 36       | 27             | ♒            | 22 32       | 27             | ♓            | 12 40       |
| 28             | ♑            | 11 07       | 29             | ♓            | 4 02        | 29             | ♓            | 20 40       |
| 30             | ♒            | 14 31       |                |              |             |                |              |             |

2016 के सूर्य-ग्रहण  
SOLAR ECLIPSE IN 2016

There will be two solar eclipses in the year 2016. The Total eclipse of the sun will occur on 9 March Wednesday is visible in India and Annual eclipse of the sun will occur on 15 September Thursday is not visible in India.

वर्ष 2016 में दो सूर्यग्रहण होंगे दिनांक 9 मार्च बुधवार को खग्रास ग्रहण भारत वर्ष में दृश्य होगा और दिनांक 15 सितम्बर गुरुवार को होने वाला कंकणाकृति ग्रहण भारत वर्ष में दृश्य नहीं होगा।  
Circumstances of the Annular Eclipse of the Sun March 8-9, Tuesday-Wednesday.  
(Indian Standard Time)

|                       |         | D | H. | M.   |
|-----------------------|---------|---|----|------|
| Eclipse begin         | स्पर्श  | 9 | 4  | 49.4 |
| Central eclipse begin | सम्मीलन | 9 | 5  | 46.7 |
| Greatest Eclipse      | मध्य    | 9 | 7  | 27.1 |
| Central eclipse ends  | उन्मीलन | 9 | 9  | 07.6 |
| Eclipse ends          | मोक्ष   | 9 | 10 | 04.9 |

\* Magnitude of the eclipse. 1.044

Circumstances of the Annular eclipse of the sun 1 September Thursday.  
(Indian - Standard Time)

|                       |         | D | H. | M.   |
|-----------------------|---------|---|----|------|
| Eclipse begin         | स्पर्श  | 1 | 11 | 42.9 |
| Central eclipse begin | सम्मीलन | 1 | 12 | 48.8 |
| Greatest Eclipse      | मध्य    | 1 | 14 | 36.5 |
| Central eclipse ends  | उन्मीलन | 1 | 16 | 24.1 |
| Eclipse ends          | मोक्ष   | 1 | 17 | 30.2 |

Transit of mercury - 2016

बुध का पारगमन - 2016

There will be occur one transit of mercury on 9-10 may monday is visible in India. दिनांक 9-10 मई सोमवार को बुध का पारगमन भारत वर्ष में दृश्य होगा।  
(Indian - Standard Time)

|                       |         | D  | H. | M. | S    |
|-----------------------|---------|----|----|----|------|
| Eclipse begin         | स्पर्श  | 9  | 16 | 42 | 18.5 |
| Central eclipse begin | सम्मीलन | 9  | 16 | 45 | 30.3 |
| Greatest Eclipse      | मध्य    | 9  | 20 | 27 | 25.3 |
| Central eclipse ends  | उन्मीलन | 10 | 00 | 09 | 11.3 |
| Eclipse ends          | मोक्ष   | 10 | 00 | 12 | 22.7 |

| Place  | स्पर्श     | सम्मीलन    | Sunset |
|--------|------------|------------|--------|
|        | H M S      | H M S      |        |
| Ujjain | 16 40 42.8 | 16 43 54.4 | 18-59  |



### प्रतिछाया चन्द्र ग्रहण Penumbra Lunar Eclipse

There will be three Penumbra lunar Eclipse in the moon in the year 2016. The Penumbra eclipse of the Moon will occur on March 23, 2016. Wednesday and 18 August Thursday, September 16, 2016 Friday.

वर्ष 2016 में तीन प्रतिछाया चन्द्रग्रहण होंगे, दिनांक 23 मार्च 2016, बुधवार और दिनांक 18 अगस्त 2016 गुरुवार, 16 सितम्बर 2016 शुक्रवार को होंगे।

Penumbra Eclipse of the moon March 23, 2016 Wednesday (circumstancer of the eclipse) (Indian Standard Time)

|                       |        | D  | H. | M.   |
|-----------------------|--------|----|----|------|
| Moon enters Penumbra  | स्पर्श | 23 | 15 | 07.0 |
| Middle of the Eclipse | मध्य   | 23 | 17 | 17.2 |
| Moon leaver Penumbra  | मोक्ष  | 23 | 19 | 27.4 |

Penumbra magnitude of eclipse : 0.801

Penumbra eclipse of the moon. 18 August, 2016. Thursday.  
(circumstancer of the eclipse) (Indian Standard Time)

|                       |        | D  | H. | M.   |
|-----------------------|--------|----|----|------|
| Moon enters Penumbra  | स्पर्श | 18 | 14 | 54.4 |
| Middle of the Eclipse | मध्य   | 18 | 15 | 12.5 |
| Moon leaver Penumbra  | मोक्ष  | 18 | 15 | 31.0 |

Penumbra magnitude of eclipse : 0.017

Penumbra eclipse of the moon. 16 September, 2016. Friday.  
(circumstancer of the eclipse) (Indian Standard Time)

|                       |        | D  | H. | M.   |
|-----------------------|--------|----|----|------|
| Moon enters Penumbra  | स्पर्श | 16 | 22 | 22.7 |
| Middle of the Eclipse | मध्य   | 17 | 00 | 24.3 |
| Moon leaver Penumbra  | मोक्ष  | 17 | 02 | 26.0 |

Penumbra magnitude of eclipse : 0.933

Note :- A Penumbra eclipse of the moon is not to be taken as an eclipse of the moon in the ordinary sense, as the moon is not covered by the real shadow of the earth during such an eclipse.

### चन्द्र से ग्रहों का योगकाल, 2016 Timings of Lunar Aspects in 2016

| दिनांक<br>Date | योग<br>Aspects | समय<br>Time<br>H. M. | दिनांक<br>Date | योग<br>Aspects | समय<br>Time<br>H. M. | दिनांक<br>Date | योग<br>Aspects | समय<br>Time<br>H. M. |
|----------------|----------------|----------------------|----------------|----------------|----------------------|----------------|----------------|----------------------|
| JANUARY        |                |                      |                |                |                      |                |                |                      |
|                |                |                      |                |                |                      |                |                |                      |
| 1              | ☾ ☐            | 4 49                 |                | ☾ ☐            | 11 19                | 24             | ☾ ☐            | 8 0 37               |
|                | ☾ ☒            | 10 57                |                |                |                      |                | ☾ ☐            | 9 56                 |
|                | ☾ ☐            | 21 28                | 13             | ☾ ☐            | 7 45                 |                | ☾ ☐            | 15 24                |
|                |                |                      |                | ☾ ☐            | 12 15                |                | ☾ ☐            | 19 51                |
| 2              | ☾ ☐            | 4 23                 |                | ☾ ☐            | 20 07                |                | ☾ ☐            | 22 44                |
|                | ☾ ☒            | 5 00                 | 14             | ☾ ☐            | 3 18                 |                |                |                      |
|                | ☾ ☐            | 15 46                |                | ☾ ☐            | 5 20                 | 25             | ☾ ☐            | 2 17                 |
|                |                |                      |                | ☾ ☐            | 8 57                 |                | ☾ ☐            | 14 30                |
| 3              | ☾ ☐            | 5 14                 |                | ☾ ☐            | 8 14 37              |                |                |                      |
|                | ☾ ☐            | 19 00                |                |                |                      | 26             | ☾ ☐            | 8 24                 |
|                | ☾ ☐            | 20 32                | 15             | ☾ ☐            | 12 37                |                | ☾ ☐            | 10 16                |
|                |                |                      |                | ☾ ☐            | 15 17                |                | ☾ ☐            | 18 54                |
| 4              | ☾ ☐            | 6 11                 |                | ☾ ☐            | 23 21                |                |                |                      |
|                | ☾ ☐            | 9 54                 |                |                |                      | 27             | ☾ ☐            | 3 24                 |
|                | ☾ ☐            | 17 37                | 16             | ☾ ☐            | 6 18                 |                | ☾ ☐            | 5 41                 |
|                | ☾ ☐            | 21 58                |                | ☾ ☐            | 13 07                |                | ☾ ☐            | 8 14                 |
| 5              | ☾ ☐            | 3 44                 |                | ☾ ☐            | 14 56                |                | ☾ ☐            | 12 04                |
|                | ☾ ☐            | 16 52                |                | ☾ ☐            | 17 09                |                |                |                      |
|                |                |                      |                | ☾ ☐            | 21 56                |                |                |                      |
|                |                |                      |                |                |                      | 28             | ☾ ☐            | 1 35                 |
| 6              | ☾ ☐            | 7 47                 | 17             | ☾ ☐            | 8 17 37              |                |                |                      |
|                | ☾ ☐            | 8 40                 |                | ☾ ☐            | 18 23                |                |                |                      |
|                | ☾ ☐            | 20 40                |                |                |                      |                |                |                      |
|                | ☾ ☐            | 23 35                | 18             | ☾ ☐            | 2 50                 | 29             | ☾ ☐            | 3 21                 |
|                |                |                      |                | ☾ ☐            | 9 30                 |                | ☾ ☐            | 7 23                 |
| 7              | ☾ ☐            | 4 36                 |                | ☾ ☐            | 13 34                |                | ☾ ☐            | 7 52                 |
|                | ☾ ☐            | 13 27                |                | ☾ ☐            | 20 13                |                | ☾ ☐            | 18 12                |
|                | ☾ ☐            | 13 49                |                | ☾ ☐            | 21 11                |                | ☾ ☐            | 19 05                |
|                |                |                      |                |                |                      |                | ☾ ☐            | 22 15                |
| 8              | ☾ ☐            | 1 48                 | 19             | ☾ ☐            | 5 40                 |                |                |                      |
|                | ☾ ☐            | 14 48                |                | ☾ ☐            | 22 41                | 30             | ☾ ☐            | 1 00                 |
|                | ☾ ☐            | 19 03                |                | ☾ ☐            | 23 51                |                |                |                      |
|                |                |                      |                |                |                      |                | ☾ ☐            | 13 43                |
| 9              | ☾ ☐            | 4 27                 | 20             | ☾ ☐            | 8 7 16               |                |                |                      |
|                | ☾ ☐            | 12 03                |                | ☾ ☐            | 13 44                |                |                |                      |
|                | ☾ ☐            | 12 08                |                | ☾ ☐            | 14 19                | 31             | ☾ ☐            | 20 22                |
|                | ☾ ☐            | 20 17                |                |                |                      |                | ☾ ☐            | 22 54                |
|                |                |                      | 21             | ☾ ☐            | 2 15                 |                |                |                      |
| 10             | ☾ ☐            | 0 11                 |                | ☾ ☐            | 8 6 47               |                |                |                      |
|                | ☾ ☐            | 7 47                 |                |                |                      |                |                |                      |
|                | ☾ ☐            | 17 21                | 22             | ☾ ☐            | 3 11                 |                |                |                      |
|                |                |                      |                | ☾ ☐            | 6 17                 |                |                |                      |
| 11             | ☾ ☐            | 2 34                 |                | ☾ ☐            | 12 19                |                |                |                      |
|                | ☾ ☐            | 9 14                 |                | ☾ ☐            | 18 29                |                |                |                      |
|                | ☾ ☐            | 17 00                |                | ☾ ☐            | 18 41                |                |                |                      |
|                | ☾ ☐            | 21 55                |                |                |                      |                |                |                      |
|                |                |                      | 23             | ☾ ☐            | 7 21                 |                |                |                      |
| 12             | ☾ ☐            | 0 17                 |                | ☾ ☐            | 17 34                |                |                |                      |
|                | ☾ ☐            | 7 30                 |                | ☾ ☐            | 23 54                |                |                |                      |



चन्द्र से ग्रहों का योगकाल, 2016  
Timings of Lunar Aspects in 2016

| दिनांक<br>Date | योग<br>Aspects | समय<br>Time<br>H. M. | दिनांक<br>Date | योग<br>Aspects | समय<br>Time<br>H. M. | दिनांक<br>Date | योग<br>Aspects | समय<br>Time<br>H. M. |
|----------------|----------------|----------------------|----------------|----------------|----------------------|----------------|----------------|----------------------|
| FEBRUARY       |                |                      |                |                |                      |                |                |                      |
| 1              | ☉ □            | 1 58                 |                | ♂ ∇            | 23 40                |                | ♂ ∇            | 23 54                |
|                | ♂ ∇            | 7 22                 |                |                |                      |                |                |                      |
|                | ♂ ∇            | 9 09                 | 12             | ♂ ∇            | 9 46                 | 23             | ♂ ∇            | 4 39                 |
|                | ♂ ∇            | 13 17                |                | ♂ ∇            | 13 59                |                | ♂ ∇            | 11 12                |
|                | ♂ ∇            | 13 32                |                | ♂ ∇            | 18 59                |                | ♂ ∇            | 17 01                |
|                | ♂ ∇            | 23 27                |                | ♂ ∇            | 20 14                |                | ♂ ∇            | 21 39                |
|                |                |                      |                | ♂ ∇            | 23 47                |                |                |                      |
| 3              | ♂ ∇            | 7 28                 |                |                |                      | 24             | ♂ ∇            | 1 52                 |
|                | ♂ ∇            | 16 18                | 13             | ♂ ∇            | 4 08                 |                | ♂ ∇            | 13 09                |
|                | ♂ ∇            | 16 20                |                | ♂ ∇            | 9 09                 |                |                |                      |
|                | ♂ ∇            | 18 48                |                |                |                      | 25             | ♂ ∇            | 10 13                |
|                | ♂ ∇            | 22 38                | 14             | ♂ ∇            | 1 45                 |                | ♂ ∇            | 17 07                |
|                |                |                      |                | ♂ ∇            | 12 07                |                | ♂ ∇            | 19 00                |
| 4              | ♂ ∇            | 0 07                 |                | ♂ ∇            | 16 19                |                |                |                      |
|                | ♂ ∇            | 3 53                 |                | ♂ ∇            | 22 12                | 26             | ♂ ∇            | 5 55                 |
|                | ♂ ∇            | 9 23                 |                | ♂ ∇            | 22 56                |                | ♂ ∇            | 8 13                 |
|                |                |                      |                |                |                      |                | ♂ ∇            | 10 41                |
| 5              | ♂ ∇            | 15 42                | 15             | ♂ ∇            | 6 43                 |                | ♂ ∇            | 14 00                |
|                |                |                      |                | ♂ ∇            | 10 23                |                |                |                      |
|                |                |                      |                | ♂ ∇            | 17 29                |                |                |                      |
| 6              | ♂ ∇            | 1 57                 |                |                |                      | 27             | ♂ ∇            | 4 24                 |
|                | ♂ ∇            | 4 57                 | 16             | ♂ ∇            | 5 37                 |                | ♂ ∇            |                      |
|                | ♂ ∇            | 5 47                 |                | ♂ ∇            | 8 16                 | 28             | ♂ ∇            | 4 41                 |
|                | ♂ ∇            | 6 58                 |                | ♂ ∇            | 20 41                |                |                |                      |
|                | ♂ ∇            | 7 16                 |                |                |                      |                |                |                      |
|                | ♂ ∇            | 14 27                | 17             | ♂ ∇            | 2 25                 |                | ♂ ∇            | 6 02                 |
|                | ♂ ∇            | 15 14                |                | ♂ ∇            | 5 25                 |                | ♂ ∇            | 15 02                |
|                |                |                      |                | ♂ ∇            | 15 18                |                |                |                      |
| 7              | ♂ ∇            | 19 49                |                | ♂ ∇            | 19 26                |                | ♂ ∇            | 19 04                |
|                |                |                      |                |                |                      |                |                |                      |
| 8              | ♂ ∇            | 5 55                 | 18             | ♂ ∇            | 3 56                 |                | ♂ ∇            | 23 52                |
|                | ♂ ∇            | 10 32                |                | ♂ ∇            | 10 55                |                |                |                      |
|                | ♂ ∇            | 12 30                |                | ♂ ∇            | 22 09                |                |                |                      |
|                | ♂ ∇            | 13 15                |                |                |                      | 29             | ♂ ∇            | 6 02                 |
|                | ♂ ∇            | 13 26                | 19             | ♂ ∇            | 3 06                 |                | ♂ ∇            | 12 58                |
|                | ♂ ∇            | 17 55                |                | ♂ ∇            | 8 21                 |                |                |                      |
|                | ♂ ∇            | 21 31                |                | ♂ ∇            | 13 22                |                | ♂ ∇            | 21 39                |
|                |                |                      |                |                |                      |                |                |                      |
| 9              | ♂ ∇            | 22 18                | 20             | ♂ ∇            | 3 03                 |                |                |                      |
|                |                |                      |                | ♂ ∇            | 8 33                 |                |                |                      |
| 10             | ♂ ∇            | 8 10                 |                | ♂ ∇            | 17 59                |                |                |                      |
|                | ♂ ∇            | 12 30                |                | ♂ ∇            | 18 47                |                |                |                      |
|                | ♂ ∇            | 15 59                |                |                |                      |                |                |                      |
|                | ♂ ∇            | 18 44                | 21             | ♂ ∇            | 6 51                 |                |                |                      |
|                | ♂ ∇            | 19 13                |                | ♂ ∇            | 11 22                |                |                |                      |
|                | ♂ ∇            | 19 49                |                | ♂ ∇            | 15 59                |                |                |                      |
|                |                |                      |                | ♂ ∇            | 24 00                |                |                |                      |
| 11             | ♂ ∇            | 3 07                 | 22             | ♂ ∇            | 16 54                |                |                |                      |

चन्द्र से ग्रहों का योगकाल, 2016  
Timings of Lunar Aspects in 2016

| दिनांक<br>Date | योग<br>Aspects | समय<br>Time<br>H. M. | दिनांक<br>Date | योग<br>Aspects | समय<br>Time<br>H. M. | दिनांक<br>Date | योग<br>Aspects | समय<br>Time<br>H. M. |
|----------------|----------------|----------------------|----------------|----------------|----------------------|----------------|----------------|----------------------|
| MARCH          |                |                      |                |                |                      |                |                |                      |
| 1              | ♂ ∇            | 2 28                 |                | ♂ ∇            | 14 25                | 24             | ♂ ∇            | 1 50                 |
|                | ♂ ∇            | 17 44                |                | ♂ ∇            | 21 25                |                | ♂ ∇            | 10 14                |
|                |                |                      |                | ♂ ∇            | 23 48                |                | ♂ ∇            | 13 46                |
| 2              | ♂ ∇            | 6 19                 |                | ♂ ∇            | 8 51                 |                | ♂ ∇            | 13 59                |
|                | ♂ ∇            | 8 51                 | 13             | ♂ ∇            | 3 31                 |                | ♂ ∇            | 20 16                |
|                | ♂ ∇            | 10 57                |                | ♂ ∇            | 8 24                 |                |                |                      |
|                | ♂ ∇            | 12 29                |                | ♂ ∇            | 22 44                |                |                |                      |
|                |                |                      |                | ♂ ∇            | 24 00                | 26             | ♂ ∇            | 5 11                 |
| 3              | ♂ ∇            | 7 04                 |                |                |                      |                | ♂ ∇            | 5 56                 |
|                |                |                      | 14             | ♂ ∇            | 8 0 47               |                | ♂ ∇            | 10 35                |
| 4              | ♂ ∇            | 2 55                 |                | ♂ ∇            | 13 09                |                | ♂ ∇            | 14 46                |
|                | ♂ ∇            | 10 57                |                | ♂ ∇            | 23 40                |                |                |                      |
|                | ♂ ∇            | 14 33                |                |                |                      | 27             | ♂ ∇            | 2 01                 |
|                | ♂ ∇            | 18 56                | 15             | ♂ ∇            | 8 0 13               |                | ♂ ∇            | 2 49                 |
|                | ♂ ∇            | 19 35                |                | ♂ ∇            | 2 14                 |                | ♂ ∇            | 8 58                 |
|                | ♂ ∇            | 22 33                |                | ♂ ∇            | 5 01                 |                | ♂ ∇            | 9 46                 |
|                |                |                      |                | ♂ ∇            | 15 54                |                |                |                      |
| 5              | ♂ ∇            | 15 37                |                |                |                      |                |                |                      |
|                |                |                      | 16             | ♂ ∇            | 6 18                 | 28             | ♂ ∇            | 1 35                 |
| 6              | ♂ ∇            | 8 07                 |                | ♂ ∇            | 8 24                 |                | ♂ ∇            | 18 58                |
|                | ♂ ∇            | 19 02                |                | ♂ ∇            | 16 55                |                |                |                      |
|                | ♂ ∇            | 19 34                |                |                |                      |                |                |                      |
|                | ♂ ∇            | 23 11                | 17             | ♂ ∇            | 5 41                 | 29             | ♂ ∇            | 0 30                 |
|                | ♂ ∇            | 23 12                |                | ♂ ∇            | 7 13                 |                | ♂ ∇            | 2 46                 |
|                |                |                      |                | ♂ ∇            | 10 38                |                |                |                      |
|                |                |                      |                | ♂ ∇            | 14 15                |                |                |                      |
| 7              | ♂ ∇            | 7 13                 |                |                |                      |                | ♂ ∇            | 10 40                |
|                | ♂ ∇            | 19 20                | 18             | ♂ ∇            | 15 02                |                | ♂ ∇            | 12 59                |
|                |                |                      |                | ♂ ∇            | 19 54                |                | ♂ ∇            | 14 21                |
| 8              | ♂ ∇            | 0 51                 |                |                |                      |                | ♂ ∇            | 21 03                |
|                | ♂ ∇            | 10 23                | 19             | ♂ ∇            | 2 37                 |                |                |                      |
|                | ♂ ∇            | 20 52                |                | ♂ ∇            | 14 20                | 30             | ♂ ∇            | 0 12                 |
|                |                |                      |                | ♂ ∇            | 15 18                |                |                |                      |
| 9              | ♂ ∇            | 0 07                 |                | ♂ ∇            | 19 47                | 31             | ♂ ∇            | 6 02                 |
|                | ♂ ∇            | 0 44                 |                |                |                      |                |                |                      |
|                | ♂ ∇            | 0 45                 | 20             | ♂ ∇            | 5 36                 |                | ♂ ∇            | 10 50                |
|                | ♂ ∇            | 12 49                |                | ♂ ∇            | 10 43                |                | ♂ ∇            | 12 28                |
|                |                |                      |                |                |                      |                |                |                      |
| 10             | ♂ ∇            | 0 05                 | 21             | ♂ ∇            | 1 41                 |                |                |                      |
|                | ♂ ∇            | 7 14                 |                | ♂ ∇            | 8 13 02              |                | ♂ ∇            | 23 09                |
|                | ♂ ∇            | 10 28                |                | ♂ ∇            | 8 14 39              |                |                |                      |
|                | ♂ ∇            | 20 28                |                |                |                      |                | ♂ ∇            | 23 52                |
|                |                |                      |                |                |                      |                |                |                      |
| 11             | ♂ ∇            | 0 54                 | 22             | ♂ ∇            | 1 38                 |                |                |                      |
|                | ♂ ∇            | 4 13                 |                | ♂ ∇            | 2 02                 |                |                |                      |
|                | ♂ ∇            | 17 20                |                | ♂ ∇            | 7 36                 |                |                |                      |
|                | ♂ ∇            | 22 27                | 23             | ♂ ∇            | 8 9 33               |                |                |                      |
|                |                |                      |                | ♂ ∇            | 10 59                |                |                |                      |
| 12             | ♂ ∇            | 11 13                |                | ♂ ∇            | 15 49                |                |                |                      |



चन्द्र से ग्रहों का योगकाल, 2016  
Timings of Lunar Aspects in 2016

| दिनांक<br>Date | योग<br>Aspects | समय<br>Time<br>H. M. | दिनांक<br>Date | योग<br>Aspects | समय<br>Time<br>H. M. | दिनांक<br>Date | योग<br>Aspects | समय<br>Time<br>H. M. |
|----------------|----------------|----------------------|----------------|----------------|----------------------|----------------|----------------|----------------------|
| APRIL          |                |                      |                |                |                      |                |                |                      |
| 1              | ॥ □            | 6 02                 |                | ॥ 8            | 7 48                 | 23             | ५ ×            | 3 25                 |
|                | ॥ □            | 6 48                 |                | ॥ ×            | 15 05                |                | ॥ ∇            | 7 36                 |
|                | ॥ ×            | 15 03                |                | ○ ×            | 17 32                |                | ॥ ∇            | 18 43                |
|                |                |                      |                |                |                      |                | ॥ 8            | 20 30                |
| 2              | ॥ ×            | 5 43                 | 12             | ○ ∇            | 21 03                |                | ॥ 8            | 20 59                |
|                | ○ ×            | 14 22                |                | ॥ □            | 22 45                |                |                |                      |
|                | ॥ ∇            | 20 04                |                |                |                      | 24             | ○ ∇            | 18 49                |
|                |                |                      | 13             | ॥ ∇            | 2 56                 |                |                |                      |
| 3              | ○ ×            | 0 12                 |                | ॥ ×            | 3 56                 | 25             | ○ 8            | 4 46                 |
|                | ५ ∇            | 3 44                 |                | ५ ×            | 8 38                 |                | ५ □            | 10 46                |
|                | ॥ ×            | 12 16                |                | ॥ ∇            | 11 48                |                | ५ □            | 14 47                |
|                | ॥ ×            | 22 00                |                | ॥ □            | 19 47                |                | ॥ 8            | 18 56                |
|                | ॥ ∇            | 24 00                | 14             | ○ □            | 3 01                 |                |                |                      |
|                |                |                      |                |                |                      | 26             | ॥ ∇            | 6 08                 |
| 4              | ○ □            | 18 06                | 15             | ○ ∇            | 4 26                 |                | ॥ ∇            | 9 55                 |
|                | ५ 8            | 22 55                |                | ॥ ∇            | 6 30                 |                | ॥ ∇            | 14 14                |
|                |                |                      |                | ५ ∇            | 10 12                |                |                |                      |
| 5              | ५ 8            | 5 45                 |                | ५ ∇            | 15 50                | 27             | ○ ∇            | 13 33                |
|                | ○ ∇            | 6 53                 |                | ॥ □            | 18 01                |                | ○ ∇            | 15 07                |
|                | ॥ □            | 7 56                 |                | ॥ ∇            | 19 23                |                | ५ ×            | 21 16                |
|                | ॥ ∇            | 14 19                |                |                |                      |                |                |                      |
|                |                |                      | 16             | ॥ ∇            | 4 44                 | 28             | ५ ∇            | 0 58                 |
| 6              | ५ ∇            | 0 59                 |                | ○ ∇            | 16 22                |                | ॥ □            | 4 54                 |
|                | ॥ ∇            | 5 55                 |                |                |                      |                | ॥ □            | 16 21                |
|                | ॥ 8            | 6 31                 | 17             | ○ □            | 16 02                |                | ॥ ∇            | 20 22                |
|                | ○ ∇            | 18 48                |                | ५ 8            | 20 30                |                |                |                      |
|                |                |                      |                |                |                      |                |                |                      |
| 7              | ५ ∇            | 5 19                 | 18             | ५ 8            | 2 32                 | 29             | ॥ □            | 5 25                 |
|                | ॥ ∇            | 7 37                 |                | ॥ ∇            | 4 56                 |                | ○ ×            | 22 25                |
|                | ○ 8            | 10 01                |                | ॥ □            | 6 33                 |                |                |                      |
|                | ॥ 8            | 14 01                |                | ॥ ∇            | 11 29                |                |                |                      |
|                |                |                      |                | ॥ ∇            | 16 45                | 30             | ○ □            | 1 53                 |
| 8              | ॥ ∇            | 10 09                |                |                |                      |                | ५ ∇            | 4 48                 |
|                | ॥ 8            | 11 58                | 19             | ○ ∇            | 14 01                |                | ५ ∇            | 8 14                 |
|                | ○ ∇            | 18 35                |                |                |                      |                | ॥ ×            | 11 55                |
|                | ५ ×            | 22 32                | 20             | ○ ×            | 4 50                 |                | ॥ ×            | 23 17                |
|                |                |                      |                | ५ ∇            | 9 42                 |                |                |                      |
| 9              | ५ ∇            | 4 40                 |                | ५ ∇            | 14 51                |                |                |                      |
|                | ॥ ∇            | 6 58                 |                | ॥ ×            | 19 00                |                |                |                      |
|                | ○ ∇            | 12 44                |                | ॥ 8            | 24 00                |                |                |                      |
|                | ॥ ∇            | 13 37                |                |                |                      |                |                |                      |
|                |                |                      | 21             | ॥ 8            | 4 22                 |                |                |                      |
| 10             | ॥ ×            | 14 46                |                | ॥ ∇            | 4 56                 |                |                |                      |
|                | ॥ ∇            | 18 47                |                |                |                      |                |                |                      |
|                | ○ 8            | 19 23                | 22             | ○ 8            | 4 15                 |                |                |                      |
|                | ५ □            | 23 16                |                | ○ ∇            | 17 32                |                |                |                      |
|                |                |                      |                | ५ ∇            | 22 41                |                |                |                      |
| 11             | ५ □            | 5 08                 |                |                |                      |                |                |                      |

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| दिनांक<br>Date | योग<br>Aspects | समय<br>Time<br>H. M. | दिनांक<br>Date | योग<br>Aspects | समय<br>Time<br>H. M. | दिनांक<br>Date | योग<br>Aspects | समय<br>Time<br>H. M. |
|----------------|----------------|----------------------|----------------|----------------|----------------------|----------------|----------------|----------------------|
| MAY            |                |                      |                |                |                      |                |                |                      |
|                |                |                      |                |                |                      |                |                |                      |
| 1              | ॥ □            | 2 08                 |                | ५ ×            | 15 27                |                | ○ 8            | 21 43                |
|                | ॥ □            | 17 03                |                | ॥ ∇            | 18 06                |                |                |                      |
|                |                |                      |                |                |                      | 22             | ५ □            | 17 24                |
|                |                |                      | 11             | ॥ ×            | 00 47                |                | ५ □            | 20 36                |
| 2              | ○ □            | 2 28                 |                | ○ ×            | 4 22                 |                | ॥ 8            | 21 31                |
|                | ५ 8            | 9 21                 |                | ॥ □            | 7 00                 |                | ॥ ∇            | 22 12                |
|                | ○ ×            | 10 29                |                |                |                      |                |                |                      |
|                | ५ 8            | 12 22                | 12             | ○ ∇            | 6 13                 | 23             | ॥ ∇            | 14 46                |
|                |                |                      |                | ५ ∇            | 18 02                |                |                |                      |
| 3              | ॥ ∇            | 2 30                 |                | ५ ∇            | 20 46                | 24             | ॥ ∇            | 3 32                 |
|                | ॥ ×            | 4 22                 |                | ॥ ∇            | 23 15                |                | ○ ∇            | 7 04                 |
|                | ॥ ×            | 23 56                |                |                |                      |                | ○ ∇            | 12 32                |
|                |                |                      | 13             | ॥ □            | 2 02                 | 25             | ५ ×            | 3 39                 |
| 4              | ॥ ∇            | 0 00                 |                | ॥ □            | 5 06                 |                | ५ ∇            | 6 53                 |
|                | ○ ∇            | 4 02                 |                | ॥ ∇            | 14 23                |                | ॥ ∇            | 7 12                 |
|                | ५ ∇            | 11 13                |                | ○ □            | 15 54                |                | ॥ ∇            | 8 52                 |
|                | ५ ∇            | 13 59                |                |                |                      |                |                |                      |
|                | ○ ∇            | 15 44                | 14             | ○ □            | 13 46                | 26             | ○ ×            | 14 38                |
|                | ॥ 8            | 17 01                |                |                |                      |                | ॥ ∇            | 18 52                |
|                |                |                      | 15             | ५ 8            | 5 48                 |                | ॥ □            | 23 31                |
|                |                |                      |                | ५ 8            | 7 08                 |                |                |                      |
| 5              | ॥ 8            | 3 22                 |                | ॥ □            | 9 30                 | 27             | ○ ∇            | 0 00                 |
|                | ॥ 8            | 3 40                 |                | ॥ ∇            | 12 49                |                | ५ ∇            | 11 31                |
|                |                |                      |                |                |                      |                | ॥ ×            | 14 34                |
| 6              | ○ ∇            | 2 56                 | 16             | ॥ ∇            | 1 38                 |                | ५ ∇            | 14 46                |
|                | ॥ 8            | 3 40                 |                | ○ ∇            | 8 14                 |                | ॥ □            | 17 14                |
|                | ५ ×            | 10 36                |                |                |                      |                |                |                      |
|                | ५ ∇            | 13 11                | 17             | ○ ×            | 00 30                | 28             | ॥ ×            | 7 39                 |
|                | ॥ ∇            | 15 59                |                | ५ ∇            | 16 59                |                | ○ □            | 19 33                |
|                | ○ 8            | 18 09                |                | ५ ∇            | 20 05                |                |                |                      |
|                |                |                      |                | ॥ ×            | 22 01                | 29             | ॥ □            | 6 42                 |
| 7              | ॥ 8            | 1 31                 |                | ॥ ∇            | 23 46                |                | ○ □            | 10 58                |
|                | ॥ ∇            | 2 56                 |                |                |                      |                | ५ 8            | 17 34                |
|                |                |                      | 18             | ॥ 8            | 14 49                |                | ॥ □            | 20 14                |
| 8              | ॥ ∇            | 0 09                 |                | ॥ ∇            | 14 54                |                | ५ 8            | 20 56                |
|                | ○ ∇            | 2 01                 |                |                |                      |                |                |                      |
|                | ॥ ∇            | 7 48                 | 19             | ○ ∇            | 2 29                 | 30             | ॥ ×            | 1 33                 |
|                | ५ □            | 10 42                |                | ○ ∇            | 11 48                |                | ॥ ∇            | 12 20                |
|                | ५ □            | 13 18                |                |                |                      |                | ○ ∇            | 22 17                |
|                | ॥ 8            | 15 59                | 20             | ५ ∇            | 5 57                 |                |                |                      |
|                | ○ ∇            | 21 47                |                | ५ ×            | 9 08                 | 31             | ○ ×            | 6 05                 |
|                |                |                      |                | ॥ ∇            | 10 34                |                | ॥ ×            | 14 40                |
| 9              | ॥ ×            | 3 38                 |                | ॥ 8            | 11 24                |                | ५ ∇            | 20 29                |
|                |                |                      |                |                |                      |                | ॥ ∇            | 22 45                |
| 10             | ○ ∇            | 2 41                 | 21             | ॥ ∇            | 3 21                 |                | ५ ∇            | 24 00                |
|                | ५ ∇            | 12 49                |                | ॥ 8            | 9 56                 |                |                |                      |
|                | ॥ ×            | 14 38                |                | ○ 8            | 19 33                |                |                |                      |



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Timings of Lunar Aspects in 2016

| दिनांक<br>Date | योग<br>Aspects | समय<br>Time<br>H. M. | दिनांक<br>Date | योग<br>Aspects | समय<br>Time<br>H. M. | दिनांक<br>Date | योग<br>Aspects | समय<br>Time<br>H. M. |
|----------------|----------------|----------------------|----------------|----------------|----------------------|----------------|----------------|----------------------|
| JUNE           |                |                      |                |                |                      |                |                |                      |
| 1              | ☾ ☽            | 5 34                 |                | ☾ ☽            | 9 49                 |                | ☾ ☽            | 13 38                |
|                | ☾ ☽            | 14 57                |                | ☾ ☽            | 10 53                |                | ☾ ☽            | 14 56                |
|                | ☾ ☽            | 23 22                |                | ☾ ☽            | 13 58                |                | ☾ ☽            |                      |
| 2              | ☾ ☽            | 20 38                |                | ☾ ☽            | 22 38                | 25             | ☾ ☽            | 8 47                 |
|                | ☾ ☽            | 21 43                | 14             | ☾ ☽            | 0 21                 |                | ☾ ☽            | 18 38                |
|                | ☾ ☽            | 22 42                |                | ☾ ☽            | 6 32                 |                | ☾ ☽            | 22 16                |
|                | ☾ ☽            | 23 38                |                | ☾ ☽            | 23 02                |                | ☾ ☽            | 23 08                |
| 3              | ☾ ☽            | 00 54                | 15             | ☾ ☽            | 8 0 00               | 26             | ☾ ☽            | 6 53                 |
|                | ☾ ☽            | 9 09                 |                | ☾ ☽            | 0 49                 |                | ☾ ☽            | 18 09                |
|                | ☾ ☽            | 15 14                |                | ☾ ☽            | 1 52                 |                | ☾ ☽            | 18 30                |
|                | ☾ ☽            | 22 45                |                | ☾ ☽            | 5 47                 |                | ☾ ☽            | 20 05                |
| 4              | ☾ ☽            | 23 14                |                | ☾ ☽            | 20 25                | 27             | ☾ ☽            | 17 23                |
|                | ☾ ☽            | 8 24 00              | 16             | ☾ ☽            | 4 10                 | 28             | ☾ ☽            | 1 49                 |
|                | ☾ ☽            | 1 01                 |                | ☾ ☽            | 13 07                |                | ☾ ☽            | 2 48                 |
|                | ☾ ☽            | 1 09                 |                | ☾ ☽            | 13 22                |                | ☾ ☽            | 3 30                 |
|                | ☾ ☽            | 1 57                 | 17             | ☾ ☽            | 12 14                |                | ☾ ☽            | 10 44                |
|                | ☾ ☽            | 12 28                |                | ☾ ☽            | 12 56                |                | ☾ ☽            | 21 25                |
|                | ☾ ☽            | 16 04                |                | ☾ ☽            | 18 00                |                | ☾ ☽            | 23 08                |
|                | ☾ ☽            | 22 20                | 18             | ☾ ☽            | 00 44                | 29             | ☾ ☽            | 5 45                 |
| 6              | ☾ ☽            | 22 47                |                | ☾ ☽            | 8 16 56              |                | ☾ ☽            | 23 18                |
| 7              | ☾ ☽            | 0 23                 | 19             | ☾ ☽            | 0 14                 | 30             | ☾ ☽            | 3 57                 |
|                | ☾ ☽            | 3 23                 |                | ☾ ☽            | 0 17                 |                | ☾ ☽            | 5 08                 |
|                | ☾ ☽            | 7 20                 |                | ☾ ☽            | 7 13                 |                | ☾ ☽            | 10 35                |
|                | ☾ ☽            | 7 26                 |                | ☾ ☽            | 23 18                |                | ☾ ☽            | 13 29                |
|                | ☾ ☽            | 18 48                |                | ☾ ☽            | 23 28                |                | ☾ ☽            | 23 36                |
|                | ☾ ☽            | 23 50                | 20             | ☾ ☽            | 8 9 40               |                | ☾ ☽            |                      |
| 8              | ☾ ☽            | 18 48                |                | ☾ ☽            | 8 17 32              |                | ☾ ☽            |                      |
| 9              | ☾ ☽            | 2 58                 | 21             | ☾ ☽            | 9 40                 |                | ☾ ☽            |                      |
|                | ☾ ☽            | 4 51                 |                | ☾ ☽            | 10 02                |                | ☾ ☽            |                      |
|                | ☾ ☽            | 18 17                |                | ☾ ☽            | 11 51                |                | ☾ ☽            |                      |
|                | ☾ ☽            | 16 09                |                | ☾ ☽            | 17 20                |                | ☾ ☽            |                      |
|                | ☾ ☽            | 17 32                | 22             | ☾ ☽            | 7 29                 |                | ☾ ☽            |                      |
| 10             | ☾ ☽            | 00 55                |                | ☾ ☽            | 8 21                 |                | ☾ ☽            |                      |
|                | ☾ ☽            | 5 09                 |                | ☾ ☽            | 22 53                |                | ☾ ☽            |                      |
|                | ☾ ☽            | 6 01                 | 23             | ☾ ☽            | 7 05                 |                | ☾ ☽            |                      |
| 11             | ☾ ☽            | 12 10                |                | ☾ ☽            | 16 32                |                | ☾ ☽            |                      |
|                | ☾ ☽            | 13 07                |                | ☾ ☽            | 17 09                |                | ☾ ☽            |                      |
|                | ☾ ☽            | 17 36                | 24             | ☾ ☽            | 0 57                 |                | ☾ ☽            |                      |
| 12             | ☾ ☽            | 6 44                 |                | ☾ ☽            | 1 21                 |                | ☾ ☽            |                      |

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Timings of Lunar Aspects in 2016

| दिनांक<br>Date | योग<br>Aspects | समय<br>Time<br>H. M. | दिनांक<br>Date | योग<br>Aspects | समय<br>Time<br>H. M. | दिनांक<br>Date | योग<br>Aspects | समय<br>Time<br>H. M. |
|----------------|----------------|----------------------|----------------|----------------|----------------------|----------------|----------------|----------------------|
| JULY           |                |                      |                |                |                      |                |                |                      |
| 1              | ☾ ☽            | 1 22                 |                | ☾ ☽            | 21 19                |                | ☾ ☽            | 6 03                 |
|                | ☾ ☽            | 16 05                |                | ☾ ☽            | 14 44                |                | ☾ ☽            |                      |
|                | ☾ ☽            |                      | 13             | ☾ ☽            | 17 41                |                | ☾ ☽            |                      |
| 2              | ☾ ☽            | 4 15                 |                | ☾ ☽            | 20 15                |                | ☾ ☽            |                      |
|                | ☾ ☽            | 5 20                 |                | ☾ ☽            | 25 4 43              |                | ☾ ☽            |                      |
|                | ☾ ☽            | 6 41                 | 14             | ☾ ☽            | 10 49                |                | ☾ ☽            | 7 25                 |
|                | ☾ ☽            | 15 26                |                | ☾ ☽            | 17 46                |                | ☾ ☽            | 15 11                |
|                | ☾ ☽            | 16 37                |                | ☾ ☽            | 21 42                |                | ☾ ☽            | 23 20                |
| 3              | ☾ ☽            | 0 31                 |                | ☾ ☽            | 22 51                |                | ☾ ☽            |                      |
|                | ☾ ☽            |                      | 15             | ☾ ☽            | 13 21                | 26             | ☾ ☽            | 0 46                 |
| 4              | ☾ ☽            | 2 43                 |                | ☾ ☽            | 15 59                |                | ☾ ☽            | 5 20                 |
|                | ☾ ☽            | 6 59                 |                | ☾ ☽            | 21 39                |                | ☾ ☽            |                      |
|                | ☾ ☽            | 8 44                 | 16             | ☾ ☽            | 4 45                 |                | ☾ ☽            |                      |
|                | ☾ ☽            | 9 42                 |                | ☾ ☽            | 7 28                 | 27             | ☾ ☽            | 7 38                 |
|                | ☾ ☽            | 17 58                |                | ☾ ☽            | 22 34                |                | ☾ ☽            | 10 15                |
|                | ☾ ☽            | 23 26                |                | ☾ ☽            |                      |                | ☾ ☽            | 22 55                |
| 5              | ☾ ☽            | 4 07                 |                | ☾ ☽            | 8 07                 |                | ☾ ☽            |                      |
|                | ☾ ☽            | 5 55                 |                | ☾ ☽            | 9 10                 | 28             | ☾ ☽            | 2 45                 |
|                | ☾ ☽            |                      |                | ☾ ☽            | 9 13                 |                | ☾ ☽            | 8 05                 |
| 6              | ☾ ☽            | 11 02                | 18             | ☾ ☽            | 8 30                 |                | ☾ ☽            | 10 30                |
|                | ☾ ☽            | 12 50                |                | ☾ ☽            | 10 23                |                | ☾ ☽            | 14 09                |
|                | ☾ ☽            | 16 20                |                | ☾ ☽            | 14 21                | 29             | ☾ ☽            | 4 27                 |
|                | ☾ ☽            | 18 01                |                | ☾ ☽            | 17 02                |                | ☾ ☽            | 10 19                |
|                | ☾ ☽            | 23 16                |                | ☾ ☽            |                      |                | ☾ ☽            | 12 47                |
| 7              | ☾ ☽            | 9 27                 | 19             | ☾ ☽            | 7 36                 | 30             | ☾ ☽            | 6 04                 |
|                | ☾ ☽            | 10 12                |                | ☾ ☽            | 16 05                |                | ☾ ☽            | 6 21                 |
|                | ☾ ☽            | 11 10                |                | ☾ ☽            | 18 02                |                | ☾ ☽            | 10 47                |
| 8              | ☾ ☽            | 18 29                | 20             | ☾ ☽            | 7 12                 |                | ☾ ☽            | 18 08                |
|                | ☾ ☽            | 20 32                |                | ☾ ☽            | 20 52                |                | ☾ ☽            | 19 54                |
|                | ☾ ☽            |                      |                | ☾ ☽            | 21 04                | 31             | ☾ ☽            | 11 07                |
| 9              | ☾ ☽            | 6 53                 |                | ☾ ☽            | 23 30                |                | ☾ ☽            | 13 39                |
|                | ☾ ☽            | 8 45                 |                | ☾ ☽            |                      |                | ☾ ☽            | 16 23                |
|                | ☾ ☽            | 12 11                | 21             | ☾ ☽            | 1 55                 |                | ☾ ☽            |                      |
|                | ☾ ☽            | 19 10                |                | ☾ ☽            | 14 34                |                | ☾ ☽            |                      |
|                | ☾ ☽            | 20 25                |                | ☾ ☽            | 22 16                |                | ☾ ☽            |                      |
| 10             | ☾ ☽            | 1 58                 |                | ☾ ☽            | 24 00                |                | ☾ ☽            |                      |
|                | ☾ ☽            |                      | 22             | ☾ ☽            | 1 01                 |                | ☾ ☽            |                      |
| 11             | ☾ ☽            | 5 08                 |                | ☾ ☽            |                      |                | ☾ ☽            |                      |
|                | ☾ ☽            | 7 42                 | 23             | ☾ ☽            | 1 44                 |                | ☾ ☽            |                      |
|                | ☾ ☽            | 21 28                |                | ☾ ☽            | 4 15                 |                | ☾ ☽            |                      |
|                | ☾ ☽            | 24 00                |                | ☾ ☽            | 7 09                 |                | ☾ ☽            |                      |
| 12             | ☾ ☽            | 8 20                 |                | ☾ ☽            | 15 01                |                | ☾ ☽            |                      |
|                | ☾ ☽            | 8 59                 |                | ☾ ☽            | 19 48                |                | ☾ ☽            |                      |
|                | ☾ ☽            | 13 13                | 24             | ☾ ☽            | 2 12                 |                | ☾ ☽            |                      |



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Timings of Lunar Aspects in 2016

| दिनांक<br>Date | योग<br>Aspects | समय<br>Time<br>H. M. | दिनांक<br>Date | योग<br>Aspects | समय<br>Time<br>H. M. | दिनांक<br>Date | योग<br>Aspects | समय<br>Time<br>H. M. |
|----------------|----------------|----------------------|----------------|----------------|----------------------|----------------|----------------|----------------------|
| AUGUST         |                |                      |                |                |                      |                |                |                      |
| 1              | ☿ ✕            | 11 01                | 13             | ☿ □            | 3 06                 | 24             | ☿ △            | 10 38                |
|                | ☿ ∇            | 14 43                |                | ☿ △            | 9 37                 |                | ☿ ∇            | 13 03                |
|                | ☿ □            | 14 53                |                | ☿ △            | 16 41                |                | ☿ △            | 17 04                |
|                | ☿ △            | 23 46                |                | ☿ □            | 16 42                |                | ☿ △            | 18 27                |
| 2              | ☿ ∇            | 6 42                 | 14             | ☿ ∇            | 12 44                | 25             | ☿ □            | 2 18                 |
|                | ☿ △            | 17 58                |                | ☿ ∇            | 22 11                |                | ☿ 8            | 15 30                |
|                | ☿ 8            | 19 24                |                | ☿ 8            | 16 21                |                | ☿ 8            | 16 21                |
|                | ☿ ∇            | 20 43                | 15             | ☿ ✕            | 0 30                 |                | ☿ □            | 17 06                |
|                |                |                      |                | ☿ △            | 0 41                 |                |                |                      |
| 3              | ☿ ∇            | 16 47                |                | ☿ △            | 18 01                | 26             | ☿ ✕            | 16 35                |
|                | ☿ △            | 20 21                |                | ☿ △            | 23 26                |                | ☿ □            | 19 08                |
|                |                |                      |                | ☿ □            | 21 38                |                | ☿ □            | 21 38                |
| 4              | ☿ 8            | 3 01                 | 16             | ☿ □            | 0 51                 |                | ☿ □            | 23 53                |
|                | ☿ □            | 8 34                 |                | ☿ △            | 1 47                 |                |                |                      |
|                | ☿ 8            | 20 27                |                | ☿ ✕            | 21 43                | 27             | ☿ ✕            | 10 19                |
| 5              | ☿ □            | 1 30                 | 17             | ☿ ✕            | 4 26                 |                | ☿ ∇            | 19 15                |
|                | ☿ 8            | 4 24                 |                | ☿ ∇            | 6 48                 |                | ☿ △            | 20 37                |
|                | ☿ ∇            | 7 36                 |                | ☿ ∇            | 12 35                |                | ☿ △            | 21 53                |
|                |                |                      |                |                |                      | 28             | ☿ □            | 20 53                |
| 6              | ☿ 8            | 2 32                 | 18             | ☿ ∇            | 3 25                 |                |                |                      |
|                | ☿ ∇            | 5 27                 |                | ☿ ✕            | 6 11                 | 29             | ☿ ✕            | 3 05                 |
|                | ☿ ✕            | 18 55                |                | ☿ ∇            | 7 53                 |                | ☿ ✕            | 5 01                 |
|                | ☿ ∇            | 20 14                |                | ☿ 8            | 8 18                 |                | ☿ ✕            | 5 37                 |
| 7              | ☿ ✕            | 11 25                | 19             | ☿ □            | 3 45                 |                | ☿ ∇            | 19 15                |
|                | ☿ ∇            | 13 19                |                | ☿ □            | 8 21                 |                |                |                      |
|                | ☿ ∇            | 14 23                |                | ☿ 8            | 10 33                | 30             | ☿ △            | 1 32                 |
|                | ☿ ✕            | 22 50                |                | ☿ 8            | 20 46                |                | ☿ ∇            | 2 51                 |
|                |                |                      |                |                |                      |                | ☿ △            | 6 43                 |
| 8              | ☿ ∇            | 15 15                | 20             | ☿ ∇            | 8 54                 |                |                |                      |
|                | ☿ 8            | 17 18                |                | ☿ 8            | 9 23                 | 31             | ☿ △            | 3 44                 |
|                |                |                      |                | ☿ 8            | 11 23                |                | ☿ ∇            | 11 11                |
| 9              | ☿ ∇            | 10 39                |                | ☿ △            | 14 43                |                | ☿ ∇            | 12 00                |
|                | ☿ ✕            | 14 37                |                |                |                      |                |                |                      |
| 10             | ☿ ∇            | 0 09                 | 21             | ☿ △            | 8 04                 |                |                |                      |
|                | ☿ ∇            | 3 08                 |                | ☿ ∇            | 10 53                |                |                |                      |
|                | ☿ ✕            | 9 34                 |                | ☿ ∇            | 12 47                |                |                |                      |
|                | ☿ □            | 17 18                | 22             | ☿ ∇            | 3 50                 |                |                |                      |
|                |                |                      |                | ☿ 8            | 11 00                |                |                |                      |
| 11             | ☿ ✕            | 0 30                 |                | ☿ ∇            | 14 11                |                |                |                      |
|                | ☿ ∇            | 5 44                 |                | ☿ ∇            | 14 12                |                |                |                      |
|                |                |                      |                | ☿ △            | 20 23                |                |                |                      |
| 12             | ☿ 8            | 0 01                 | 23             | ☿ ∇            | 11 55                |                |                |                      |
|                | ☿ □            | 8 16                 |                | ☿ ∇            | 12 55                |                |                |                      |
|                | ☿ 8            | 11 53                |                | ☿ ✕            | 14 45                |                |                |                      |
|                | ☿ □            | 14 37                |                |                |                      |                |                |                      |

चन्द्र से ग्रहों का योगकाल, 2016  
Timings of Lunar Aspects in 2016

| दिनांक<br>Date | योग<br>Aspects | समय<br>Time<br>H. M. | दिनांक<br>Date | योग<br>Aspects | समय<br>Time<br>H. M. | दिनांक<br>Date | योग<br>Aspects | समय<br>Time<br>H. M. |
|----------------|----------------|----------------------|----------------|----------------|----------------------|----------------|----------------|----------------------|
| SEPTEMBER      |                |                      |                |                |                      |                |                |                      |
| 1              | ☿ □            | 9 48                 | 13             | ☿ ∇            | 15 33                |                | ☿ △            | 6 49                 |
|                | ☿ 8            | 10 54                |                | ☿ ✕            | 16 00                |                | ☿ □            | 9 32                 |
|                | ☿ 8            | 16 05                |                | ☿ △            | 24 00                |                | ☿ □            | 13 10                |
|                | ☿ □            | 17 37                |                |                |                      |                |                |                      |
|                |                |                      | 14             | ☿ △            | 5 14                 | 24             | ☿ △            | 1 34                 |
| 2              | ☿ 8            | 12 32                |                | ☿ ∇            | 7 31                 |                | ☿ ∇            | 3 26                 |
|                | ☿ 8            | 20 58                |                | ☿ ✕            | 11 23                |                | ☿ ✕            | 10 28                |
|                | ☿ 8            | 20 59                |                | ☿ ∇            | 11 39                |                |                |                      |
|                |                |                      |                | ☿ ✕            | 14 53                | 25             | ☿ □            | 1 01                 |
| 3              | ☿ 8            | 9 57                 |                |                |                      |                | ☿ ∇            | 10 30                |
|                | ☿ ✕            | 19 55                | 15             | ☿ ∇            | 3 26                 |                | ☿ □            | 17 02                |
|                | ☿ ✕            | 20 46                |                | ☿ 8            | 18 48                |                | ☿ ✕            | 18 04                |
|                | ☿ ∇            | 22 48                |                | ☿ □            | 19 26                |                | ☿ ✕            | 19 08                |
|                |                |                      |                |                |                      |                |                |                      |
| 4              | ☿ ✕            | 6 57                 | 16             | ☿ 8            | 7 15                 | 26             | ☿ ∇            | 4 26                 |
|                | ☿ 8            | 23 23                |                | ☿ ∇            | 12 55                |                | ☿ ∇            | 7 40                 |
|                |                |                      |                | ☿ □            | 16 14                |                | ☿ △            | 9 43                 |
| 5              | ☿ ∇            | 6 54                 |                | ☿ ∇            | 17 10                |                |                |                      |
|                | ☿ ∇            | 10 20                |                | ☿ 8            | 17 54                | 27             | ☿ △            | 8 19                 |
|                |                |                      |                |                |                      |                | ☿ △            | 21 22                |
| 6              | ☿ ∇            | 5 12                 | 17             | ☿ 8            | 6 16                 |                |                |                      |
|                | ☿ ∇            | 8 50                 |                | ☿ ∇            | 20 24                | 28             | ☿ ∇            | 4 03                 |
|                | ☿ △            | 9 25                 |                | ☿ △            | 21 18                |                | ☿ ∇            | 6 51                 |
|                | ☿ ✕            | 16 59                |                | ☿ ✕            | 16 59                |                | ☿ ✕            | 7 00                 |
|                | ☿ ∇            | 22 52                | 18             | ☿ ∇            | 6 02                 |                | ☿ 8            | 16 21                |
|                |                |                      |                | ☿ 8            | 17 54                |                | ☿ □            | 19 26                |
| 7              | ☿ ∇            | 12 28                |                | ☿ △            | 19 17                |                |                |                      |
|                | ☿ ∇            | 16 31                |                | ☿ 8            | 18 20                | 29             | ☿ 8            | 8 43                 |
|                |                |                      |                | ☿ △            | 22 09                |                | ☿ ∇            | 17 31                |
| 8              | ☿ 8            | 21 39                |                |                |                      |                |                |                      |
|                | ☿ □            | 21 54                | 19             | ☿ ∇            | 7 46                 |                |                |                      |
|                |                |                      |                | ☿ ✕            | 20 48                | 30             | ☿ □            | 10 44                |
| 9              | ☿ □            | 10 13                |                | ☿ ∇            | 21 55                |                | ☿ 8            | 15 51                |
|                | ☿ 8            | 13 47                | 20             | ☿ ∇            | 5 06                 |                | ☿ ∇            | 22 35                |
|                | ☿ △            | 23 49                |                | ☿ ∇            | 18 25                |                | ☿ ∇            | 24 00                |
|                |                |                      |                | ☿ △            | 22 03                |                |                |                      |
| 10             | ☿ □            | 0 01                 |                | ☿ ∇            | 23 19                |                |                |                      |
|                | ☿ ✕            | 12 22                |                |                |                      |                |                |                      |
|                |                |                      |                |                |                      |                |                |                      |
| 11             | ☿ ✕            | 8 05                 | 21             | ☿ △            | 2 26                 |                |                |                      |
|                | ☿ ∇            | 8 50                 |                | ☿ 8            | 9 20                 |                |                |                      |
|                | ☿ □            | 17 21                |                | ☿ □            | 21 50                |                |                |                      |
|                |                |                      |                | ☿ 8            | 23 16                |                |                |                      |
| 12             | ☿ △            | 1 00                 |                |                |                      |                |                |                      |
|                | ☿ ∇            | 2 31                 | 22             | ☿ □            | 5 56                 |                |                |                      |
|                | ☿ △            | 5 02                 |                | ☿ ✕            | 20 12                |                |                |                      |
|                | ☿ □            | 8 56                 |                |                |                      |                |                |                      |
|                | ☿ □            | 21 41                | 23             | ☿ 8            | 3 01                 |                |                |                      |



चन्द्र से ग्रहों का योगकाल, 2016  
Timings of Lunar Aspects in 2016

| दिनांक<br>Date | योग<br>Aspects | समय<br>Time<br>H. M. | दिनांक<br>Date | योग<br>Aspects | समय<br>Time<br>H. M. | दिनांक<br>Date | योग<br>Aspects | समय<br>Time<br>H. M. |
|----------------|----------------|----------------------|----------------|----------------|----------------------|----------------|----------------|----------------------|
| OCTOBER        |                |                      |                |                |                      |                |                |                      |
| 1              | ☾ ∇            | 0 16                 |                | ☾ ☿            | 4 17                 |                | ☾ ∇            | 11 55                |
|                | ☾ ∇            | 2 33                 |                | ☾ ☿            | 5 49                 |                | ☾ ∇            | 19 14                |
|                | ☾ ✕            | 6 06                 |                | ☾ ☿            | 9 15                 |                |                |                      |
|                |                |                      |                | ☾ ∇            | 23 11                | 24             | ☾ ∇            | 4 25                 |
| 2              | ☾ ∇            | 2 37                 |                | ☾ ∇            | 11 49                |                | ☾ ∇            | 11 49                |
|                | ☾ ∇            | 5 08                 | 14             | ☾ ∇            | 1 59                 |                | ☾ ✕            | 2 25                 |
|                |                |                      |                | ☾ ∇            | 5 45                 | 25             | ☾ ✕            | 6 32                 |
| 3              | ☾ ✕            | 2 38                 |                | ☾ ∇            | 2 28                 |                | ☾ ☿            | 19 21                |
|                | ☾ ∇            | 5 28                 | 15             | ☾ ∇            | 5 37                 |                | ☾ ☿            | 20 30                |
|                | ☾ ∇            | 15 03                |                | ☾ ☿            | 9 33                 |                | ☾ ∇            | 21 32                |
|                | ☾ ∇            | 16 43                |                | ☾ ∇            | 10 42                |                |                |                      |
|                | ☾ ∇            | 19 02                |                | ☾ ∇            | 11 58                | 26             | ☾ ☿            | 5 08                 |
|                | ☾ ☿            | 19 44                |                |                |                      |                | ☾ ∇            | 17 14                |
| 4              | ☾ ∇            | 17 33                | 16             | ☾ ☿            | 2 11                 |                | ☾ ∇            | 21 08                |
|                | ☾ ✕            | 23 38                |                | ☾ ☿            | 3 07                 |                |                |                      |
|                |                |                      |                | ☾ ∇            | 9 36                 | 27             | ☾ ∇            | 1 55                 |
| 5              | ☾ ∇            | 18 57                |                | ☾ ∇            | 2 51                 |                | ☾ ∇            | 21 14                |
|                | ☾ ✕            | 19 17                | 17             | ☾ ✕            | 5 13                 |                |                |                      |
|                |                |                      |                | ☾ ∇            | 10 35                | 28             | ☾ ∇            | 8 02                 |
| 6              | ☾ ☿            | 3 32                 |                | ☾ ∇            | 11 25                |                | ☾ ☿            | 10 08                |
|                | ☾ ✕            | 8 10                 |                | ☾ ∇            | 17 49                |                | ☾ ✕            | 13 38                |
|                | ☾ ∇            | 16 25                |                |                |                      |                | ☾ ✕            | 17 31                |
|                |                |                      | 18             | ☾ ∇            | 1 33                 |                |                |                      |
| 7              | ☾ ∇            | 6 01                 |                | ☾ ∇            | 5 44                 |                |                |                      |
|                | ☾ ☿            | 20 02                |                | ☾ ☿            | 8 13                 | 29             | ☾ ☿            | 9 18                 |
|                |                |                      |                | ☾ ∇            | 11 02                |                | ☾ ☿            | 9 18                 |
| 8              | ☾ ☿            | 7 52                 | 19             | ☾ ∇            | 3 27                 |                |                |                      |
|                | ☾ ☿            | 9 58                 |                | ☾ ☿            | 5 10                 |                |                |                      |
|                | ☾ ✕            | 14 54                |                | ☾ ☿            | 11 02                | 30             | ☾ ☿            | 13 08                |
|                | ☾ ∇            | 19 47                |                | ☾ ∇            | 14 05                |                | ☾ ∇            | 20 23                |
|                |                |                      |                |                |                      |                | ☾ ☿            | 21 00                |
| 9              | ☾ ☿            | 3 03                 | 20             | ☾ ∇            | 1 10                 |                | ☾ ∇            | 23 33                |
|                | ☾ ✕            | 8 40                 |                | ☾ ✕            | 2 43                 |                |                |                      |
|                | ☾ ☿            | 16 08                |                | ☾ ∇            | 10 12                |                |                |                      |
|                |                |                      |                | ☾ ∇            | 18 40                | 31             | ☾ ∇            | 6 19                 |
| 10             | ☾ ∇            | 15 45                |                |                |                      |                | ☾ ∇            | 8 45                 |
|                | ☾ ∇            | 18 29                | 21             | ☾ ☿            | 6 06                 |                | ☾ ∇            | 21 49                |
|                | ☾ ∇            | 22 50                |                | ☾ ∇            | 7 05                 |                |                |                      |
|                | ☾ ∇            | 24 00                |                | ☾ ∇            | 13 40                |                |                |                      |
|                |                |                      |                | ☾ ☿            | 19 07                |                |                |                      |
| 11             | ☾ ✕            | 4 29                 |                |                |                      |                |                |                      |
|                | ☾ ∇            | 15 33                | 22             | ☾ ☿            | 5 11                 |                |                |                      |
|                | ☾ ☿            | 21 48                |                | ☾ ☿            | 10 57                |                |                |                      |
|                | ☾ ✕            | 23 09                |                | ☾ ☿            | 17 52                |                |                |                      |
|                |                |                      |                |                |                      |                |                |                      |
| 13             | ☾ ∇            | 0 09                 | 23             | ☾ ∇            | 5 08                 |                |                |                      |
|                | ☾ ∇            | 3 56                 |                | ☾ ✕            | 9 35                 |                |                |                      |

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| दिनांक<br>Date | योग<br>Aspects | समय<br>Time<br>H. M. | दिनांक<br>Date | योग<br>Aspects | समय<br>Time<br>H. M. | दिनांक<br>Date | योग<br>Aspects | समय<br>Time<br>H. M. |
|----------------|----------------|----------------------|----------------|----------------|----------------------|----------------|----------------|----------------------|
| NOVEMBER       |                |                      |                |                |                      |                |                |                      |
| 1              | ☾ ✕            | 1 49                 | 13             | ☾ ∇            | 1 48                 |                | ☾ ✕            | 22 14                |
|                |                |                      |                | ☾ ∇            | 2 49                 |                |                |                      |
| 2              | ☾ ☿            | 9 02                 |                | ☾ ☿            | 5 53                 | 24             | ☾ ∇            | 13 45                |
|                | ☾ ∇            | 10 50                |                | ☾ ✕            | 16 01                |                | ☾ ∇            | 17 55                |
|                | ☾ ✕            | 13 20                |                | ☾ ∇            | 22 59                |                |                |                      |
|                | ☾ ∇            | 18 56                |                |                |                      | 25             | ☾ ☿            | 1 17                 |
|                | ☾ ☿            | 19 34                | 14             | ☾ ∇            | 2 16                 |                | ☾ ✕            | 2 48                 |
|                |                |                      |                | ☾ ∇            | 11 03                |                | ☾ ✕            | 5 21                 |
| 3              | ☾ ☿            | 4 20                 |                | ☾ ☿            | 12 33                |                | ☾ ✕            | 9 09                 |
|                | ☾ ∇            | 10 04                |                |                |                      |                | ☾ ∇            | 13 22                |
|                | ☾ ∇            | 18 17                | 15             | ☾ ∇            | 4 06                 |                |                |                      |
|                |                |                      |                | ☾ ∇            | 4 23                 | 26             | ☾ ∇            | 16 49                |
| 4              | ☾ ✕            | 3 31                 |                | ☾ ∇            | 5 37                 |                |                |                      |
|                |                |                      |                | ☾ ☿            | 13 27                | 27             | ☾ ∇            | 2 13                 |
| 5              | ☾ ☿            | 1 49                 |                | ☾ ∇            | 20 59                |                | ☾ ☿            | 10 27                |
|                | ☾ ✕            | 3 42                 |                |                |                      |                | ☾ ∇            | 16 21                |
|                | ☾ ∇            | 7 27                 | 16             | ☾ ☿            | 1 00                 |                | ☾ ∇            | 18 37                |
|                | ☾ ✕            | 15 24                |                | ☾ ✕            | 9 57                 |                | ☾ ✕            | 20 36                |
|                | ☾ ☿            | 21 00                |                | ☾ ∇            | 15 16                |                |                |                      |
|                | ☾ ∇            | 22 06                |                |                |                      | 28             | ☾ ∇            | 2 12                 |
|                |                |                      | 17             | ☾ ∇            | 9 49                 |                | ☾ ∇            | 6 23                 |
| 6              | ☾ ☿            | 8 42                 |                | ☾ ☿            | 9 57                 |                |                |                      |
|                |                |                      |                | ☾ ∇            | 11 56                | 29             | ☾ ☿            | 11 14                |
| 7              | ☾ ∇            | 6 22                 |                | ☾ ∇            | 15 27                |                | ☾ ☿            | 14 55                |
|                | ☾ ∇            | 12 52                |                | ☾ ☿            | 24 00                |                |                |                      |
|                | ☾ ✕            | 17 52                |                |                |                      | 30             | ☾ ✕            | 2 42                 |
|                | ☾ ☿            | 18 46                | 18             | ☾ ∇            | 3 02                 |                | ☾ ✕            | 5 21                 |
|                |                |                      |                | ☾ ☿            | 11 20                |                | ☾ ☿            | 7 15                 |
| 8              | ☾ ✕            | 5 28                 |                | ☾ ∇            | 20 22                |                | ☾ ∇            | 13 41                |
|                | ☾ ☿            | 7 55                 |                |                |                      |                | ☾ ∇            | 15 00                |
|                | ☾ ✕            | 12 14                | 19             | ☾ ☿            | 15 49                |                |                |                      |
|                | ☾ ∇            | 19 56                |                | ☾ ∇            | 17 54                |                |                |                      |
|                |                |                      |                | ☾ ∇            | 18 49                |                |                |                      |
| 9              | ☾ ☿            | 13 30                |                | ☾ ∇            | 21 50                |                |                |                      |
|                | ☾ ∇            | 20 02                |                |                |                      |                |                |                      |
|                |                |                      | 20             | ☾ ✕            | 5 00                 |                |                |                      |
| 10             | ☾ ☿            | 0 00                 |                | ☾ ∇            | 7 51                 |                |                |                      |
|                | ☾ ∇            | 4 16                 |                | ☾ ∇            | 16 10                |                |                |                      |
|                | ☾ ∇            | 10 20                |                |                |                      |                |                |                      |
|                | ☾ ∇            | 19 36                | 21             | ☾ ☿            | 7 29                 |                |                |                      |
|                | ☾ ☿            | 21 43                |                |                |                      |                |                |                      |
|                |                |                      | 22             | ☾ ☿            | 2 34                 |                |                |                      |
| 11             | ☾ ✕            | 2 43                 |                | ☾ ∇            | 2 43                 |                |                |                      |
|                | ☾ ∇            | 16 20                |                | ☾ ∇            | 7 19                 |                |                |                      |
|                | ☾ ☿            | 23 11                |                | ☾ ☿            | 12 59                |                |                |                      |
|                |                |                      |                | ☾ ∇            | 14 05                |                |                |                      |
| 12             | ☾ ∇            | 2 30                 |                | ☾ ☿            | 16 47                |                |                |                      |
|                | ☾ ∇            | 10 08                |                |                |                      |                |                |                      |
|                | ☾ ☿            | 12 06                | 23             | ☾ ∇            | 3 20                 |                |                |                      |



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| दिनांक<br>Date | योग<br>Aspects | समय<br>Time<br>H. M. | दिनांक<br>Date | योग<br>Aspects | समय<br>Time<br>H. M. | दिनांक<br>Date | योग<br>Aspects | समय<br>Time<br>H. M. |
|----------------|----------------|----------------------|----------------|----------------|----------------------|----------------|----------------|----------------------|
| DECEMBER       |                |                      |                |                |                      |                |                |                      |
| 1              | इ ∇            | 1 38                 |                | मि ∇           | 20 55                |                | त ×            | 18 35                |
|                |                |                      |                |                |                      |                | मि 8           | 19 12                |
| 2              | श ×            | 1 22                 | 12             | र ∆            | 2 43                 |                |                |                      |
|                | म ∇            | 3 14                 |                | इ ∆            | 21 01                | 23             | म ×            | 18 17                |
|                | श □            | 18 15                |                |                |                      |                |                |                      |
|                | र ∇            | 18 43                | 13             | श □            | 2 35                 |                |                |                      |
|                | त ∇            | 20 02                |                | इ ∆            | 6 41                 | 24             | श ∆            | 9 23                 |
|                |                |                      |                | म ∆            | 17 25                |                | इ ×            | 15 51                |
| 3              | मि □           | 1 03                 |                | त 8            | 18 06                |                |                |                      |
|                | इ 8            | 8 44                 |                | मि ×           | 20 23                | 25             | इ □            | 6 12                 |
|                | इ 8            | 21 31                |                | म 8            | 23 00                |                | म ∇            | 7 15                 |
|                |                |                      |                |                |                      |                | त ∇            | 7 38                 |
| 4              | इ ∇            | 0 00                 | 14             | र ∆            | 4 45                 |                | मि ∆           | 7 41                 |
|                | श ∇            | 12 50                |                |                |                      |                |                |                      |
|                | म ×            | 19 42                | 15             | इ ∆            | 0 44                 | 26             | म ∇            | 12 44                |
|                |                |                      |                | श ∆            | 2 37                 |                | म □            | 13 20                |
| 5              | म ∆            | 4 23                 |                | इ 8            | 9 27                 |                | श □            | 22 12                |
|                | त ×            | 5 48                 |                | म □            | 18 26                |                | इ ∇            | 23 34                |
|                | र 8            | 7 41                 |                | त ∆            | 19 02                |                |                |                      |
|                | म ∇            | 10 44                |                | मि □           | 20 59                | 27             | मि ∆           | 19 23                |
|                | इ ∇            | 24 00                |                |                |                      |                | म ×            | 19 34                |
|                |                |                      | 16             | म ∆            | 3 08                 |                | त 8            | 19 59                |
| 6              | इ ×            | 11 41                |                | र 8            | 8 21                 |                |                |                      |
|                | श 8            | 20 33                |                |                |                      |                |                |                      |
|                |                |                      | 17             | श ∆            | 4 51                 | 28             | इ ×            | 0 02                 |
| 7              | म □            | 7 35                 |                | इ 8            | 7 19                 |                |                |                      |
|                | म ∆            | 12 02                |                | इ ∆            | 14 05                | 29             | र ×            | 4 24                 |
|                | त □            | 13 11                |                | म ×            | 22 08                |                | इ 8            | 4 38                 |
|                | मि ∇           | 17 19                |                | त ∆            | 22 40                |                | म 8            | 5 21                 |
|                | र ∇            | 17 49                |                |                |                      |                | श ×            | 9 15                 |
|                |                |                      | 18             | मि ∆           | 0 27                 |                |                |                      |
| 8              | इ ×            | 10 45                |                | म ∆            | 11 11                | 30             | मि □           | 6 28                 |
|                | इ □            | 22 49                |                | र ∆            | 15 40                |                | म □            | 7 13                 |
|                |                |                      |                |                |                      |                | त ∇            | 7 37                 |
| 9              | श ∇            | 1 22                 | 19             | श 8            | 10 59                |                | इ ∇            | 16 41                |
|                | म ∆            | 15 11                |                | इ ∆            | 18 09                |                |                |                      |
|                | म 8            | 16 13                |                | इ ∆            | 20 46                | 31             | इ ∇            | 9 00                 |
|                | त ∆            | 17 10                |                |                |                      |                | म ∇            | 18 28                |
|                | मि 8           | 20 30                | 20             | म ∇            | 6 07                 |                | श ∇            | 19 20                |
|                | र ×            | 23 54                |                | त □            | 6 41                 |                | र ∇            | 20 02                |
|                |                |                      |                | मि ∆           | 7 50                 |                |                |                      |
| 10             | र □            | 0 00                 |                | म □            | 24 00                |                |                |                      |
|                | इ □            | 17 28                |                |                |                      |                |                |                      |
|                |                |                      | 21             | र ∆            | 4 12                 |                |                |                      |
| 11             | श ×            | 2 51                 |                | श ∆            | 20 22                |                |                |                      |
|                | इ ∆            | 3 48                 |                |                |                      |                |                |                      |
|                | म ∆            | 17 23                | 22             | इ □            | 6 48                 |                |                |                      |
|                | त ∆            | 18 12                |                | इ ∆            | 11 20                |                |                |                      |
|                | म ∆            | 19 44                |                | म 8            | 18 05                |                |                |                      |

ग्रहों के पारस्परिक योग, 2016  
Mutual Aspects of Planets in 2016

| दिनांक<br>Date | योग<br>Aspects | समय<br>Time<br>H. M. | दिनांक<br>Date | योग<br>Aspects | समय<br>Time<br>H. M. | दिनांक<br>Date | योग<br>Aspects | समय<br>Time<br>H. M. |
|----------------|----------------|----------------------|----------------|----------------|----------------------|----------------|----------------|----------------------|
| JANUARY        |                |                      |                |                |                      |                |                |                      |
|                |                |                      |                | म ∆ इ          | 23 49                | 26             | म ∆ र          | 16 42                |
|                |                |                      |                |                |                      |                |                |                      |
|                |                |                      | 10             | म ∆ इ          | 10 48                | 28             | मि ∇ इ         | 9 18                 |
| 2              | म ∇ त          | 11 34                |                |                |                      |                |                |                      |
|                |                |                      | 11             | म ∆ म          | 0 54                 | 30             | त ∆ इ          | 8 30                 |
| 5              | श □ इ          | 4 20                 | 12             | श L इ          | 13 40                |                |                |                      |
|                | र □ इ          | 13 36                | 14             | म × र          | 20 00                | 31             | म ∇ श          | 3 44                 |
|                |                |                      |                | त L इ          | 18 34                |                |                |                      |
|                |                |                      | 17             | त L इ          | 9 17                 | APRIL          |                |                      |
| 7              | म □ मि         | 17 54                | 21             | श ∇ इ          | 22 07                | 2              | र म इ          | 14 35                |
|                |                |                      | 24             | श ∇ इ          | 1 20                 |                |                |                      |
| 9              | त 8 इ          | 14 09                | 25             | त × इ          | 10 19                |                |                |                      |
|                |                |                      |                |                |                      |                |                |                      |
| 13             | म L श          | 20 48                | 28             | म 8 श          | 21 06                | 4              | म ∆ म          | 15 38                |
|                | मि ∆ इ         | 14 21                |                |                |                      |                |                |                      |
| MARCH          |                |                      |                |                |                      |                |                |                      |
| 14             | म ∆ म          | 4 39                 | 1              | त × इ          | 17 00                | 5              | म ∆ त          | 22 00                |
|                |                |                      |                |                |                      |                |                |                      |
| 15             | म ∆ इ          | 6 54                 | 2              | श ∇ इ          | 16 38                | 6              | इ ∇ इ          | 6 28                 |
|                | म L त          | 12 25                |                |                |                      |                |                |                      |
| 18             | म L त          | 20 34                | 3              | म ∆ इ          | 6 27                 | 10             | म 8 मि         | 3 00                 |
|                | श ∆ र          | 6 48                 |                | मि × इ         | 17 44                | 11             | र ∆ इ          | 22 12                |
|                | म □ इ          | 13 36                | 4              | म म र          | 20 13                | 12             | श × इ          | 8 37                 |
|                |                |                      |                |                |                      | 13             | म म र          | 13 17                |
| 21             | मि × इ         | 1 12                 | 6              | म □ त          | 11 36                |                | र ∆ इ          | 00 41                |
|                |                |                      |                | मि ∆ म         | 20 00                |                |                |                      |
|                |                |                      |                |                |                      | 14             | म ∆ इ          | 01 18                |
| 29             | म ∇ श          | 2 15                 | 8              | म 8 म          | 18 00                |                |                |                      |
|                | म म म          | 6 06                 |                | श L इ          | 13 00                | 15             | म L श          | 22 06                |
|                |                |                      |                |                |                      |                | श ∇ इ          | 24 00                |
|                |                |                      | 9              | म ∇ मि         | 1 04                 |                |                |                      |
| 30             | श × इ          | 2 00                 |                | त L र          | 9 20                 | 16             | त ∆ इ          | 15 46                |
|                | त ∇ र          | 17 32                |                |                |                      | 17             | म ∆ इ          | 17 55                |
|                |                |                      | 15             | म 8 इ          | 8 56                 | 18             | त ∆ इ          | 3 40                 |
|                |                |                      |                | र □ इ          | 22 02                |                |                |                      |
|                |                |                      |                |                |                      | 21             | मि ∇ इ         | 17 08                |
|                |                |                      | 16             | मि × इ         | 11 21                | 23             | मि 8 इ         | 22 17                |
| FEBRUARY       |                |                      |                |                |                      |                |                |                      |
| 1              | मि × इ         | 15 00                | 18             | मि म र         | 0 48                 | 27             | श L इ          | 15 17                |
|                |                |                      |                |                |                      |                |                |                      |
| 4              | म × त          | 0 00                 | 20             | श 8 इ          | 00 51                | 28             | म ∆ र          | 7 17                 |
|                |                |                      | 23             | त □ म          | 15 25                |                | म ∆ र          | 6 00                 |
|                | त ∇ इ          | 5 24                 | 24             | म L मि         | 23 34                |                |                |                      |
|                |                |                      |                | म 8 इ          | 22 48                |                |                |                      |
| 6              | म × मि         | 22 10                |                |                |                      |                |                |                      |
|                |                |                      | 25             | त □ इ          | 01 45                | 30             | त म इ          | 9 59                 |
| 7              | म □ र          | 18 00                |                | र ∆ इ          | 19 51                |                |                |                      |
|                | मि □ इ         | 20 40                |                | म 8 इ          | 6 31                 |                |                |                      |



ग्रहों के पारस्परिक योग, 2016  
Mutual Aspects of Planets in 2016

| दिनांक<br>Date | योग<br>Aspects | समय<br>Time<br>H. M. | दिनांक<br>Date | योग<br>Aspects | समय<br>Time<br>H. M. | दिनांक<br>Date | योग<br>Aspects | समय<br>Time<br>H. M. |
|----------------|----------------|----------------------|----------------|----------------|----------------------|----------------|----------------|----------------------|
| MAY            |                |                      |                |                |                      |                |                |                      |
|                |                |                      | 5              | ☿ ☊ ♀          | 17 50                | 17             | ☿ ☊ ♀          | 18 00                |
|                |                |                      |                |                |                      | 18             | ♂ ☊ ♀          | 5 36                 |
| 1              | ☿ ☊ ♀          | 16 36                |                | ♂ ☊ ♀          | 20 28                | 19             | ♂ ☊ ♀          | 12 13                |
| 3              | ☿ ☊ ♀          | 13 38                | 7              | ☿ ☊ ♀          | 20 28                | 20             | ♂ ☊ ♀          | 5 17                 |
| 5              | ♂ ☊ ♀          | 11 09                |                | ♂ ☊ ♀          | 4 23                 | 21             | ♂ ☊ ♀          | 17 50                |
|                | ☿ ☊ ♀          | 10 28                | 9              | ♂ ☊ ♀          | 1 22                 |                | ☿ ☊ ♀          | 13 48                |
|                | ♂ ☊ ♀          | 4 28                 | 12             | ♂ ☊ ♀          | 3 20                 | 23             | ♂ ☊ ♀          | 14 00                |
| 9              | ♂ ☊ ♀          | 5 40                 | 13             | ♂ ☊ ♀          | 2 47                 | 25             | ♂ ☊ ♀          | 15 10                |
| 11             | ♂ ☊ ♀          | 21 08                | 14             | ☿ ☊ ♀          | 13 43                | 29             | ☿ ☊ ♀          | 12 36                |
| 12             | ☿ ☊ ♀          | 19 51                | 15             | ☿ ☊ ♀          | 11 18                | AUGUST         |                |                      |
|                | ♂ ☊ ♀          | 19 29                | 18             | ♂ ☊ ♀          | 0 01                 | 1              | ☿ ☊ ♀          | 2 12                 |
| 17             | ☿ ☊ ♀          | 13 16                | 19             | ♂ ☊ ♀          | 9 20                 |                | ♂ ☊ ♀          | 14 37                |
| 18             | ♂ ☊ ♀          | 9 57                 | 20             | ♂ ☊ ♀          | 3 56                 | 3              | ☿ ☊ ♀          | 13 38                |
| 19             | ☿ ☊ ♀          | 4 17                 | 23             | ♂ ☊ ♀          | 19 16                | 6              | ♂ ☊ ♀          | 11 08                |
| 20             | ☿ ☊ ♀          | 0 00                 | 25             | ♂ ☊ ♀          | 14 20                |                | ♂ ☊ ♀          | 5 11                 |
| 23             | ♂ ☊ ♀          | 13 00                | 27             | ♂ ☊ ♀          | 4 32                 | 7              | ♂ ☊ ♀          | 17 52                |
| 26             | ♂ ☊ ♀          | 6 00                 |                | ♂ ☊ ♀          | 16 00                |                | ♂ ☊ ♀          | 1 56                 |
| 29             | ☿ ☊ ♀          | 5 27                 |                | ♂ ☊ ♀          | 15 44                | 10             | ☿ ☊ ♀          | 12 46                |
| 31             | ♂ ☊ ♀          | 3 34                 | 28             | ♂ ☊ ♀          | 13 01                | 13             | ♂ ☊ ♀          | 8 00                 |
| JUNE           |                |                      | JULY           |                |                      | 14             | ♂ ☊ ♀          | 3 54                 |
|                |                |                      |                |                |                      | 17             | ☿ ☊ ♀          | 12 25                |
| 1              | ♂ ☊ ♀          | 20 01                | 2              | ♂ ☊ ♀          | 23 04                | 18             | ☿ ☊ ♀          | 2 19                 |
| 2              | ☿ ☊ ♀          | 8 13                 |                | ☿ ☊ ♀          | 20 36                | 20             | ☿ ☊ ♀          | 0 33                 |
| 3              | ☿ ☊ ♀          | 12 26                | 3              | ☿ ☊ ♀          | 17 03                | 22             | ♂ ☊ ♀          | 14 53                |
|                | ♂ ☊ ♀          | 14 16                | 5              | ♂ ☊ ♀          | 6 09                 | 23             | ♂ ☊ ♀          | 10 30                |
| 4              | ♂ ☊ ♀          | 17 32                | 7              | ♂ ☊ ♀          | 21 53                | 24             | ♂ ☊ ♀          | 7 22                 |
|                | ☿ ☊ ♀          | 16 26                |                | ♂ ☊ ♀          | 4 07                 | 25             | ♂ ☊ ♀          | 9 24                 |
|                |                |                      | 8              | ☿ ☊ ♀          | 14 57                | 26             | ♂ ☊ ♀          | 11 15                |
|                |                |                      | 10             | ☿ ☊ ♀          | 9 12                 |                |                |                      |
|                |                |                      | 11             | ☿ ☊ ♀          | 11 01                |                |                |                      |
|                |                |                      | 12             | ☿ ☊ ♀          | 16 18                | 28             | ♂ ☊ ♀          | 19 52                |
|                |                |                      | 14             | ♂ ☊ ♀          | 9 36                 |                |                |                      |
|                |                |                      | 16             | ☿ ☊ ♀          | 19 09                | 29             | ♂ ☊ ♀          | 11 39                |
|                |                |                      |                | ☿ ☊ ♀          | 9 49                 |                |                |                      |

ग्रहों के पारस्परिक योग, 2016  
Mutual Aspects of Planets in 2016

| दिनांक<br>Date | योग<br>Aspects | समय<br>Time<br>H. M. | दिनांक<br>Date | योग<br>Aspects | समय<br>Time<br>H. M. | दिनांक<br>Date | योग<br>Aspects | समय<br>Time<br>H. M. |
|----------------|----------------|----------------------|----------------|----------------|----------------------|----------------|----------------|----------------------|
| SEPTEMBER      |                |                      |                |                |                      |                |                |                      |
|                |                |                      | 15             | ☿ ☊ ♀          | 16 43                |                |                |                      |
|                |                |                      | 16             | ♂ ☊ ♀          | 13 26                | 28             | ☿ ☊ ♀          | 00 58                |
| 2              | ☿ ☊ ♀          | 22 31                |                | ♂ ☊ ♀          | 10 00                | DECEMBER       |                |                      |
|                | ☿ ☊ ♀          | 9 04                 | 17             | ☿ ☊ ♀          | 18 00                |                |                |                      |
|                | ♂ ☊ ♀          | 24 00                | 21             | ♂ ☊ ♀          | 11 29                | 1              | ☿ ☊ ♀          | 6 48                 |
| 7              | ♂ ☊ ♀          | 3 02                 | 22             | ♂ ☊ ♀          | 13 16                | 2              | ♂ ☊ ♀          | 14 44                |
|                | ♂ ☊ ♀          | 6 56                 | 23             | ♂ ☊ ♀          | 2 00                 | 3              | ♂ ☊ ♀          | 6 19                 |
| 10             | ♂ ☊ ♀          | 7 12                 | 24             | ♂ ☊ ♀          | 13 36                | 5              | ♂ ☊ ♀          | 10 58                |
|                | ♂ ☊ ♀          | 1 33                 | 26             | ♂ ☊ ♀          | 15 39                |                |                |                      |
|                |                |                      | 27             | ☿ ☊ ♀          | 2 24                 | 7              | ♂ ☊ ♀          | 12 15                |
|                |                |                      | 28             | ♂ ☊ ♀          | 14 40                |                |                |                      |
|                |                |                      | 30             | ♂ ☊ ♀          | 17 27                |                |                |                      |
| NOVEMBER       |                |                      |                |                |                      |                |                |                      |
| 12             | ♂ ☊ ♀          | 19 11                | 1              | ☿ ☊ ♀          | 14 19                | 10             | ☿ ☊ ♀          | 17 46                |
| 14             | ☿ ☊ ♀          | 2 11                 |                |                |                      |                |                |                      |
| 16             | ☿ ☊ ♀          | 7 12                 | 3              | ☿ ☊ ♀          | 23 30                |                | ☿ ☊ ♀          | 3 14                 |
| 17             | ♂ ☊ ♀          | 11 24                | 5              | ♂ ☊ ♀          | 12 19                | 12             | ☿ ☊ ♀          | 12 46                |
| 18             | ♂ ☊ ♀          | 10 44                | 7              | ☿ ☊ ♀          | 11 33                | 16             | ♂ ☊ ♀          | 22 56                |
| 20             | ♂ ☊ ♀          | 12 21                |                | ♂ ☊ ♀          | 13 15                | 25             | ♂ ☊ ♀          | 18 51                |
| 23             | ♂ ☊ ♀          | 18 27                | 13             | ☿ ☊ ♀          | 14 19                |                | ♂ ☊ ♀          | 1 49                 |
| 26             | ☿ ☊ ♀          | 10 56                | 14             | ☿ ☊ ♀          | 17 43                | 27             | ☿ ☊ ♀          | 3 29                 |
| 28             | ☿ ☊ ♀          | 22 30                | 15             | ♂ ☊ ♀          | 1 16                 |                | ☿ ☊ ♀          | 13 36                |
|                |                |                      | 16             | ☿ ☊ ♀          | 10 24                |                | ♂ ☊ ♀          | 24 00                |
|                |                |                      |                | ♂ ☊ ♀          | 22 00                |                | ♂ ☊ ♀          | 24 00                |
| OCTOBER        |                |                      |                |                |                      |                | ♂ ☊ ♀          | 9 42                 |
| 1              | ♂ ☊ ♀          | 1 18                 | 17             | ♂ ☊ ♀          | 16 25                |                | ♂ ☊ ♀          | 22 17                |
| 2              | ☿ ☊ ♀          | 20 39                | 18             | ♂ ☊ ♀          | 2 09                 |                |                |                      |
|                | ♂ ☊ ♀          | 00 26                |                |                |                      | 28             | ♂ ☊ ♀          | 5 05                 |
| 3              | ♂ ☊ ♀          | 11 39                | 20             | ♂ ☊ ♀          | 19 26                | 29             | ♂ ☊ ♀          | 8 38                 |
| 4              | ☿ ☊ ♀          | 22 28                | 22             | ☿ ☊ ♀          | 10 04                |                |                |                      |
| 6              | ♂ ☊ ♀          | 19 16                |                | ♂ ☊ ♀          | 24 00                |                |                |                      |
| 11             | ♂ ☊ ♀          | 1 09                 | 24             | ♂ ☊ ♀          | 23 42                |                |                |                      |
|                | ♂ ☊ ♀          | 9 03                 |                |                |                      |                |                |                      |
| 13             | ♂ ☊ ♀          | 18 24                | 25             | ♂ ☊ ♀          | 4 48                 |                |                |                      |
| 14             | ♂ ☊ ♀          | 7 30                 | 26             | ♂ ☊ ♀          | 01 01                |                |                |                      |
|                | ♂ ☊ ♀          | 21 40                |                |                |                      |                |                |                      |
|                | ♂ ☊ ♀          | 22 11                |                | ♂ ☊ ♀          | 4 43                 |                |                |                      |



ग्रहों के युक्तिकालीन क्रान्त्यान्तर, 2016  
Distances apart of all O S in 2016

| दिनांक<br>Date | योग<br>Aspects | समय<br>Time<br>H. M. | क्रान्त्यान्तर<br>Distance | दिनांक<br>Date | योग<br>Aspects | समय<br>Time<br>H. M. | क्रान्त्यान्तर<br>Distance |
|----------------|----------------|----------------------|----------------------------|----------------|----------------|----------------------|----------------------------|
| JANUARY        |                |                      |                            | APRIL          |                |                      |                            |
| 3              | ३ ३ ४          | 1 21                 | 2 24                       | 6              | ३ ३ १          | 13 30                | 0 54                       |
| 7              | ३ ३ १          | 5 24                 | 2 37                       | 8              | ३ ३ १          | 19 10                | 4 44                       |
|                | ३ ३ १          | 10 57                | 3 01                       | 18             | ३ ३ ५          | 8 35                 | 6 59                       |
| 9              | १ ३ १          | 9 41                 | 0 02                       | 25             | ३ ३ ४          | 11 16                | 4 37                       |
| 10             | ३ ३ १          | 23 09                | 1 40                       |                | ३ ३ १          | 1 17                 | 3 52                       |
| 28             | ३ ३ ५          | 5 41                 | 2 24                       |                |                |                      |                            |
| FEBRUARY       |                |                      |                            | MAY            |                |                      |                            |
| 1              | ३ ३ ४          | 15 59                | 2 42                       | 6              | ३ ३ १          | 10 41                | 1 41                       |
| 3              | ३ ३ १          | 1 01                 | 4 03                       | 7              | ३ ३ १          | 7 40                 | 4 15                       |
| 6              | ३ ३ १          | 11 59                | 4 47                       | 13             | ३ ३ १          | 0 40                 | 1 57                       |
|                | ३ ३ १          | 21 09                | 3 45                       | 15             | ३ ३ ५          | 13 32                | 2 22                       |
| 24             | ३ ३ ५          | 8 14                 | 3 32                       | 21             | ३ ३ ४          | 4 13                 | 6 42                       |
| 29             | ३ ३ ४          | 1 25                 | 4 09                       | 22             | ३ ३ १          | 3 50                 | 4 02                       |
| MARCH          |                |                      |                            | JUNE           |                |                      |                            |
| 2              | ३ ३ १          | 12 46                | 3 39                       | 3              | ३ ३ १          | 15 36                | 0 31                       |
| 7              | ३ ३ १          | 14 15                | 3 42                       | 5              | ३ ३ १          | 7 38                 | 4 34                       |
| 8              | ३ ३ १          | 7 59                 | 4 56                       | 11             | ३ ३ ५          | 23 00                | 0 20                       |
| 22             | ३ ३ ५          | 7 57                 | 3 20                       | 17             | ३ ३ ४          | 19 23                | 7 02                       |
| 28             | ३ ३ ४          | 1 42                 | 5 00                       | 19             | ३ ३ १          | 6 37                 | 2 41                       |
| 29             | ३ ३ १          | 20 48                | 3 44                       |                |                |                      |                            |

ग्रहों के युक्तिकालीन क्रान्त्यान्तर, 2016

| दिनांक<br>Date | योग<br>Aspects | समय<br>Time<br>H. M. | क्रान्त्यान्तर<br>Distance | दिनांक<br>Date | योग<br>Aspects | समय<br>Time<br>H. M. | क्रान्त्यान्तर<br>Distance |
|----------------|----------------|----------------------|----------------------------|----------------|----------------|----------------------|----------------------------|
| JULY           |                |                      |                            | OCTOBER        |                |                      |                            |
| 4              | ३ ३ १          | 9 59                 | 5 42                       | 3              | ३ ३ १          | 2 28                 | 5 39                       |
| 5              | ३ ३ १          | 6 39                 | 5 37                       | 6              | ३ ३ १          | 14 14                | 3 42                       |
| 9              | ३ ३ ५          | 15 02                | 1 06                       | 8              | ३ ३ ४          | 16 49                | 7 01                       |
| 14             | ३ ३ ४          | 3 52                 | 8 43                       | 11             | ३ ३ ५          | 15 15                | 12 07                      |
| 16             | ३ ३ १          | 11 15                | 3 08                       | 28             | ३ ३ ५          | 16 13                | 1 12                       |
|                | ३ ३ १          | 3 29                 | 1 21                       | 30             | ३ ३ १          | 6 15                 | 3 13                       |
|                |                |                      |                            |                | ३ ३ १          | 3 42                 | 5 43                       |
| AUGUST         |                |                      |                            | NOVEMBER       |                |                      |                            |
| 4              | ३ ३ १          | 9 43                 | 3 39                       | 2              | ३ ३ १          | 1 39                 | 4 24                       |
|                | ३ ३ १          | 6 14                 | 0 39                       |                |                |                      |                            |
|                |                |                      | 1 29                       | 3              | ३ ३ १          | 11 02                | 7 00                       |
| 6              | ३ ३ ५          | 8 51                 |                            |                |                |                      |                            |
|                |                |                      | 7 18                       | 6              | ३ ३ ४          | 15 27                | 5 16                       |
| 12             | ३ ३ ४          | 6 34                 |                            |                |                |                      |                            |
|                | ३ ३ १          | 18 22                | 3 52                       | 23             | ३ ३ १          | 0 14                 | 3 34                       |
| 22             | ३ ३ ५          | 14 34                | 1 18                       |                |                |                      |                            |
| 24             | ३ ३ १          | 16 57                | 4 19                       | 25             | ३ ३ ५          | 8 51                 | 0 30                       |
| 27             | ३ ३ ५          | 3 59                 | 0 12                       |                |                |                      |                            |
| 29             | ३ ३ १          | 12 02                | 2 15                       | 30             | ३ ३ १          | 13 46                | 3 30                       |
| SEPTEMBER      |                |                      |                            | DECEMBER       |                |                      |                            |
| 2              | ३ ३ ५          | 22 49                | 1 47                       | 1              | ३ ३ १          | 9 38                 | 7 08                       |
|                | ३ ३ १          | 3 30                 | 0 18                       |                |                |                      |                            |
|                | ३ ३ ५          | 3 43                 | 2 05                       | 3              | ३ ३ १          | 15 46                | 5 34                       |
| 3              | ३ ३ १          | 17 00                | 0 30                       | 5              | ३ ३ ४          | 14 19                | 2 27                       |
| 8              | ३ ३ १          | 3 36                 | 4 44                       |                |                |                      |                            |
| 9              | ३ ३ ४          | 20 41                | 8 08                       | 22             | ३ ३ ५          | 0 01                 | 3 13                       |
|                |                |                      |                            |                |                |                      |                            |
| 29             | ३ ३ १          | 15 35                | 0 50                       | 27             | ३ ३ १          | 2 41                 | 10 07                      |
|                |                |                      |                            |                |                |                      |                            |
| 30             | ३ ३ ५          | 22 24                | 0 18                       |                |                |                      |                            |



नाक्षत्र  
काल

७° से २०° अक्षांश के लिए लमनकोष्टक

Table of Ascendants for Latitudes 7° to 20° (contd.)

| Sid. Time | 7°        | 8°       | 9°     | 10°        | 11°    | 12°    | 13°    | 14°    | 15°    | 16°    | 17°    | 18°    | 19°    | 20°    |
|-----------|-----------|----------|--------|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| घ. मि.    |           |          |        |            |        |        |        |        |        |        |        |        |        |        |
| H. M.     |           |          |        |            |        |        |        |        |        |        |        |        |        |        |
| 0         | 0 192 48  | 93 12 93 | 34 94  | 0 94 25 94 | 50 95  | 15 95  | 40 96  | 5 96   | 30 96  | 56 97  | 22 97  | 47 98  | 14     |        |
| 15        | 96 13 96  | 37 97    | 1 97   | 25 97      | 50 98  | 14 98  | 39 99  | 3 99   | 28 99  | 53 100 | 18 100 | 44 101 | 10     | 101 36 |
| 30        | 99 39 100 | 3 100    | 27 100 | 50 101     | 14 101 | 38 102 | 2 102  | 27 102 | 51 103 | 15 103 | 40 104 | 5 104  | 31     | 104 59 |
| 45        | 102 3 103 | 28 103   | 52 104 | 15 104     | 39 105 | 3 105  | 27 105 | 50 106 | 15 106 | 38 107 | 3 107  | 27 107 | 52     | 108 17 |
| 1         | 0 106 31  | 105 54   | 107 16 | 107 40     | 108 3  | 108 26 | 108 49 | 109 13 | 109 36 | 110 0  | 110 23 | 110 47 | 111 11 | 111 36 |
| 15        | 109 58    | 110 20   | 110 42 | 111 5      | 111 28 | 111 51 | 112 13 | 112 36 | 112 59 | 113 21 | 113 45 | 114 8  | 114 31 | 114 54 |
| 30        | 113 24    | 113 47   | 114 9  | 114 31     | 114 53 | 115 15 | 115 37 | 115 59 | 116 21 | 116 43 | 117 6  | 117 28 | 117 51 | 118 14 |
| 45        | 116 54    | 117 14   | 117 36 | 117 58     | 118 19 | 118 40 | 119 2  | 119 23 | 119 45 | 120 6  | 120 27 | 120 49 | 121 11 | 121 32 |
| 2         | 0 120 23  | 120 44   | 121 4  | 121 25     | 121 45 | 122 7  | 122 27 | 122 47 | 123 9  | 123 29 | 123 50 | 124 11 | 124 31 | 124 53 |
| 15        | 123 53    | 124 14   | 124 34 | 124 55     | 125 14 | 125 34 | 125 53 | 126 13 | 126 33 | 126 53 | 127 13 | 127 33 | 127 53 | 128 13 |
| 30        | 127 26    | 127 45   | 128 4  | 128 24     | 128 42 | 129 1  | 129 24 | 129 39 | 129 58 | 130 17 | 130 37 | 130 56 | 131 15 | 131 34 |
| 45        | 131 1     | 131 18   | 131 37 | 131 56     | 132 13 | 132 31 | 132 49 | 133 7  | 133 25 | 133 43 | 134 1  | 134 20 | 134 38 | 134 56 |
| 3         | 0 134 37  | 134 54   | 135 12 | 135 29     | 135 45 | 136 2  | 136 19 | 136 36 | 136 53 | 137 10 | 137 26 | 137 43 | 138 0  | 138 17 |
| 15        | 138 14    | 138 31   | 138 47 | 139 4      | 139 19 | 139 35 | 139 51 | 140 6  | 140 22 | 140 38 | 140 54 | 141 10 | 141 25 | 141 41 |
| 30        | 141 53    | 142 10   | 142 25 | 142 40     | 142 55 | 143 10 | 143 25 | 143 39 | 143 54 | 144 8  | 144 23 | 144 37 | 144 52 | 145 6  |
| 45        | 145 36    | 145 50   | 146 4  | 146 19     | 146 31 | 146 45 | 146 59 | 147 12 | 147 27 | 147 39 | 147 52 | 148 5  | 148 19 | 148 33 |
| 4         | 0 149 20  | 149 33   | 149 45 | 149 59     | 150 10 | 150 22 | 150 35 | 150 47 | 150 59 | 151 11 | 151 23 | 151 35 | 151 46 | 151 58 |
| 15        | 153 6     | 153 17   | 153 29 | 153 40     | 153 50 | 154 0  | 154 11 | 154 22 | 154 33 | 154 43 | 154 55 | 155 5  | 155 15 | 155 26 |
| 30        | 156 54    | 157 3    | 157 12 | 157 22     | 157 32 | 157 41 | 157 51 | 158 0  | 158 9  | 158 19 | 158 29 | 158 37 | 158 46 | 158 55 |
| 45        | 160 41    | 160 51   | 161 2  | 161 12     | 161 18 | 161 27 | 161 35 | 161 42 | 161 50 | 161 58 | 162 5  | 162 13 | 162 20 | 162 28 |
| 5         | 0 164 33  | 164 39   | 164 45 | 164 51     | 164 58 | 165 4  | 165 11 | 165 17 | 165 23 | 165 30 | 165 36 | 165 42 | 165 49 | 165 55 |
| 15        | 168 22    | 168 28   | 168 33 | 168 38     | 168 43 | 168 47 | 168 52 | 168 57 | 169 2  | 169 7  | 169 11 | 169 16 | 169 20 | 169 25 |
| 30        | 172 16    | 172 19   | 172 21 | 172 24     | 172 28 | 172 31 | 172 35 | 172 37 | 172 40 | 172 44 | 172 47 | 172 51 | 172 54 | 172 57 |
| 45        | 176 6     | 176 9    | 176 11 | 176 12     | 176 14 | 176 15 | 176 18 | 176 19 | 176 20 | 176 22 | 176 23 | 176 24 | 176 27 | 176 28 |
| 6         | 0 180 0   | 180 0    | 180 0  | 180 0      | 180 0  | 180 0  | 180 0  | 180 0  | 180 0  | 180 0  | 180 0  | 180 0  | 180 0  | 180 0  |

नाक्षत्र  
काल

७° से २०° अक्षांश के लिए लमनकोष्टक

Table of Ascendants for Latitudes 7° to 20° (contd.)

| Sid. Time | 7°       | 8°     | 9°     | 10°    | 11°    | 12°    | 13°    | 14°    | 15°    | 16°    | 17°    | 18°    | 19°    | 20°    |
|-----------|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| घ. मि.    |          |        |        |        |        |        |        |        |        |        |        |        |        |        |
| H. M.     |          |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 6         | 0 180 0  | 180 0  | 180 0  | 180 0  | 180 0  | 180 0  | 180 0  | 180 0  | 180 0  | 180 0  | 180 0  | 180 0  | 180 0  | 180 0  |
| 15        | 183 53   | 183 51 | 183 49 | 183 48 | 183 46 | 183 45 | 183 42 | 183 41 | 183 40 | 183 38 | 183 37 | 183 36 | 183 33 | 183 32 |
| 30        | 187 45   | 187 41 | 187 39 | 187 36 | 187 32 | 187 29 | 187 25 | 187 23 | 187 20 | 187 16 | 187 13 | 187 9  | 187 6  | 187 03 |
| 45        | 191 36   | 191 32 | 191 27 | 191 22 | 191 17 | 191 13 | 191 8  | 191 3  | 190 58 | 190 53 | 190 49 | 190 44 | 190 35 | 190 35 |
| 7         | 0 195 27 | 195 22 | 195 15 | 195 9  | 195 2  | 194 56 | 194 39 | 194 43 | 194 37 | 194 30 | 194 24 | 194 18 | 194 11 | 194 05 |
| 15        | 199 19   | 199 10 | 199 2  | 198 52 | 198 46 | 198 37 | 198 25 | 198 18 | 198 14 | 198 6  | 198 0  | 197 51 | 197 44 | 197 32 |
| 30        | 203 7    | 202 57 | 202 48 | 202 38 | 202 28 | 202 19 | 202 9  | 202 0  | 201 51 | 201 41 | 201 32 | 201 23 | 201 14 | 201 05 |
| 45        | 206 55   | 206 43 | 206 31 | 206 20 | 206 10 | 205 59 | 205 49 | 205 38 | 205 27 | 205 17 | 205 5  | 204 55 | 204 45 | 204 34 |
| 8         | 0 210 40 | 210 27 | 210 15 | 210 1  | 209 50 | 209 38 | 209 25 | 209 13 | 209 1  | 208 49 | 208 37 | 208 25 | 208 14 | 208 02 |
| 15        | 214 24   | 214 10 | 213 56 | 213 41 | 213 29 | 213 15 | 213 1  | 212 48 | 212 33 | 212 21 | 212 8  | 211 55 | 211 41 | 211 28 |
| 30        | 218 4    | 217 50 | 217 35 | 217 20 | 217 5  | 216 50 | 216 35 | 216 21 | 216 6  | 215 52 | 215 37 | 215 23 | 215 8  | 214 54 |
| 45        | 221 46   | 221 30 | 221 13 | 220 56 | 220 41 | 220 25 | 220 9  | 219 54 | 219 38 | 219 22 | 219 6  | 218 50 | 218 35 | 218 19 |
| 9         | 0 225 22 | 225 6  | 224 49 | 224 31 | 224 15 | 223 58 | 223 41 | 223 24 | 223 7  | 222 50 | 222 34 | 222 17 | 222 0  | 221 43 |
| 15        | 229 0    | 228 42 | 228 23 | 228 4  | 227 47 | 227 29 | 227 11 | 226 53 | 226 35 | 226 17 | 225 59 | 225 40 | 225 22 | 225 04 |
| 30        | 232 34   | 232 15 | 231 56 | 231 36 | 231 18 | 230 59 | 230 40 | 230 21 | 230 2  | 229 43 | 229 23 | 229 4  | 228 45 | 228 26 |
| 45        | 236 6    | 235 46 | 235 26 | 235 5  | 234 46 | 234 26 | 234 7  | 233 47 | 233 27 | 233 7  | 232 47 | 232 27 | 232 7  | 231 47 |
| 10        | 0 239 37 | 239 17 | 238 56 | 238 35 | 238 15 | 237 53 | 237 33 | 237 13 | 236 51 | 236 31 | 236 10 | 235 49 | 235 29 | 235 07 |
| 15        | 243 7    | 242 46 | 242 24 | 242 2  | 241 41 | 241 20 | 240 58 | 240 37 | 240 15 | 239 54 | 239 33 | 239 11 | 238 50 | 238 28 |
| 30        | 246 36   | 246 13 | 245 51 | 245 29 | 245 7  | 244 45 | 244 23 | 244 1  | 243 39 | 243 17 | 242 54 | 242 32 | 242 9  | 241 46 |
| 45        | 250 2    | 249 40 | 249 18 | 248 55 | 248 32 | 248 9  | 247 47 | 247 25 | 247 1  | 246 39 | 246 15 | 245 52 | 245 29 | 245 6  |
| 11        | 0 253 29 | 253 7  | 252 44 | 252 20 | 251 57 | 251 34 | 251 11 | 250 47 | 250 24 | 250 0  | 249 37 | 249 13 | 248 49 | 248 24 |
| 15        | 256 56   | 256 32 | 256 8  | 255 45 | 255 21 | 254 57 | 254 33 | 254 10 | 253 45 | 253 22 | 252 57 | 252 33 | 252 8  | 251 43 |
| 30        | 260 21   | 259 57 | 259 34 | 259 10 | 258 46 | 258 22 | 257 58 | 257 35 | 257 9  | 256 45 | 256 20 | 255 55 | 255 29 | 255 03 |
| 45        | 263 47   | 263 23 | 262 59 | 262 35 | 262 10 | 261 46 | 261 21 | 260 57 | 260 32 | 260 7  | 259 42 | 259 16 | 258 50 | 258 24 |
| 12        | 0 267 13 | 266 48 | 266 23 | 265 00 | 265 35 | 265 10 | 264 45 | 264 20 | 263 55 | 263 30 | 263 4  | 262 38 | 262 13 | 261 46 |



७° से २०° अक्षांश के लिए लमकोष्टक  
Table of Ascendants for Latitudes 7° to 20° (contd.)

| Sid. Time | 7°       | 8°     | 9°     | 10°    | 11°    | 12°    | 13°    | 14°    | 15°    | 16°    | 17°    | 18°    | 19°    | 20°    |
|-----------|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| घ. मि.    |          |        |        |        |        |        |        |        |        |        |        |        |        |        |
| H. M.     | 0        | 1      | 0      | 1      | 0      | 1      | 0      | 1      | 0      | 1      | 0      | 1      | 0      | 1      |
| 12        | 0 267 13 | 266 48 | 266 23 | 266 0  | 265 35 | 265 10 | 264 45 | 264 20 | 263 55 | 263 30 | 263 4  | 263 38 | 262 13 | 261 46 |
| 15        | 270 38   | 270 14 | 269 49 | 269 25 | 269 0  | 268 35 | 268 10 | 267 41 | 267 19 | 266 53 | 266 27 | 266 1  | 265 34 | 265 8  |
| 30        | 274 4    | 273 41 | 273 17 | 272 51 | 272 27 | 272 2  | 271 36 | 271 19 | 270 47 | 270 21 | 269 55 | 269 27 | 269 0  | 268 34 |
| 45        | 277 34   | 277 9  | 276 44 | 276 20 | 275 55 | 275 30 | 275 4  | 274 39 | 274 13 | 273 47 | 273 21 | 272 54 | 272 27 | 271 59 |
| 13        | 0 281 3  | 280 38 | 280 14 | 279 50 | 279 25 | 279 0  | 278 35 | 278 1  | 277 43 | 277 17 | 276 51 | 276 24 | 275 57 | 275 29 |
| 15        | 284 34   | 284 10 | 283 45 | 283 21 | 282 56 | 282 31 | 282 6  | 281 45 | 281 15 | 280 48 | 280 22 | 279 55 | 279 28 | 279 0  |
| 30        | 288 3    | 287 44 | 287 19 | 286 55 | 286 30 | 286 6  | 285 41 | 285 13 | 284 50 | 284 24 | 283 58 | 283 30 | 283 3  | 282 36 |
| 45        | 291 41   | 291 19 | 290 55 | 290 32 | 290 7  | 289 43 | 289 18 | 288 54 | 288 27 | 288 0  | 287 35 | 287 8  | 286 41 | 286 15 |
| 14        | 0 295 19 | 294 56 | 294 33 | 294 11 | 293 46 | 293 22 | 292 58 | 292 36 | 292 8  | 291 42 | 291 17 | 290 50 | 290 23 | 289 56 |
| 15        | 299 0    | 298 38 | 298 15 | 297 52 | 297 28 | 297 5  | 296 41 | 296 14 | 295 52 | 295 27 | 295 2  | 294 35 | 294 9  | 293 41 |
| 30        | 302 43   | 302 21 | 301 59 | 301 37 | 301 14 | 300 51 | 300 28 | 300 6  | 299 40 | 299 15 | 298 50 | 298 25 | 297 59 | 297 32 |
| 45        | 306 29   | 306 8  | 305 46 | 305 27 | 305 3  | 304 41 | 304 18 | 303 51 | 303 28 | 303 5  | 302 44 | 302 19 | 301 54 | 301 28 |
| 15        | 0 310 17 | 309 59 | 309 38 | 309 17 | 308 56 | 308 35 | 308 13 | 307 51 | 307 28 | 307 5  | 306 41 | 306 17 | 305 52 | 305 27 |
| 15        | 314 11   | 313 52 | 313 32 | 313 12 | 312 52 | 312 32 | 312 12 | 311 55 | 311 31 | 311 6  | 310 45 | 310 22 | 309 58 | 309 34 |
| 30        | 318 7    | 317 50 | 317 32 | 317 12 | 316 55 | 316 34 | 316 15 | 315 53 | 315 35 | 315 15 | 314 53 | 314 31 | 314 9  | 313 46 |
| 45        | 322 6    | 321 50 | 321 32 | 321 18 | 320 58 | 320 41 | 320 23 | 320 7  | 319 45 | 319 25 | 319 5  | 318 45 | 318 24 | 318 3  |
| 16        | 0 326 11 | 325 55 | 325 39 | 325 24 | 325 7  | 324 51 | 324 34 | 324 14 | 324 0  | 323 42 | 323 23 | 323 5  | 322 45 | 322 25 |
| 15        | 330 14   | 330 2  | 329 48 | 329 33 | 329 20 | 329 5  | 328 49 | 328 36 | 328 18 | 328 2  | 327 46 | 327 29 | 327 10 | 326 52 |
| 30        | 334 25   | 334 11 | 334 0  | 333 47 | 333 35 | 333 22 | 333 9  | 332 59 | 332 41 | 332 28 | 332 13 | 331 58 | 331 42 | 331 28 |
| 45        | 338 37   | 338 25 | 338 15 | 338 5  | 337 54 | 337 42 | 337 31 | 337 18 | 337 8  | 336 56 | 336 43 | 336 30 | 336 17 | 336 2  |
| 17        | 0 342 49 | 342 41 | 342 33 | 342 25 | 342 15 | 342 6  | 341 58 | 341 48 | 341 38 | 341 28 | 341 17 | 341 7  | 340 56 | 340 45 |
| 15        | 347 5    | 346 58 | 346 52 | 346 47 | 346 39 | 346 33 | 346 25 | 346 11 | 346 1  | 346 3  | 346 55 | 345 47 | 345 39 | 345 31 |
| 30        | 351 22   | 351 18 | 351 15 | 351 11 | 351 6  | 351 1  | 350 56 | 350 51 | 350 46 | 350 41 | 350 36 | 350 30 | 350 25 | 350 20 |
| 45        | 355 42   | 355 40 | 355 38 | 355 34 | 355 33 | 355 31 | 355 29 | 355 28 | 355 23 | 355 20 | 355 17 | 355 15 | 355 13 | 355 9  |
| 18        | 0 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      |

७° से २०° अक्षांश के लिए लमकोष्टक  
Table of Ascendants for Latitudes 7° to 20° (contd.)

| Sid. Time | 7°    | 8°    | 9°    | 10°   | 11°   | 12°   | 13°   | 14°   | 15°   | 16°   | 17°   | 18°   | 19°   | 20°   |
|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| घ. मि.    |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| H. M.     | 0     | 1     | 0     | 1     | 0     | 1     | 0     | 1     | 0     | 1     | 0     | 1     | 0     | 1     |
| 18        | 0 0   | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     |
| 15        | 4 9   | 4 20  | 4 23  | 4 26  | 4 27  | 4 29  | 4 31  | 4 34  | 4 37  | 4 40  | 4 44  | 4 45  | 4 47  | 4 50  |
| 30        | 8 37  | 8 42  | 8 46  | 8 49  | 8 54  | 8 59  | 9 4   | 9 9   | 9 14  | 9 19  | 9 25  | 9 30  | 9 35  | 9 40  |
| 45        | 12 56 | 13 2  | 13 8  | 13 13 | 13 17 | 13 21 | 13 27 | 13 35 | 13 42 | 13 49 | 13 57 | 14 3  | 14 14 | 14 29 |
| 19        | 0 17  | 14 17 | 17 27 | 17 35 | 17 45 | 17 54 | 18 2  | 18 12 | 18 22 | 18 32 | 18 47 | 18 53 | 19 4  | 19 15 |
| 15        | 21 27 | 21 35 | 21 45 | 21 55 | 22 6  | 22 18 | 22 29 | 22 41 | 22 52 | 23 4  | 23 17 | 23 30 | 23 43 | 23 58 |
| 30        | 25 35 | 25 48 | 26 0  | 26 13 | 26 26 | 26 38 | 26 51 | 27 4  | 27 19 | 27 32 | 27 44 | 28 2  | 28 18 | 28 32 |
| 45        | 29 46 | 29 58 | 30 12 | 30 27 | 30 40 | 30 55 | 31 11 | 31 26 | 31 42 | 31 58 | 32 17 | 32 31 | 32 50 | 33 8  |
| 20        | 0 33  | 51 34 | 5 34  | 5 42  | 5 53  | 6 3   | 6 19  | 6 35  | 6 51  | 7 7   | 7 23  | 7 36  | 7 55  | 8 14  |
| 15        | 37 54 | 38 10 | 38 27 | 38 52 | 39 2  | 39 19 | 39 37 | 39 57 | 40 15 | 40 35 | 40 55 | 41 15 | 41 36 | 41 57 |
| 30        | 41 53 | 42 10 | 42 28 | 42 48 | 43 5  | 43 26 | 43 45 | 44 5  | 44 25 | 44 46 | 45 7  | 45 29 | 45 51 | 46 14 |
| 45        | 45 48 | 46 9  | 46 28 | 46 48 | 47 8  | 47 28 | 47 48 | 48 9  | 48 30 | 48 51 | 49 15 | 49 38 | 50 2  | 50 26 |
| 21        | 0 49  | 42 50 | 2 50  | 22 50 | 43 51 | 4 51  | 25 51 | 47 52 | 9 52  | 32 52 | 55 53 | 19 53 | 43 54 | 8 54  |
| 15        | 53 30 | 53 52 | 54 14 | 54 33 | 54 57 | 55 19 | 55 42 | 56 5  | 56 28 | 56 52 | 57 16 | 57 41 | 58 6  | 58 32 |
| 30        | 57 17 | 57 39 | 58 1  | 58 23 | 58 46 | 59 9  | 59 32 | 59 56 | 60 45 | 61 10 | 61 35 | 62 1  | 62 28 | 62 58 |
| 45        | 61 57 | 62 21 | 62 45 | 62 8  | 62 32 | 62 56 | 63 19 | 63 44 | 64 8  | 64 33 | 64 58 | 65 25 | 65 51 | 66 19 |
| 22        | 0 64  | 41 65 | 4 65  | 27 65 | 49 66 | 14 66 | 38 67 | 2 67  | 26 67 | 52 68 | 18 68 | 43 69 | 10 69 | 37 70 |
| 15        | 68 19 | 68 41 | 69 5  | 69 28 | 69 53 | 70 17 | 70 42 | 71 7  | 71 33 | 72 0  | 72 25 | 72 52 | 73 19 | 73 45 |
| 30        | 71 53 | 72 17 | 72 41 | 73 5  | 73 30 | 73 54 | 74 19 | 74 45 | 75 10 | 75 36 | 76 2  | 76 30 | 76 57 | 77 24 |
| 45        | 75 27 | 75 50 | 76 15 | 76 39 | 77 4  | 77 29 | 77 54 | 78 19 | 78 45 | 79 12 | 79 38 | 80 5  | 80 32 | 81 0  |
| 23        | 0 78  | 58 79 | 21 79 | 46 80 | 10 80 | 35 81 | 0 81  | 25 81 | 51 82 | 17 82 | 43 83 | 9 83  | 36 84 | 3 84  |
| 15        | 82 28 | 82 51 | 83 16 | 83 40 | 84 5  | 30 84 | 56 85 | 21 85 | 47 86 | 13 86 | 39 87 | 6 87  | 33 88 | 1     |
| 30        | 85 45 | 86 19 | 86 43 | 87 9  | 87 33 | 87 58 | 88 24 | 88 49 | 89 17 | 89 39 | 90 5  | 90 33 | 91 0  | 91 26 |
| 45        | 89 21 | 89 46 | 90 11 | 90 35 | 91 0  | 91 25 | 91 50 | 92 15 | 92 41 | 93 7  | 93 33 | 93 59 | 94 26 | 94 52 |
| 24        | 0 92  | 48 93 | 12 93 | 34 94 | 0 94  | 25 94 | 50 95 | 15 95 | 40 96 | 5 96  | 30 96 | 56 97 | 22 97 | 47 98 |



नाक्षत्र  
काल२१° से ३४° अक्षांश के लिए लग्नकोषक  
Table of Ascendants for Latitudes 21° to 34° (contd.)

| Sid. Time | 21°      | 22°     | 23°    | 24°      | 25°        | 26°       | 27°           | 28°           | 29°          | 30°    | 31°    | 32°    | 33°    | 34°    |
|-----------|----------|---------|--------|----------|------------|-----------|---------------|---------------|--------------|--------|--------|--------|--------|--------|
| घ. मि.    |          |         |        |          |            |           |               |               |              |        |        |        |        |        |
| H. M.     | 0        | 1       | 0      | 1        | 0          | 1         | 0             | 1             | 0            | 1      | 0      | 1      | 0      | 1      |
| 0         | 0 98 41  | 99 8 99 | 35 100 | 3 100 31 | 100 39 101 | 27 101 56 | 102 34 102 57 | 103 26 103 57 | 104 29 105 2 |        |        |        |        |        |
| 15        | 102 2    | 102 28  | 102 55 | 103 22   | 103 49     | 104 17    | 104 45        | 105 18        | 105 43       | 106 12 | 106 41 | 107 11 | 107 42 | 108 13 |
| 30        | 105 22   | 105 48  | 106 14 | 106 40   | 107 7      | 107 33    | 108 2         | 108 29        | 108 58       | 109 26 | 109 54 | 110 24 | 110 53 | 111 21 |
| 45        | 108 42   | 109 7   | 109 32 | 109 57   | 110 23     | 110 49    | 111 16        | 111 43        | 112 11       | 112 38 | 113 6  | 113 34 | 114 2  | 114 38 |
| 1         | 0 112 0  | 112 24  | 112 49 | 113 14   | 113 39     | 114 5     | 114 31        | 114 56        | 115 22       | 115 49 | 116 16 | 116 43 | 117 10 | 117 35 |
| 15        | 115 18   | 115 42  | 116 16 | 116 30   | 116 54     | 117 19    | 117 44        | 118 9         | 118 34       | 119 0  | 119 25 | 119 50 | 120 18 | 120 41 |
| 30        | 118 39   | 119 0   | 119 23 | 119 46   | 120 10     | 120 33    | 120 57        | 121 21        | 121 46       | 122 11 | 122 35 | 123 0  | 123 25 | 123 50 |
| 45        | 121 54   | 122 17  | 122 38 | 123 2    | 123 24     | 123 48    | 124 9         | 124 32        | 124 56       | 125 21 | 125 44 | 126 8  | 126 32 | 126 51 |
| 2         | 0 125 14 | 125 35  | 125 57 | 126 18   | 126 39     | 127 1     | 127 23        | 127 45        | 128 8        | 128 31 | 128 54 | 129 17 | 129 37 | 130 1  |
| 15        | 128 31   | 128 53  | 129 14 | 129 34   | 129 54     | 130 15    | 130 36        | 130 57        | 131 19       | 131 40 | 132 2  | 132 24 | 132 45 | 133 7  |
| 30        | 131 54   | 132 13  | 132 35 | 132 51   | 133 10     | 133 30    | 133 50        | 134 9         | 134 29       | 134 50 | 135 11 | 135 30 | 135 51 | 136 2  |
| 45        | 135 15   | 135 32  | 135 50 | 136 7    | 136 26     | 136 44    | 137 3         | 137 22        | 137 41       | 138 1  | 138 18 | 138 37 | 138 57 | 139 5  |
| 3         | 0 138 34 | 138 52  | 139 9  | 139 26   | 139 43     | 140 0     | 140 17        | 140 34        | 140 51       | 141 11 | 141 28 | 141 45 | 142 3  | 142 20 |
| 15        | 141 57   | 142 13  | 142 29 | 142 45   | 143 1      | 143 17    | 143 33        | 143 49        | 144 5        | 144 23 | 144 39 | 144 55 | 145 12 | 145 34 |
| 30        | 145 20   | 145 35  | 145 50 | 146 5    | 146 19     | 146 33    | 146 48        | 147 3         | 147 18       | 147 33 | 147 49 | 148 4  | 148 19 | 148 30 |
| 45        | 148 45   | 148 59  | 149 12 | 149 26   | 149 38     | 149 51    | 150 5         | 150 19        | 150 33       | 150 47 | 150 59 | 151 13 | 151 28 | 151 40 |
| 4         | 0 152 10 | 152 22  | 152 32 | 152 46   | 152 58     | 153 10    | 153 22        | 153 35        | 153 47       | 153 59 | 154 11 | 154 24 | 154 36 | 154 45 |
| 15        | 155 36   | 155 47  | 155 58 | 156 8    | 156 19     | 156 30    | 156 40        | 156 51        | 157 2        | 157 13 | 157 23 | 157 34 | 157 45 | 157 54 |
| 30        | 159 4    | 159 13  | 159 22 | 159 31   | 159 40     | 159 50    | 159 59        | 160 8         | 160 18       | 160 27 | 160 36 | 160 46 | 160 55 | 161 2  |
| 45        | 162 35   | 162 44  | 162 50 | 162 56   | 163 3      | 163 10    | 163 18        | 163 25        | 163 33       | 163 41 | 163 49 | 163 57 | 164 6  | 164 12 |
| 5         | 0 166 2  | 166 8   | 166 14 | 166 20   | 166 26     | 166 32    | 166 38        | 166 44        | 166 50       | 166 57 | 167 3  | 167 9  | 167 16 | 167 21 |
| 15        | 169 30   | 169 35  | 169 40 | 169 44   | 169 48     | 169 53    | 169 58        | 170 2         | 170 7        | 170 13 | 170 17 | 170 22 | 170 26 | 170 30 |
| 30        | 173 0    | 173 3   | 173 6  | 173 9    | 173 12     | 173 15    | 173 19        | 173 21        | 173 24       | 173 28 | 173 31 | 173 34 | 173 37 | 173 40 |
| 45        | 176 29   | 176 32  | 176 33 | 176 34   | 176 36     | 176 38    | 176 40        | 176 41        | 176 43       | 176 44 | 176 45 | 176 47 | 176 50 | 176 50 |
| 6         | 0 180 0  | 180 0   | 180 0  | 180 0    | 180 0      | 180 0     | 180 0         | 180 0         | 180 0        | 180 0  | 180 0  | 180 0  | 180 0  | 180 0  |

नाक्षत्र  
काल२१° से ३४° अक्षांश के लिए लग्नकोषक  
Table of Ascendants for Latitudes 21° to 34° (contd.)

| Sid. Time | 21°      | 22°    | 23°    | 24°    | 25°    | 26°    | 27°    | 28°    | 29°    | 30°    | 31°    | 32°    | 33°    | 34°    |
|-----------|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| घ. मि.    |          |        |        |        |        |        |        |        |        |        |        |        |        |        |
| H. M.     | 0        | 1      | 0      | 1      | 0      | 1      | 0      | 1      | 0      | 1      | 0      | 1      | 0      | 1      |
| 6         | 0 180 0  | 180 0  | 180 0  | 180 0  | 180 0  | 180 0  | 180 0  | 180 0  | 180 0  | 180 0  | 180 0  | 180 0  | 180 0  | 180 0  |
| 15        | 183 31   | 183 28 | 183 27 | 183 26 | 183 24 | 183 22 | 183 20 | 183 19 | 183 17 | 183 16 | 183 15 | 183 13 | 183 10 | 183 10 |
| 30        | 186 0    | 186 57 | 186 54 | 186 51 | 186 48 | 186 45 | 186 41 | 186 39 | 186 36 | 186 32 | 186 29 | 186 26 | 186 23 | 186 20 |
| 45        | 190 30   | 190 25 | 190 20 | 190 16 | 190 12 | 190 7  | 190 2  | 189 58 | 189 53 | 189 47 | 189 43 | 189 38 | 189 34 | 189 29 |
| 7         | 0 193 58 | 193 52 | 193 46 | 193 40 | 193 34 | 193 28 | 193 22 | 193 16 | 193 10 | 193 3  | 192 57 | 192 51 | 192 44 | 192 38 |
| 15        | 197 29   | 197 20 | 197 14 | 197 1  | 196 57 | 196 50 | 196 42 | 196 31 | 196 27 | 196 19 | 196 11 | 196 3  | 195 54 | 195 48 |
| 30        | 200 56   | 200 47 | 200 38 | 200 29 | 200 20 | 200 10 | 200 1  | 199 51 | 199 42 | 199 33 | 199 24 | 199 14 | 198 56 | 198 50 |
| 45        | 204 24   | 204 13 | 204 2  | 203 52 | 203 41 | 203 30 | 203 20 | 203 9  | 202 58 | 202 47 | 202 37 | 202 26 | 202 15 | 202 5  |
| 8         | 0 207 50 | 207 38 | 207 27 | 207 14 | 207 2  | 206 50 | 206 38 | 206 25 | 206 13 | 206 1  | 205 49 | 205 36 | 205 24 | 205 12 |
| 15        | 211 15   | 211 1  | 210 48 | 210 34 | 210 22 | 210 9  | 209 55 | 209 41 | 209 27 | 209 14 | 209 1  | 208 47 | 208 32 | 208 20 |
| 30        | 214 40   | 214 25 | 214 10 | 213 55 | 213 42 | 213 27 | 213 12 | 212 57 | 212 42 | 212 27 | 212 11 | 211 56 | 211 41 | 211 26 |
| 45        | 218 3    | 217 47 | 217 31 | 217 15 | 216 58 | 216 43 | 216 27 | 216 11 | 215 55 | 215 37 | 215 21 | 215 5  | 214 48 | 214 30 |
| 9         | 0 221 26 | 221 8  | 220 51 | 220 34 | 220 17 | 220 0  | 219 43 | 219 26 | 219 9  | 218 49 | 218 32 | 218 15 | 217 57 | 217 39 |
| 15        | 224 46   | 224 28 | 224 10 | 223 53 | 223 34 | 223 16 | 222 57 | 222 38 | 222 19 | 221 59 | 221 42 | 221 23 | 221 3  | 220 45 |
| 30        | 228 4    | 227 47 | 227 28 | 227 9  | 226 50 | 226 30 | 226 10 | 225 51 | 225 31 | 225 10 | 224 50 | 224 30 | 224 9  | 223 48 |
| 45        | 231 29   | 231 7  | 230 46 | 230 26 | 230 6  | 229 45 | 229 24 | 229 3  | 228 41 | 228 20 | 227 57 | 227 37 | 227 15 | 226 53 |
| 10        | 0 234 45 | 234 25 | 234 3  | 233 42 | 233 21 | 232 59 | 232 37 | 232 15 | 231 52 | 231 29 | 231 6  | 230 45 | 230 23 | 229 59 |
| 15        | 238 6    | 237 43 | 237 21 | 236 58 | 236 36 | 236 13 | 235 51 | 235 28 | 235 4  | 234 39 | 234 16 | 233 53 | 233 28 | 233 9  |
| 30        | 241 22   | 241 0  | 240 37 | 240 14 | 239 50 | 239 27 | 239 3  | 238 39 | 238 14 | 237 49 | 237 25 | 237 0  | 236 35 | 236 15 |
| 45        | 244 32   | 244 18 | 243 54 | 243 30 | 243 6  | 242 41 | 242 16 | 241 51 | 241 26 | 241 0  | 240 35 | 240 9  | 239 42 | 239 22 |
| 11        | 0 248 0  | 247 36 | 247 11 | 246 48 | 246 21 | 245 55 | 245 29 | 245 3  | 244 38 | 244 11 | 243 44 | 243 17 | 242 50 | 242 28 |
| 15        | 251 18   | 250 53 | 250 28 | 250 3  | 249 37 | 249 11 | 248 44 | 248 17 | 247 49 | 247 22 | 246 54 | 246 26 | 245 58 | 245 37 |
| 30        | 254 38   | 254 12 | 253 46 | 253 20 | 252 32 | 252 6  | 251 58 | 251 31 | 250 54 | 250 27 | 249 50 | 249 23 | 248 47 | 248 17 |
| 45        | 257 58   | 257 32 | 257 5  | 256 38 | 256 11 | 255 43 | 255 15 | 254 46 | 254 17 | 253 48 | 253 19 | 252 49 | 252 18 | 251 58 |
| 12        | 0 261 19 | 260 52 | 260 25 | 259 57 | 259 29 | 259 1  | 258 31 | 258 4  | 257 34 | 257 3  | 256 34 | 256 3  | 255 31 | 255 00 |



राष्ट्र से ३४° अक्षांश के लिए लम्बकोणिक  
Table of Ascendants for Latitudes 21° to 34° (contd.)

| नाक्षत्र<br>काल | Sid.<br>Time | 21°    | 22°    | 23°    | 24°    | 25°    | 26°    | 27°    | 28°    | 29°    | 30°    | 31°    | 32°     | 33°    | 34°    |
|-----------------|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|--------|--------|
| घ. मि.          |              |        |        |        |        |        |        |        |        |        |        |        |         |        |        |
| H. M.           |              |        |        |        |        |        |        |        |        |        |        |        |         |        |        |
| 0               | 1            | 0      | 1      | 0      | 1      | 0      | 1      | 0      | 1      | 0      | 1      | 0      | 1       | 0      | 1      |
| 12              | 0            | 261 19 | 260 52 | 259 25 | 258 57 | 257 29 | 256 1  | 254 31 | 252 4  | 250 34 | 247 3  | 244 34 | 241 256 | 237 3  | 234 58 |
| 15              | 264 41       | 263 14 | 261 45 | 259 16 | 257 47 | 255 18 | 253 49 | 251 20 | 248 51 | 246 22 | 243 53 | 241 24 | 238 55  | 236 26 | 233 57 |
| 30              | 268 6        | 266 38 | 264 9  | 261 40 | 259 11 | 256 42 | 254 13 | 251 44 | 249 15 | 246 46 | 244 17 | 241 48 | 239 19  | 236 50 | 234 21 |
| 45              | 271 32       | 271 4  | 270 35 | 270 6  | 269 38 | 267 9  | 265 40 | 263 11 | 260 42 | 258 13 | 255 44 | 253 15 | 250 46  | 248 17 | 245 48 |
| 13              | 0            | 275 1  | 274 33 | 273 4  | 272 35 | 271 6  | 270 37 | 269 48 | 268 59 | 267 7  | 265 38 | 263 9  | 260 40  | 258 11 | 255 42 |
| 15              | 278 32       | 278 3  | 277 35 | 277 5  | 276 36 | 275 4  | 274 27 | 273 34 | 272 41 | 271 28 | 269 59 | 267 30 | 264 41  | 262 12 | 259 43 |
| 30              | 282 7        | 281 38 | 280 9  | 279 8  | 278 39 | 277 50 | 276 41 | 275 52 | 274 63 | 273 14 | 271 45 | 269 16 | 266 47  | 264 18 | 261 49 |
| 45              | 285 46       | 285 17 | 284 48 | 284 18 | 283 49 | 282 20 | 280 51 | 278 22 | 275 53 | 273 24 | 270 55 | 268 26 | 265 57  | 263 28 | 260 59 |
| 14              | 0            | 289 28 | 288 54 | 288 30 | 287 0  | 285 59 | 284 29 | 282 59 | 280 30 | 277 61 | 275 32 | 272 63 | 269 34  | 266 65 | 263 36 |
| 15              | 293 14       | 292 46 | 292 17 | 291 48 | 291 18 | 290 49 | 289 20 | 287 50 | 286 21 | 284 52 | 282 23 | 279 54 | 277 25  | 274 56 | 272 27 |
| 30              | 297 5        | 296 38 | 296 9  | 295 40 | 294 11 | 292 42 | 290 13 | 287 44 | 285 15 | 282 46 | 280 17 | 277 48 | 275 19  | 272 50 | 269 21 |
| 45              | 301 2        | 300 34 | 300 7  | 299 38 | 298 9  | 296 40 | 294 11 | 291 42 | 289 13 | 286 44 | 284 15 | 281 46 | 279 17  | 276 48 | 274 19 |
| 15              | 0            | 305 2  | 304 36 | 304 3  | 303 41 | 302 13 | 300 44 | 298 15 | 295 46 | 293 17 | 290 48 | 288 19 | 285 50  | 283 21 | 280 52 |
| 30              | 309 9        | 308 44 | 308 18 | 307 51 | 307 24 | 306 55 | 305 26 | 303 57 | 301 28 | 298 59 | 296 30 | 293 61 | 291 32  | 288 63 | 286 34 |
| 45              | 313 22       | 312 59 | 312 34 | 312 8  | 311 42 | 310 13 | 308 44 | 306 15 | 303 46 | 301 17 | 298 48 | 296 19 | 293 50  | 291 21 | 288 52 |
| 16              | 0            | 317 41 | 317 18 | 316 56 | 316 31 | 315 6  | 314 31 | 313 6  | 311 37 | 309 8  | 306 39 | 304 10 | 301 41  | 299 12 | 296 43 |
| 30              | 322 5        | 321 43 | 321 21 | 320 59 | 320 36 | 319 11 | 317 42 | 315 13 | 312 44 | 310 15 | 307 46 | 305 17 | 302 48  | 300 19 | 297 50 |
| 45              | 326 33       | 326 15 | 325 56 | 325 35 | 325 14 | 324 52 | 324 30 | 324 8  | 323 36 | 322 16 | 320 47 | 318 18 | 315 49  | 313 20 | 310 51 |
| 30              | 331 9        | 330 53 | 330 35 | 330 16 | 329 57 | 329 38 | 329 18 | 328 57 | 328 35 | 327 12 | 324 43 | 322 14 | 319 45  | 317 16 | 314 47 |
| 45              | 335 49       | 335 35 | 335 19 | 335 3  | 334 48 | 334 31 | 334 14 | 333 55 | 333 36 | 332 17 | 330 48 | 328 19 | 325 50  | 323 21 | 320 52 |
| 17              | 0            | 340 34 | 340 22 | 340 9  | 339 56 | 339 43 | 339 30 | 339 16 | 338 0  | 336 31 | 334 2  | 331 33 | 328 4   | 325 35 | 322 66 |
| 30              | 345 22       | 345 13 | 345 3  | 344 54 | 344 44 | 344 34 | 344 24 | 344 14 | 343 59 | 343 46 | 343 33 | 343 19 | 342 5   | 341 41 | 340 27 |
| 45              | 350 14       | 350 7  | 350 1  | 349 54 | 349 47 | 349 41 | 349 34 | 349 25 | 348 17 | 346 48 | 344 19 | 341 50 | 339 21  | 336 52 | 334 23 |
| 18              | 0            | 355 7  | 355 4  | 354 59 | 354 56 | 354 53 | 354 49 | 354 46 | 354 42 | 354 38 | 354 33 | 354 29 | 354 24  | 354 19 | 354 14 |

राष्ट्र से ३४° अक्षांश के लिए लम्बकोणिक  
Table of Ascendants for Latitudes 21° to 34° (contd.)

| नाक्षत्र<br>काल | Sid.<br>Time | 21°   | 22°    | 23°    | 24°   | 25°    | 26°    | 27°    | 28°    | 29°    | 30°    | 31°    | 32°    | 33°    | 34°    |
|-----------------|--------------|-------|--------|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| घ. मि.          |              |       |        |        |       |        |        |        |        |        |        |        |        |        |        |
| H. M.           |              |       |        |        |       |        |        |        |        |        |        |        |        |        |        |
| 0               | 1            | 0     | 1      | 0      | 1     | 0      | 1      | 0      | 1      | 0      | 1      | 0      | 1      | 0      | 1      |
| 18              | 0            | 359 4 | 358 56 | 357 28 | 356 0 | 354 32 | 352 4  | 350 36 | 348 8  | 346 40 | 344 12 | 341 44 | 339 16 | 336 48 | 334 20 |
| 15              | 4            | 359 4 | 358 56 | 357 28 | 356 0 | 354 32 | 352 4  | 350 36 | 348 8  | 346 40 | 344 12 | 341 44 | 339 16 | 336 48 | 334 20 |
| 30              | 9            | 46 9  | 53 9   | 59 10  | 6 10  | 13 10  | 19 10  | 26 10  | 32 10  | 38 10  | 44 10  | 50 10  | 56 10  | 62 10  | 68 10  |
| 45              | 14           | 38 14 | 47 14  | 57 15  | 6 15  | 16 15  | 27 15  | 38 15  | 49 16  | 60 16  | 71 16  | 82 16  | 93 16  | 104 16 | 115 16 |
| 19              | 0            | 19 26 | 19 38  | 19 51  | 20 4  | 20 17  | 20 30  | 20 44  | 21 0   | 21 16  | 21 31  | 21 48  | 22 6   | 22 25  | 22 44  |
| 30              | 24           | 11 24 | 25 24  | 41 24  | 57 24 | 72 24  | 87 24  | 102 24 | 117 24 | 132 24 | 147 24 | 162 24 | 177 24 | 192 24 | 207 24 |
| 45              | 33           | 27 33 | 45 34  | 63 34  | 81 34 | 99 34  | 117 34 | 135 34 | 153 34 | 171 34 | 189 34 | 207 34 | 225 34 | 243 34 | 261 34 |
| 20              | 0            | 37 55 | 38 17  | 38 39  | 39 1  | 39 24  | 39 48  | 40 12  | 40 36  | 41 0   | 41 24  | 41 48  | 42 12  | 42 36  | 43 0   |
| 15              | 42           | 19 42 | 42 43  | 43 4   | 43 29 | 43 54  | 44 18  | 44 43  | 45 8   | 45 33  | 46 8   | 46 33  | 47 8   | 47 33  | 48 8   |
| 30              | 46           | 38 47 | 1 47   | 28 47  | 52 48 | 76 48  | 100 48 | 124 48 | 148 48 | 172 48 | 196 48 | 220 48 | 244 48 | 268 48 | 292 48 |
| 45              | 50           | 51 51 | 16 51  | 42 52  | 68 52 | 94 52  | 120 52 | 146 52 | 172 52 | 198 52 | 224 52 | 250 52 | 276 52 | 302 52 | 328 52 |
| 21              | 0            | 54 58 | 55 24  | 55 50  | 56 19 | 56 47  | 57 17  | 57 50  | 58 18  | 58 46  | 59 14  | 59 42  | 60 10  | 60 38  | 61 6   |
| 15              | 58           | 58 59 | 26 59  | 53 60  | 22 60 | 51 61  | 21 61  | 50 62  | 22 62  | 55 63  | 29 64  | 3 64   | 38 65  | 15 65  | 53 66  |
| 30              | 62           | 55 63 | 22 63  | 51 64  | 20 64 | 48 65  | 19 65  | 49 66  | 22 66  | 55 67  | 30 68  | 3 68   | 40 69  | 17 69  | 54 70  |
| 45              | 66           | 46 67 | 14 67  | 43 68  | 12 68 | 42 69  | 14 69  | 44 70  | 17 70  | 50 71  | 25 71  | 59 72  | 35 73  | 11 73  | 47 74  |
| 22              | 0            | 70 32 | 71 1   | 71 30  | 72 0  | 72 29  | 73 1   | 73 31  | 74 5   | 74 38  | 75 12  | 75 46  | 76 20  | 76 54  | 77 28  |
| 15              | 74           | 15 74 | 43 75  | 12 75  | 42 76 | 71 76  | 43 77  | 13 77  | 47 78  | 20 78  | 55 79  | 28 80  | 3 80   | 40 81  | 16 82  |
| 30              | 77           | 53 78 | 22 78  | 51 79  | 21 79 | 50 80  | 22 80  | 52 81  | 25 81  | 54 82  | 32 83  | 6 83   | 41 84  | 17 84  | 52 85  |
| 45              | 81           | 28 81 | 57 82  | 25 82  | 55 83 | 24 83  | 56 84  | 26 84  | 58 85  | 31 86  | 5 86   | 38 87  | 12 87  | 48 88  | 24 89  |
| 23              | 0            | 84 59 | 85 27  | 85 56  | 86 26 | 86 54  | 87 26  | 87 50  | 88 24  | 88 48  | 89 12  | 89 36  | 90 60  | 91 14  | 91 49  |
| 15              | 88           | 28 88 | 56 89  | 25 89  | 54 90 | 22 90  | 53 91  | 23 91  | 54 92  | 26 92  | 58 93  | 31 94  | 4 94   | 38 95  | 11 96  |
| 30              | 91           | 54 92 | 22 92  | 52 93  | 19 93 | 48 94  | 18 94  | 48 95  | 18 95  | 49 96  | 4 96   | 52 97  | 24 97  | 58 98  | 31 99  |
| 45              | 95           | 19 95 | 46 96  | 19 96  | 42 97 | 11 97  | 40 98  | 8 98   | 38 99  | 8 99   | 41 100 | 11 100 | 42 101 | 15 101 | 48 102 |
| 24              | 0            | 98 41 | 99 8   | 99 35  | 100 2 | 100 31 | 100 59 | 101 27 | 101 56 | 102 26 | 102 57 | 103 26 | 103 57 | 104 29 | 105 8  |



| Paush- Magha              |                          |             |         | JANUARY 2017                    |              |    |                   |    |              |    |            |    |                           |                   |    |       |       |
|---------------------------|--------------------------|-------------|---------|---------------------------------|--------------|----|-------------------|----|--------------|----|------------|----|---------------------------|-------------------|----|-------|-------|
| भा<br>र<br>ती<br>य<br>दि. | G<br>r<br>e<br>n.<br>Dt. | D<br>a<br>y | वा<br>र | नाक्षत्रकाल<br>Sidereal<br>Time | ॐ सूर्य      |    |                   |    | ॐ चन्द्र     |    |            |    | रवि<br>उदय<br>Sun<br>Rise |                   |    |       |       |
|                           |                          |             |         |                                 | भोग<br>Long. |    | क्रान्ति<br>Decl. |    | भोग<br>Long. |    | शर<br>Lat. |    |                           | क्रान्ति<br>Decl. |    |       |       |
|                           |                          |             |         | H. M. S                         | ०            | १  | २                 | ०  | १            | ०  | १          | ०  | १                         | ०                 | १  | H. M. |       |
| 11                        | 1                        | Su          | रवि     | 6 43 21                         | 11           | 01 | 52                | 22 | S 59         | 18 | 33         | 34 | 1                         | S 41              | 14 | S 01  | 7: 09 |
| 12                        | 2                        | M           | सोम     | 6 47 18                         | 12           | 03 | 03                | 22 | 54           | 01 | 36         | 25 | 0                         | 43                | 10 | 43    | 7: 09 |
| 13                        | 3                        | Tu          | मंगल    | 6 51 15                         | 13           | 04 | 13                | 22 | 47           | 14 | 44         |    | 0                         | 36                | 06 | 48    | 7: 09 |
| 14                        | 4                        | W           | बुध     | 6 55 12                         | 14           | 05 | 22                | 22 | 41           | 28 | 12         |    | 1                         | N 45              | 02 | 43    | 7: 10 |
| 15                        | 5                        | Th          | शुक्र   | 6 58 09                         | 15           | 06 | 32                | 22 | 35           | 11 | 37         | 35 | 2                         | 50                | 02 | N 19  | 7: 10 |
| 16                        | 6                        | F           | शुक्र   | 7 03 05                         | 16           | 07 | 41                | 22 | 28           | 25 | 44         |    | 3                         | 43                | 06 | 04    | 7: 10 |
| 17                        | 7                        | S           | शनि     | 7 07 02                         | 17           | 08 | 50                | 22 | 20           | 09 | ४ 53       |    | 4                         | 30                | 10 | 02    | 7: 10 |
| 18                        | 8                        | Su          | रवि     | 7 10 59                         | 18           | 09 | 58                | 22 | 12           | 24 | 19         |    | 4                         | 57                | 13 | 48    | 7: 10 |
| 19                        | 9                        | M           | सोम     | 7 14 56                         | 19           | 11 | 06                | 22 | 04           | 08 | II 57      |    | 5                         | 06                | 16 | 32    | 7: 10 |
| 20                        | 10                       | Tu          | मंगल    | 7 18 52                         | 20           | 12 | 14                | 21 | 55           | 23 | 44         |    | 4                         | S 55              | 18 | 15    | 7: 10 |
| 21                        | 11                       | W           | बुध     | 7 22 49                         | 21           | 13 | 21                | 21 | 46           | 08 | ४६ 33      |    | 4                         | 24                | 18 | 48    | 7: 11 |
| 22                        | 12                       | Th          | शुक्र   | 7 26 46                         | 22           | 14 | 28                | 21 | 36           | 23 | 10         |    | 3                         | 36                | 18 | S 04  | 7: 11 |
| 23                        | 13                       | F           | शुक्र   | 7 30 43                         | 23           | 15 | 34                | 21 | 26           | 07 | ४७ 33      |    | 2                         | 35                | 16 | 08    | 7: 11 |
| 24                        | 14                       | S           | शनि     | 7 34 39                         | 24           | 16 | 40                | 21 | 15           | 21 | 19         |    | 1                         | 25                | 13 | 14    | 7: 11 |
| 25                        | 15                       | Su          | रवि     | 7 38 36                         | 25           | 17 | 45                | 21 | 04           | 04 | II ५ 57    |    | 0                         | 35                | 09 | 53    | 7: 11 |
| 26                        | 16                       | M           | सोम     | 7 42 33                         | 26           | 18 | 50                | 20 | 53           | 17 | 54         |    | 0                         | N 58              | 05 | 50    | 7: 11 |
| 27                        | 17                       | Tu          | मंगल    | 7 46 30                         | 27           | 19 | 55                | 20 | 41           | 00 | ५६ 43      |    | 2                         | 05                | 02 | 07    | 7: 11 |
| 28                        | 18                       | W           | बुध     | 7 50 26                         | 28           | 21 | 00                | 20 | 29           | 13 | 12         |    | 3                         | 03                | 01 | N 55  | 7: 11 |
| 29                        | 19                       | Th          | शुक्र   | 7 54 23                         | 29           | 22 | 05                | 20 | 16           | 25 | 23         |    | 3                         | 52                | 05 | 41    | 7: 11 |
| 30                        | 20                       | F           | शुक्र   | 7 58 20                         | 00           | 23 | 09                | 20 | 03           | 07 | III 08     |    | 4                         | 30                | 09 | 25    | 7: 11 |
| 1                         | 21                       | S           | शनि     | 8 02 17                         | 01           | 24 | 12                | 19 | 50           | 19 | 01         |    | 4                         | 56                | 12 | 23    | 7: 11 |
| 2                         | 22                       | Su          | रवि     | 8 06 14                         | 02           | 25 | 16                | 19 | 37           | 00 | ४७ 53      |    | 5                         | 09                | 15 | 07    | 7: 11 |
| 3                         | 23                       | M           | सोम     | 8 10 10                         | 03           | 26 | 19                | 19 | 23           | 12 | 47         |    | 5                         | S 09              | 16 | 59    | 7: 11 |
| 4                         | 24                       | Tu          | मंगल    | 8 14 07                         | 04           | 27 | 21                | 19 | 08           | 25 | 05         |    | 4                         | 56                | 18 | 09    | 7: 10 |
| 5                         | 25                       | W           | बुध     | 8 18 04                         | 05           | 28 | 23                | 18 | 54           | 07 | ४८ 14      |    | 4                         | 29                | 18 | 47    | 7: 10 |
| 6                         | 26                       | Th          | शुक्र   | 8 22 01                         | 06           | 29 | 25                | 18 | 39           | 19 | 35         |    | 3                         | 49                | 18 | 32    | 7: 09 |
| 7                         | 27                       | F           | शुक्र   | 8 25 57                         | 07           | 30 | 25                | 18 | 24           | 02 | 22 10      |    | 2                         | 57                | 17 | S 07  | 7: 09 |
| 8                         | 28                       | S           | शनि     | 8 29 54                         | 08           | 31 | 25                | 18 | 08           | 14 | 57         |    | 1                         | 56                | 14 | 47    | 7: 09 |
| 9                         | 29                       | Su          | रवि     | 8 33 51                         | 09           | 32 | 24                | 17 | 52           | 28 | 14         |    | 0                         | 50                | 11 | 40    | 7: 09 |
| 10                        | 30                       | M           | सोम     | 8 37 48                         | 10           | 33 | 21                | 17 | 35           | 11 | ४८ 28      |    | 0                         | 25                | 08 | 07    | 7: 08 |
| 11                        | 31                       | Tu          | मंगल    | 8 41 44                         | 11           | 34 | 18                | 17 | 18           | 24 | 53         |    | 1                         | N 37              | 03 | 09    | 7: 08 |

| JANUARY 2017 पौष-माघ     |                |               |          |           |           |            |                  |                                |                           |
|--------------------------|----------------|---------------|----------|-----------|-----------|------------|------------------|--------------------------------|---------------------------|
| G<br>r<br>e<br>n.<br>Dt. | Longitudes भोग |               |          |           |           |            |                  | Ending<br>Moments of<br>Tithis | रवि<br>अस्त<br>Sun<br>Set |
|                          | वरुण<br>卐      | प्रजापति<br>卐 | शनि<br>卐 | गुरु<br>卐 | मंगल<br>卐 | शुक्र<br>卐 | बुध<br>卐         |                                |                           |
|                          | ० १ २          | ० १ २         | ० १ २    | ० १ २     | ० १ २     | ० १ २      | ० १ २            | H. M.                          | H. M.                     |
| 1                        | 09 44          | 20 34         | 21 24    | 21 11     | 09 43     | 27 17      | 02 58            | 3 15 34                        | 5 52                      |
| 2                        | 45             | 34            | 31       | 17 10     | 29 28     | 52 01      | R 54             | 4 15 51                        | 5 53                      |
| 3                        | 47             | 34            | 38       | 23 11     | 14 29     | 56 00      | 59               | 5 15 43                        | 5 53                      |
| 4                        | 48             | 34            | 45       | 29 59     | 01 01     | 14         |                  | 6 15 06                        | 5 54                      |
| 5                        | 49             | 35            | 51       | 35 12     | 45 02     | 05 29      | 38               | 7 14 01                        | 5 55                      |
| 6                        | 51             | 35            | 58       | 41 13     | 30 03     | 08 13      |                  | 8 12 26                        | 5 56                      |
| 7                        | 53             | 35            | 22 05    | 45 14     | 15 04     | 12 28      | 58               | 9 10 22                        | 5 56                      |
| 8                        | 54             | 36            | 11       | 50 15     | 00 05     | 15 52      | S { 10 11 5 03 } | 10 22                          | 5 57                      |
| 9                        | 56             | 36            | 18       | 56 46     | 06 18     | 55         |                  | 12 2 01                        | 5 58                      |
| 10                       | 58             | 37            | 25 22    | 01 16     | 31 07     | 20 29      | 07               | 13 22 54                       | 5 59                      |
| 11                       | 59             | 37            | 31       | 05 17     | 16 08     | 22 25      |                  | 14 19 52                       | 5 59                      |
| 12                       | 10 01          | 38            | 38       | 10 18     | 01 09     | 23 51      |                  | 15 17 04                       | 6 00                      |
| 13                       | 03             | 39            | 44       | 15 46     | 10 24     | 00 23      | K 16             | 14 40                          | 6 01                      |
| 14                       | 04             | 40            | 50       | 19 19     | 32 11     | 25 01      | 01               | 17 12 50                       | 6 01                      |
| 15                       | 06             | 41            | 57       | 23 20     | 17 12     | 25 44      |                  | 18 11 40                       | 6 02                      |
| 16                       | 08             | 42            | 23 03    | 27 21     | 02 13     | 25 02      | 32               | 19 11 16                       | 6 03                      |
| 17                       | 09             | 43            | 10       | 31 47     | 14 24     | 03 23      |                  | 20 11 39                       | 6 03                      |
| 18                       | 11             | 43            | 16       | 35 22     | 32 15     | 23 04      | 18               | 21 12 49                       | 6 04                      |
| 19                       | 13             | 44            | 22       | 38 23     | 17 16     | 21 05      | 17               | 22 14 38                       | 6 05                      |
| 20                       | 15             | 46            | 28       | 41 24     | 02 17     | 19 06      | 18               | 23 16 55                       | 6 05                      |
| 21                       | 17             | 47            | 34       | 44 47     | 18 16     | 07 23      |                  | 24 19 27                       | 6 06                      |
| 22                       | 19             | 48            | 40       | 47 25     | 32 19     | 12 08      | 29               | 25 22 00                       | 6 07                      |
| 23                       | 20             | 49            | 46       | 50 26     | 17 20     | 09 09      | 38               | 26 00 22                       | 6 08                      |
| 24                       | 22             | 50            | 52       | 53 27     | 02 21     | 04 10      | 50               | 27 02 23                       | 6 08                      |
| 25                       | 24             | 51            | 58       | 55 47     | 22 00     | 12 02      |                  | 28 03 57                       | 6 09                      |
| 26                       | 26             | 53            | 24 04    | 57 28     | 32 54     | 13 17      |                  | 29 05 02                       | 6 10                      |
| 27                       | 28             | 54            | 10       | 59 29     | 17 23     | 47 14      | 33               | 30 05 37                       | 6 11                      |
| 28                       | 30             | 56            | 16 23    | 01 00     | 01 24     | 40 15      | 50               | S 1 05 44                      | 6 11                      |
| 29                       | 32             | 58            | 21       | 02 46     | 25 32     | 17 09      |                  | 2 05 26                        | 6 12                      |
| 30                       | 34             | 59            | 27       | 04 01     | 31 26     | 24 18      | 29               | 3 04 44                        | 6 12                      |
| 31                       | 36             | 21 00         | 32       | 05 02     | 16 27     | 14 19      | 50               | 4 03 41                        | 6 12                      |



## Magha-Phalguna

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| भारतीय दि. | G r e n. Dt. | D a y | वा र  | नाक्षत्रकाल<br>Sidereal Time | ☉ सूर्य      |         |                   | ☾ चन्द्र     |        |            | रवि उदय<br>Sun Rise |                   |       |
|------------|--------------|-------|-------|------------------------------|--------------|---------|-------------------|--------------|--------|------------|---------------------|-------------------|-------|
|            |              |       |       |                              | भोग<br>Long. |         | क्रान्ति<br>Decl. | भोग<br>Long. |        | शर<br>Lat. |                     | क्रान्ति<br>Decl. |       |
|            |              |       |       |                              | 0            | I II    |                   | 0            | I      |            |                     |                   |       |
|            |              |       |       | H. M. S                      | 0            | I II    | 0                 | I            | 0      | I          | 0                   | I                 | H. M. |
| 12         | 1            | W     | बुध   | 8 45 41                      | 12           | 35 13   | 17 S 01           | 8 30         | 2 N 45 | 02 00      |                     |                   | 7:08  |
| 13         | 2            | Th    | गुरु  | 8 49 38                      | 13           | 36 06   | 16 44             | 22 18        | 3 44   | 04 N 57    |                     |                   | 7:07  |
| 14         | 3            | F     | शुक्र | 8 53 35                      | 14           | 36 59   | 16 26             | 06 32        | 4 30   | 09 12      |                     |                   | 7:07  |
| 15         | 4            | S     | शनि   | 8 57 31                      | 15           | 37 51   | 16 09             | 20 38        | 5 01   | 12 46      |                     |                   | 7:06  |
| 16         | 5            | Su    | रवि   | 9 01 28                      | 16           | 38 40   | 15 51             | 04 52        | 5 14   | 15 40      |                     |                   | 7:06  |
| 17         | 6            | M     | सोम   | 9 05 25                      | 17           | 39 29   | 15 32             | 19 09        | 5 S 07 | 17 39      |                     |                   | 7:05  |
| 18         | 7            | Tu    | मंगल  | 9 09 22                      | 18           | 40 15   | 15 14             | 03 28        | 4 42   | 18 35      |                     |                   | 7:05  |
| 19         | 8            | W     | बुध   | 9 13 18                      | 19           | 41 01   | 14 55             | 17 45        | 3 59   | 18 36      |                     |                   | 7:04  |
| 20         | 9            | Th    | गुरु  | 9 17 15                      | 20           | 41 45   | 14 36             | 01 54        | 3 02   | 17 S 11    |                     |                   | 7:04  |
| 21         | 10           | F     | शुक्र | 9 21 12                      | 21           | 42 27   | 14 16             | 15 36        | 1 54   | 14 42      |                     |                   | 7:03  |
| 22         | 11           | S     | शनि   | 9 25 09                      | 22           | 43 08   | 13 57             | 29 20        | 0 49   | 11 23      |                     |                   | 7:03  |
| 23         | 12           | Su    | रवि   | 9 29 05                      | 23           | 43 48   | 13 37             | 12 46        | 0 33   | 07 45      |                     |                   | 7:02  |
| 24         | 13           | M     | सोम   | 9 33 02                      | 24           | 44 26   | 13 17             | 25 37        | 1 N 43 | 03 31      |                     |                   | 7:02  |
| 25         | 14           | Tu    | मंगल  | 9 36 59                      | 25           | 45 04   | 12 56             | 08 24        | 2 46   | 01 N 50    |                     |                   | 7:01  |
| 26         | 15           | W     | बुध   | 9 40 56                      | 26           | 45 39   | 12 35             | 20 54        | 3 40   | 04 18      |                     |                   | 7:00  |
| 27         | 16           | Th    | गुरु  | 9 44 52                      | 27           | 46 14   | 12 15             | 03 09        | 4 23   | 08 05      |                     |                   | 6:59  |
| 28         | 17           | F     | शुक्र | 9 48 49                      | 28           | 46 47   | 11 54             | 14 55        | 4 54   | 11 30      |                     |                   | 6:59  |
| 29         | 18           | S     | शनि   | 9 52 46                      | 29           | 47 19   | 11 32             | 26 51        | 5 11   | 14 10      |                     |                   | 6:58  |
| 30         | 19           | Su    | रवि   | 9 56 43                      | 00           | X 47 50 | 11 11             | 08 44        | 5 15   | 16 15      |                     |                   | 6:57  |
| 1          | 20           | M     | सोम   | 10 00 39                     | 01           | 48 20   | 10 50             | 20 39        | 5 S 06 | 17 56      |                     |                   | 6:57  |
| 2          | 21           | Tu    | मंगल  | 10 04 36                     | 02           | 48 48   | 10 28             | 02 57        | 4 43   | 18 36      |                     |                   | 6:56  |
| 3          | 22           | W     | बुध   | 10 08 33                     | 03           | 49 15   | 10 06             | 15 10        | 4 11   | 18 42      |                     |                   | 6:55  |
| 4          | 23           | Th    | गुरु  | 10 12 30                     | 04           | 49 40   | 09 44             | 27 36        | 3 20   | 17 S 36    |                     |                   | 6:54  |
| 5          | 24           | F     | शुक्र | 10 16 26                     | 05           | 50 04   | 09 22             | 10 19        | 2 20   | 15 37      |                     |                   | 6:54  |
| 6          | 25           | S     | शनि   | 10 20 23                     | 06           | 50 27   | 09 00             | 23 37        | 1 12   | 12 44      |                     |                   | 6:53  |
| 7          | 26           | Su    | रवि   | 10 24 20                     | 07           | 50 47   | 08 38             | 06 58        | 0 29   | 09 22      |                     |                   | 6:52  |
| 8          | 27           | M     | सोम   | 10 28 17                     | 08           | 51 07   | 08 15             | 20 37        | 1 N 15 | 05 09      |                     |                   | 6:51  |
| 9          | 28           | Tu    | मंगल  | 10 32 13                     | 09           | 51 24   | 07 52             | 04 46        | 2 26   | 02 23      |                     |                   | 6:50  |

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| G<br>r<br>e<br>n.<br>Dt. | Longitudes भोग |               |          |           |           |            |          |                          |    |      |      |      | Ending<br>Moments of<br>Tithis |            | रवि<br>अस्त<br>Sun<br>Set |       |      |
|--------------------------|----------------|---------------|----------|-----------|-----------|------------|----------|--------------------------|----|------|------|------|--------------------------------|------------|---------------------------|-------|------|
|                          | वरुण<br>♈      | प्रजापति<br>♌ | शनि<br>♄ | गुरु<br>♁ | मंगल<br>♂ | शुक्र<br>♀ | बुध<br>♊ | तिथ्यंकाल<br>Tithi Times |    |      |      |      |                                |            |                           |       |      |
|                          | 0              | 1             | 0        | 1         | 0         | 1          | 0        | 1                        | 0  | 1    | 0    | 1    |                                | H. M.      | H. M.                     |       |      |
| 1                        | 10             | X 38          | 21       | Y 02      | 24        | X 38       | 23       | XX 06                    | 03 | Y 01 | 28   | X 04 | 21                             | Y 13       | S 5                       | 2 20  | 6:14 |
| 2                        | 40             |               | 04       |           | 43        |            | 07       |                          | 45 |      | 53   | 22   | 37                             |            | 6                         | 0 43  | 6:15 |
| 3                        | 42             |               | 06       |           | 49        |            | 07       | 04                       | 30 | 29   | 42   | 24   | 01                             |            | 7                         | 22 50 | 6:15 |
| 4                        | 44             |               | 08       |           | 54        |            | 08       | 05                       | 15 | 00   | Y 29 | 25   | 26                             |            | 8                         | 20 45 | 6:16 |
| 5                        | 47             |               | 10       |           | 59        |            | 08       |                          | 59 | 01   | 15   | 26   | 53                             |            | 9                         | 18 30 | 6:17 |
| 6                        | 49             |               | 12       | 25        | 04        | R 08       | 06       | 44                       | 02 | 00   | 28   | 20   |                                | 10         | 16 10                     | 6:17  |      |
| 7                        | 51             |               | 13       |           | 09        |            | 08       | 07                       | 28 |      | 45   | 29   | 49                             |            | 11                        | 13 48 | 6:18 |
| 8                        | 53             |               | 15       |           | 14        |            | 08       | 08                       | 13 | 03   | 27   | 01   | XX 17                          |            | 12                        | 11 30 | 6:19 |
| 9                        | 55             |               | 17       |           | 19        |            | 08       |                          | 57 | 04   | 09   | 02   | 48                             |            | 13                        | 9 22  | 6:19 |
| 10                       | 57             |               | 19       |           | 24        |            | 07       | 09                       | 42 |      | 51   | 04   | 19                             | { 14<br>15 | 7 31<br>6 03              | 6:19  |      |
| 11                       | 11             | 00            |          | 21        |           | 29         |          | 06                       | 10 | 26   | 05   | 30   | 05                             | 50         | K 16                      | 5 05  | 6:20 |
| 12                       | 02             |               | 23       |           | 34        |            | 05       | 11                       | 10 | 06   | 08   | 07   | 23                             |            | 17                        | 4 42  | 6:21 |
| 13                       | 04             |               | 26       |           | 39        |            | 04       |                          | 55 |      | 46   | 08   | 57                             |            | 18                        | 4 57  | 6:21 |
| 14                       | 06             |               | 28       |           | 44        |            | 03       | 12                       | 39 | 07   | 21   | 10   | 31                             |            | 19                        | 4 52  | 6:22 |
| 15                       | 08             |               | 30       |           | 48        |            | 01       | 13                       | 23 |      | 56   | 12   | 06                             |            | 20                        | -- -- | 6:23 |
| 16                       | 10             |               | 32       |           | 53        | 22         | 59       | 14                       | 08 | 08   | 29   | 13   | 42                             |            | 20                        | 07 24 | 6:24 |
| 17                       | 13             |               | 35       |           | 57        |            | 57       |                          | 52 | 09   | 00   | 15   | 19                             |            | 21                        | 09 26 | 6:24 |
| 18                       | 15             |               | 37       | 26        | 02        |            | 54       | 15                       | 36 |      | 30   | 16   | 57                             |            | 22                        | 11 48 | 6:24 |
| 19                       | 17             |               | 40       |           | 06        |            | 52       | 16                       | 20 |      | 58   | 18   | 35                             |            | 23                        | 14 18 | 6:25 |
| 20                       | 19             |               | 43       |           | 10        |            | 50       | 17                       | 04 | 10   | 25   | 20   | 15                             |            | 24                        | 16 42 | 6:25 |
| 21                       | 22             |               | 45       |           | 14        |            | 47       |                          | 48 |      | 49   | 21   | 55                             |            | 25                        | 18 46 | 6:26 |
| 22                       | 24             |               | 48       |           | 18        |            | 44       | 18                       | 32 | 11   | 12   | 23   | 37                             |            | 26                        | 20 20 | 6:26 |
| 23                       | 26             |               | 50       |           | 22        |            | 41       | 19                       | 16 |      | 33   | 25   | 19                             |            | 27                        | 21 19 | 6:27 |
| 24                       | 28             |               | 52       |           | 26        |            | 38       | 20                       | 00 |      | 53   | 27   | 03                             |            | 28                        | 21 39 | 6:28 |
| 25                       | 31             |               | 55       |           | 30        |            | 35       |                          | 44 | 12   | 09   | 28   | 48                             |            | 29                        | 21 21 | 6:29 |
| 26                       | 33             |               | 58       |           | 34        |            | 31       | 21                       | 28 |      | 25   | 00   | X 33                           |            | 30                        | 20 28 | 6:29 |
| 27                       | 35             | 22            | 00       |           | 38        |            | 27       | 22                       | 12 |      | 37   | 02   | 19                             |            | S 1                       | 19 06 | 6:29 |
| 28                       | 38             |               | 03       |           | 41        |            | 23       |                          | 55 |      | 48   | 04   | 03                             |            | 2                         | 17 21 | 6:29 |



## Phalguna-Chaitra

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| भारतीय दि. | G<br>r<br>e<br>n.<br>Dt. | D<br>a<br>y | वार   | नाक्षत्रकाल<br>Sidereal<br>Time | ☉ सूर्य  |          | ☾ चन्द्र |        |          | रवि<br>उदय<br>Sun<br>Rise |
|------------|--------------------------|-------------|-------|---------------------------------|----------|----------|----------|--------|----------|---------------------------|
|            |                          |             |       |                                 | भोग      | क्रान्ति | भोग      | शर     | क्रान्ति |                           |
|            |                          |             |       |                                 | Long.    | Decl.    | Long.    | Lat.   | Decl.    |                           |
|            |                          |             |       | H. M. S                         | ° ' "    | ° ' "    | ° ' "    | ° ' "  | ° ' "    | H. M.                     |
| 10         | 1                        | W           | बुध   | 10 36 10                        | 10 51 40 | 07 S 30  | 18 51    | 3 N 30 | 03 N 45  | 6:49                      |
| 11         | 2                        | Th          | गुरु  | 10 40 07                        | 11 51 53 | 07 07    | 03 05    | 4 21   | 08 10    | 6:49                      |
| 12         | 3                        | F           | शुक्र | 10 44 04                        | 12 52 05 | 06 44    | 17 22    | 4 56   | 11 55    | 6:48                      |
| 13         | 4                        | S           | शनि   | 10 48 00                        | 13 52 14 | 06 21    | 01 39    | 5 13   | 15 00    | 6:47                      |
| 14         | 5                        | Su          | रवि   | 10 51 57                        | 14 52 22 | 05 58    | 15 54    | 5 S 11 | 17 13    | 6:47                      |
| 15         | 6                        | M           | सोम   | 10 55 54                        | 15 52 26 | 05 34    | 00 01    | 4 50   | 18 24    | 6:45                      |
| 16         | 7                        | Tu          | मंगल  | 10 59 51                        | 16 52 29 | 05 11    | 14 46    | 4 12   | 18 43    | 6:44                      |
| 17         | 8                        | W           | बुध   | 11 03 46                        | 17 52 31 | 04 48    | 27 38    | 3 19   | 17 S 38  | 6:43                      |
| 18         | 9                        | Th          | गुरु  | 11 06 43                        | 18 52 29 | 04 24    | 11 19    | 2 16   | 15 29    | 6:42                      |
| 19         | 10                       | F           | शुक्र | 11 10 40                        | 19 52 26 | 04 01    | 24 49    | 1 06   | 12 28    | 6:42                      |
| 20         | 11                       | S           | शनि   | 11 14 37                        | 20 52 21 | 03 37    | 08 07    | 0 25   | 09 04    | 6:41                      |
| 21         | 12                       | Su          | रवि   | 11 18 33                        | 21 52 14 | 03 14    | 20 56    | 1 N 17 | 04 58    | 6:40                      |
| 22         | 13                       | M           | सोम   | 11 22 30                        | 22 52 04 | 02 50    | 03 47    | 2 23   | 01 59    | 6:39                      |
| 23         | 14                       | Tu          | मंगल  | 11 26 27                        | 23 51 53 | 02 27    | 16 24    | 3 21   | 02 N 54  | 6:38                      |
| 24         | 15                       | W           | बुध   | 11 30 24                        | 24 51 39 | 02 03    | 28 48    | 4 08   | 06 48    | 6:37                      |
| 25         | 16                       | Th          | गुरु  | 11 34 20                        | 25 51 24 | 01 39    | 10 00    | 4 42   | 10 24    | 6:36                      |
| 26         | 17                       | F           | शुक्र | 11 38 17                        | 26 51 07 | 01 15    | 22 46    | 5 04   | 13 15    | 6:35                      |
| 27         | 18                       | S           | शनि   | 11 42 14                        | 27 50 49 | 00 52    | 04 42    | 5 12   | 15 51    | 6:34                      |
| 28         | 19                       | Su          | रवि   | 11 46 11                        | 28 50 29 | 00 28    | 16 35    | 5 S 07 | 17 31    | 6:33                      |
| 29         | 20                       | M           | सोम   | 11 50 07                        | 29 50 07 | 00 S 11  | 28 28    | 4 49   | 18 27    | 6:32                      |
| 30         | 21                       | Tu          | मंगल  | 11 54 04                        | 00 49 42 | 00 N 19  | 10 47    | 4 18   | 18 49    | 6:31                      |
| 1          | 22                       | W           | बुध   | 11 58 01                        | 01 49 17 | 00 43    | 22 58    | 3 35   | 18 S 05  | 6:30                      |
| 2          | 23                       | Th          | गुरु  | 12 01 58                        | 02 48 50 | 01 07    | 05 24    | 2 40   | 16 26    | 6:29                      |
| 3          | 24                       | F           | शुक्र | 12 05 54                        | 03 48 21 | 01 30    | 18 25    | 1 38   | 14 11    | 6:28                      |
| 4          | 25                       | S           | शनि   | 12 09 51                        | 04 47 40 | 01 54    | 01 33    | 0 42   | 10 51    | 6:27                      |
| 5          | 26                       | Su          | रवि   | 12 13 48                        | 05 47 17 | 02 17    | 15 05    | 0 N 46 | 06 49    | 6:26                      |
| 6          | 27                       | M           | सोम   | 12 17 45                        | 06 46 42 | 02 41    | 29 17    | 1 58   | 02 31    | 6:25                      |
| 7          | 28                       | Tu          | मंगल  | 12 21 41                        | 07 46 06 | 03 04    | 13 34    | 3 05   | 02 N 28  | 6:24                      |
| 8          | 29                       | W           | बुध   | 12 25 38                        | 08 45 27 | 03 28    | 28 07    | 4 01   | 06 42    | 6:23                      |
| 9          | 30                       | Th          | गुरु  | 12 29 35                        | 09 44 46 | 03 51    | 12 49    | 4 40   | 10 46    | 6:22                      |
| 10         | 31                       | F           | शुक्र | 12 33 32                        | 10 44 03 | 04 15    | 27 33    | 5 04   | 14 29    | 6:21                      |

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फल्गुन-चैत्र

| G<br>r<br>e<br>n.<br>Dt. | Longitudes भोग |               |          |           |           |            |          |                          |    |    | Ending<br>Moments of<br>Tithis |    | रवि<br>अस्त<br>Sun<br>Set |    |          |        |          |      |
|--------------------------|----------------|---------------|----------|-----------|-----------|------------|----------|--------------------------|----|----|--------------------------------|----|---------------------------|----|----------|--------|----------|------|
|                          | वरुण<br>♄      | प्रजापति<br>♁ | शनि<br>♄ | गुरु<br>♁ | मंगल<br>♂ | शुक्र<br>♂ | बुध<br>♂ | तिथ्यंकाल<br>Tithi Times |    |    |                                |    |                           |    |          |        |          |      |
|                          | 0              | 1             | 0        | 1         | 0         | 1          | 0        | 1                        | 0  | 1  | H. M.                          | 0  |                           | 1  |          |        |          |      |
| 1                        | 11             | 40            | 22       | 06        | 26        | 45         | 22       | 19                       | 23 | 39 | 12                             | 57 | 05                        | 55 | S 3      | 15     | 18       | 6:30 |
| 2                        |                | 42            |          | 08        |           | 48         |          | 15                       | 24 | 33 | 13                             | 03 | 07                        | 44 | 4        | 13     | 03       | 6:30 |
| 3                        |                | 44            |          | 11        |           | 51         |          | 11                       | 25 | 06 |                                | 08 | 09                        | 34 | 5        | 10     | 44       | 6:31 |
| 4                        |                | 46            |          | 14        |           | 55         |          | 06                       |    | 50 |                                | 09 | 11                        | 26 | { 6<br>7 | 8<br>6 | 24<br>08 | 6:31 |
| 5                        |                | 49            |          | 17        |           | 58         |          | 01                       | 26 | 34 | R 07                           | 13 | 19                        |    | 8        | 3      | 59       | 6:31 |
| 6                        |                | 50            |          | 20        | 27        | 01         | 21       | 56                       | 27 | 17 |                                | 04 | 15                        | 12 | 9        | 2      | 02       | 6:32 |
| 7                        |                | 54            |          | 23        |           | 04         |          | 51                       | 28 | 01 | 12                             | 58 | 17                        | 06 | 10       | 0      | 18       | 6:33 |
| 8                        |                | 56            |          | 26        |           | 07         |          | 46                       |    | 44 |                                | 50 | 19                        | 01 | 11       | 22     | 50       | 6:33 |
| 9                        |                | 58            |          | 29        |           | 09         |          | 40                       | 29 | 28 |                                | 38 | 20                        | 57 | 12       | 21     | 40       | 6:34 |
| 10                       | 12             | 00            |          | 32        |           | 12         |          | 35                       | 00 | 11 |                                | 25 | 22                        | 54 | 13       | 20     | 50       | 6:34 |
| 11                       |                | 03            |          | 35        |           | 14         |          | 29                       |    | 54 |                                | 09 | 24                        | 52 | 14       | 20     | 24       | 6:34 |
| 12                       |                | 05            |          | 38        |           | 17         |          | 23                       | 01 | 38 | 11                             | 51 | 26                        | 50 | 15       | 20     | 24       | 6:35 |
| 13                       |                | 07            |          | 41        |           | 20         |          | 17                       | 02 | 21 |                                | 29 | 28                        | 48 | K 16     | 20     | 52       | 6:35 |
| 14                       |                | 09            |          | 44        |           | 22         |          | 11                       | 03 | 04 |                                | 07 | 00                        | 46 | 17       | 21     | 50       | 6:35 |
| 15                       |                | 12            |          | 47        |           | 24         |          | 05                       |    | 47 | 10                             | 42 | 02                        | 45 | 18       | 23     | 17       | 6:36 |
| 16                       |                | 14            |          | 50        |           | 26         | 20       | 59                       | 04 | 30 |                                | 14 | 04                        | 43 | 19       | 01     | 12       | 6:36 |
| 17                       |                | 16            |          | 53        |           | 28         |          | 53                       | 05 | 13 | 09                             | 45 | 06                        | 40 | 20       | 03     | 27       | 6:37 |
| 18                       |                | 18            |          | 57        |           | 30         |          | 46                       |    | 56 |                                | 13 | 08                        | 36 | 21       | 05     | 53       | 6:37 |
| 19                       |                | 21            | 23       | 00        |           | 32         |          | 39                       | 06 | 39 | 08                             | 41 | 10                        | 32 | 22       | --     | --       | 6:38 |
| 20                       |                | 23            |          | 03        |           | 34         |          | 33                       | 07 | 22 |                                | 07 | 12                        | 26 | 23       | 08     | 19       | 6:38 |
| 21                       |                | 25            |          | 06        |           | 35         |          | 26                       | 08 | 05 | 07                             | 31 | 14                        | 18 | K 24     | 10     | 32       | 6:38 |
| 22                       |                | 27            |          | 09        |           | 37         |          | 19                       |    | 48 | 06                             | 55 | 16                        | 07 | 25       | 4      | 05       | 6:39 |
| 23                       |                | 29            |          | 13        |           | 38         |          | 12                       | 09 | 31 |                                | 18 | 17                        | 53 | 26       | 2      | 27       | 6:39 |
| 24                       |                | 31            |          | 16        |           | 39         |          | 05                       | 10 | 13 | 05                             | 41 | 19                        | 36 | 27       | 0      | 05       | 6:39 |
| 25                       |                | 34            |          | 19        |           | 40         | 19       | 58                       |    | 56 |                                | 03 | 21                        | 16 | 28       | 21     | 09       | 6:40 |
| 26                       |                | 36            |          | 22        |           | 42         |          | 51                       | 11 | 39 | 04                             | 26 | 22                        | 51 | 29       | 17     | 47       | 6:40 |
| 27                       |                | 58            |          | 26        |           | 43         |          | 43                       | 12 | 21 | 03                             | 48 | 24                        | 22 | 30       | 14     | 10       | 6:41 |
| 28                       |                | 40            |          | 29        |           | 43         |          | 36                       | 13 | 04 |                                | 11 | 25                        | 47 | S 1      | 10     | 30       | 6:41 |
| 29                       |                | 42            |          | 32        |           | 44         |          | 29                       |    | 47 | 02                             | 35 | 27                        | 07 | 2        | 6      | 56       | 6:41 |
| 30                       |                | 44            |          | 35        |           | 45         |          | 21                       | 14 | 29 |                                | 00 | 28                        | 21 | 3        | 3      | 39       | 6:42 |
| 31                       |                | 46            |          | 39        |           | 46         |          | 14                       | 15 | 11 | 01                             | 26 | 29                        | 30 | 4        | 0      | 49       | 6:42 |



संयुक्त कोणिक LOGARITHMIC TABLE

Hours of Degree

| Min. | 0      | 1      | 2      | 3     | 4     | 5     | 6     | 7     | 8     | 9     | 10    | 11    | Min. |
|------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| 0    | 3.1584 | 1.3802 | 1.0792 | .9031 | .7781 | .6812 | .6021 | .5351 | .4771 | .4260 | .3802 | .3388 | 0    |
| 1    | 3.1584 | 1.3730 | 1.0756 | .9007 | .7763 | .6798 | .6009 | .5341 | .4762 | .4252 | .3795 | .3382 | 1    |
| 2    | 2.8573 | 1.3660 | 1.0720 | .8983 | .7745 | .6784 | .5997 | .5350 | .4753 | .4244 | .3780 | .3375 | 2    |
| 3    | 2.7012 | 1.3590 | 1.0685 | .8959 | .7728 | .6769 | .5985 | .5320 | .4744 | .4236 | .3780 | .3368 | 3    |
| 4    | 2.5563 | 1.3522 | 1.0649 | .8935 | .7710 | .6755 | .5973 | .5310 | .4735 | .4228 | .3773 | .3362 | 4    |
| 5    | 2.4594 | 1.3454 | 1.0614 | .8912 | .7692 | .6741 | .5961 | .5300 | .4726 | .4220 | .3766 | .3355 | 5    |
| 6    | 2.3802 | 1.3388 | 1.0580 | .8888 | .7674 | .6726 | .5949 | .5289 | .4717 | .4212 | .3759 | .3349 | 6    |
| 7    | 2.3133 | 1.3323 | 1.0546 | .8865 | .7657 | .6712 | .5937 | .5279 | .4708 | .4204 | .3752 | .3342 | 7    |
| 8    | 2.2553 | 1.3258 | 1.0511 | .8842 | .7639 | .6688 | .5925 | .5269 | .4699 | .4196 | .3745 | .3336 | 8    |
| 9    | 2.2041 | 1.3195 | 1.0478 | .8819 | .7622 | .6684 | .5913 | .5259 | .4690 | .4188 | .3737 | .3329 | 9    |
| 10   | 2.1584 | 1.3133 | 1.0444 | .8796 | .7604 | .6670 | .5902 | .5249 | .4682 | .4180 | .3730 | .3323 | 10   |
| 11   | 2.1170 | 1.3071 | 1.0411 | .8773 | .7587 | .6656 | .5890 | .5239 | .4673 | .4172 | .3723 | .3316 | 11   |
| 12   | 2.0792 | 1.3010 | 1.0378 | .8751 | .7570 | .6642 | .5878 | .5229 | .4664 | .4164 | .3716 | .3310 | 12   |
| 13   | 2.0444 | 1.2950 | 1.0345 | .8728 | .7552 | .6628 | .5866 | .5219 | .4655 | .4156 | .3709 | .3303 | 13   |
| 14   | 2.0122 | 1.2891 | 1.0313 | .8706 | .7535 | .6614 | .5855 | .5209 | .4646 | .4148 | .3702 | .3297 | 14   |
| 15   | 1.9823 | 1.2833 | 1.0280 | .8683 | .7518 | .6600 | .5843 | .5199 | .4638 | .4141 | .3695 | .3291 | 15   |
| 16   | 1.9542 | 1.2775 | 1.0248 | .8661 | .7501 | .6587 | .5832 | .5189 | .4629 | .4133 | .3688 | .3284 | 16   |
| 17   | 1.9279 | 1.2719 | 1.0216 | .8639 | .7484 | .6573 | .5820 | .5179 | .4620 | .4125 | .3681 | .3278 | 17   |
| 18   | 1.9031 | 1.2663 | 1.0185 | .8617 | .7467 | .6559 | .5809 | .5169 | .4611 | .4117 | .3674 | .3271 | 18   |
| 19   | 1.8796 | 1.2607 | 1.0153 | .8595 | .7451 | .6546 | .5797 | .5159 | .4603 | .4109 | .3667 | .3264 | 19   |
| 20   | 1.8573 | 1.2553 | 1.0122 | .8573 | .7434 | .6532 | .5786 | .5149 | .4594 | .4102 | .3660 | .3258 | 20   |
| 21   | 1.8361 | 1.2499 | 1.0091 | .8552 | .7417 | .6519 | .5774 | .5139 | .4585 | .4094 | .3653 | .3252 | 21   |
| 22   | 1.8159 | 1.2445 | 1.0061 | .8530 | .7401 | .6505 | .5763 | .5129 | .4577 | .4086 | .3646 | .3246 | 22   |
| 23   | 1.7966 | 1.2393 | 1.0030 | .8509 | .7384 | .6492 | .5752 | .5120 | .4568 | .4079 | .3639 | .3239 | 23   |
| 24   | 1.7781 | 1.2341 | 1.0000 | .8487 | .7368 | .6478 | .5740 | .5110 | .4559 | .4071 | .3632 | .3233 | 24   |
| 25   | 1.7604 | 1.2289 | .9970  | .8466 | .7351 | .6465 | .5729 | .5100 | .4551 | .4063 | .3625 | .3227 | 25   |
| 26   | 1.7434 | 1.2239 | .9940  | .8445 | .7335 | .6451 | .5718 | .5090 | .4542 | .4055 | .3618 | .3220 | 26   |
| 27   | 1.7270 | 1.2188 | .9910  | .8424 | .7318 | .6438 | .5706 | .5081 | .4534 | .4048 | .3611 | .3214 | 27   |
| 28   | 1.7112 | 1.2139 | .9881  | .8403 | .7302 | .6425 | .5695 | .5071 | .4525 | .4040 | .3604 | .3208 | 28   |
| 29   | 1.6960 | 1.2090 | .9852  | .8380 | .7286 | .6412 | .5684 | .5061 | .4516 | .4032 | .3597 | .3201 | 29   |

संयुक्त कोणिक LOGARITHMIC TABLE (Contd.)

Hours of Degree

| Min. | 0      | 1      | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     | 10    | 11    | Min. |
|------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| 30   | 1.6812 | 1.2041 | .9823 | .8361 | .7270 | .6398 | .5673 | .5051 | .4508 | .4025 | .3590 | .3195 | 30   |
| 31   | 1.6670 | 1.1993 | .9794 | .8341 | .7254 | .6385 | .5662 | .5042 | .4499 | .4017 | .3583 | .3189 | 31   |
| 32   | 1.6532 | 1.1946 | .9765 | .8320 | .7238 | .6372 | .5651 | .5032 | .4491 | .4010 | .3576 | .3183 | 32   |
| 33   | 1.6398 | 1.1899 | .9737 | .8300 | .7222 | .6359 | .5640 | .5023 | .4482 | .4002 | .3570 | .3176 | 33   |
| 34   | 1.6269 | 1.1852 | .9708 | .8279 | .7206 | .6346 | .5629 | .5013 | .4474 | .3994 | .3563 | .3170 | 34   |
| 35   | 1.6141 | 1.1806 | .9680 | .8259 | .7190 | .6333 | .5618 | .5003 | .4466 | .3987 | .3556 | .3164 | 35   |
| 36   | 1.6021 | 1.1761 | .9652 | .8239 | .7174 | .6320 | .5607 | .4994 | .4457 | .3979 | .3549 | .3157 | 36   |
| 37   | 1.5902 | 1.1716 | .9625 | .8219 | .7159 | .6307 | .5596 | .4984 | .4449 | .3972 | .3542 | .3151 | 37   |
| 38   | 1.5786 | 1.1671 | .9597 | .8199 | .7143 | .6294 | .5585 | .4975 | .4440 | .3964 | .3535 | .3145 | 38   |
| 39   | 1.5673 | 1.1627 | .9570 | .8179 | .7128 | .6282 | .5574 | .4965 | .4432 | .3957 | .3529 | .3139 | 39   |
| 40   | 1.5563 | 1.1584 | .9542 | .8159 | .7112 | .6269 | .5563 | .4956 | .4424 | .3949 | .3522 | .3133 | 40   |
| 41   | 1.5456 | 1.1540 | .9515 | .8140 | .7097 | .6256 | .5552 | .4947 | .4415 | .3942 | .3515 | .3126 | 41   |
| 42   | 1.5351 | 1.1498 | .9488 | .8120 | .7081 | .6243 | .5541 | .4937 | .4407 | .3934 | .3508 | .3120 | 42   |
| 43   | 1.5249 | 1.1455 | .9462 | .8101 | .7066 | .6231 | .5531 | .4928 | .4399 | .3927 | .3501 | .3114 | 43   |
| 44   | 1.5149 | 1.1413 | .9435 | .8081 | .7050 | .6218 | .5520 | .4918 | .4390 | .3919 | .3495 | .3108 | 44   |
| 45   | 1.5051 | 1.1372 | .9409 | .8062 | .7035 | .6205 | .5509 | .4909 | .4382 | .3912 | .3488 | .3102 | 45   |
| 46   | 1.4956 | 1.1331 | .9383 | .8043 | .7020 | .6193 | .5498 | .4900 | .4374 | .3905 | .3481 | .3096 | 46   |
| 47   | 1.4863 | 1.1290 | .9356 | .8023 | .7005 | .6180 | .5488 | .4890 | .4365 | .3897 | .3475 | .3089 | 47   |
| 48   | 1.4771 | 1.1249 | .9330 | .8004 | .6990 | .6168 | .5477 | .4881 | .4357 | .3890 | .3468 | .3083 | 48   |
| 49   | 1.4682 | 1.1209 | .9305 | .7985 | .6975 | .6155 | .5466 | .4872 | .4349 | .3882 | .3461 | .3077 | 49   |
| 50   | 1.4594 | 1.1170 | .9279 | .7966 | .6960 | .6143 | .5456 | .4863 | .4341 | .3875 | .3454 | .3071 | 50   |
| 51   | 1.4508 | 1.1130 | .9254 | .7947 | .6945 | .6131 | .5445 | .4853 | .4333 | .3868 | .3448 | .3065 | 51   |
| 52   | 1.4424 | 1.1091 | .9228 | .7929 | .6930 | .6118 | .5435 | .4844 | .4324 | .3860 | .3441 | .3059 | 52   |
| 53   | 1.4341 | 1.1053 | .9203 | .7910 | .6915 | .6106 | .5424 | .4835 | .4316 | .3853 | .3434 | .3053 | 53   |
| 54   | 1.4260 | 1.1015 | .9178 | .7891 | .6900 | .6094 | .5414 | .4826 | .4308 | .3846 | .3428 | .3047 | 54   |
| 55   | 1.4180 | 1.0977 | .9153 | .7873 | .6885 | .6081 | .5403 | .4817 | .4300 | .3838 | .3421 | .3041 | 55   |
| 56   | 1.4102 | 1.0939 | .9128 | .7854 | .6871 | .6069 | .5393 | .4808 | .4292 | .3831 | .3415 | .3034 | 56   |
| 57   | 1.4025 | 1.0902 | .9104 | .7836 | .6856 | .6057 | .5382 | .4798 | .4284 | .3824 | .3408 | .3028 | 57   |
| 58   | 1.3949 | 1.0865 | .9079 | .7818 | .6841 | .6045 | .5372 | .4789 | .4268 | .3817 | .3401 | .3022 | 58   |
| 59   | 1.3875 | 1.0828 | .9055 | .7800 | .6827 | .6033 | .5361 | .4780 | .4268 | .3809 | .3395 | .3016 | 59   |



समूहक कोष्टक LOGARITHMIC TABLE

Hours of Degrees

| Min. | 12    | 13    | 14    | 15    | 16    | 17    | 18    | 19    | 20    | 21    | 22    | 23    | Min. |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| 0    | .3010 | .2663 | .2341 | .2041 | .1761 | .1498 | .1249 | .1015 | .0792 | .0580 | .0378 | .0185 | 0    |
| 1    | .3004 | .2657 | .2336 | .2036 | .1756 | .1493 | .1245 | .1011 | .0788 | .0577 | .0375 | .0182 | 1    |
| 2    | .2998 | .2652 | .2330 | .2030 | .1752 | .1489 | .1241 | .1007 | .0785 | .0573 | .0371 | .0179 | 2    |
| 3    | .2992 | .2646 | .2325 | .2027 | .1747 | .1485 | .1237 | .1003 | .0781 | .0570 | .0368 | .0175 | 3    |
| 4    | .2986 | .2640 | .2320 | .2022 | .1743 | .1481 | .1233 | .0999 | .0777 | .0566 | .0365 | .0172 | 4    |
| 5    | .2980 | .2635 | .2315 | .2017 | .1738 | .1476 | .1229 | .0996 | .0774 | .0563 | .0361 | .0169 | 5    |
| 6    | .2974 | .2629 | .2310 | .2012 | .1734 | .1472 | .1225 | .0992 | .0770 | .0559 | .0358 | .0166 | 6    |
| 7    | .2968 | .2624 | .2305 | .2008 | .1729 | .1468 | .1221 | .0988 | .0767 | .0556 | .0355 | .0163 | 7    |
| 8    | .2962 | .2618 | .2300 | .2003 | .1725 | .1464 | .1217 | .0984 | .0763 | .0552 | .0352 | .0160 | 8    |
| 9    | .2956 | .2613 | .2295 | .1998 | .1720 | .1459 | .1213 | .0980 | .0759 | .0549 | .0348 | .0157 | 9    |
| 10   | .2950 | .2607 | .2289 | .1993 | .1716 | .1455 | .1209 | .0977 | .0756 | .0546 | .0345 | .0154 | 10   |
| 11   | .2944 | .2602 | .2284 | .1988 | .1711 | .1451 | .1205 | .0973 | .0752 | .0542 | .0342 | .0151 | 11   |
| 12   | .2938 | .2596 | .2279 | .1984 | .1707 | .1447 | .1201 | .0969 | .0749 | .0539 | .0339 | .0147 | 12   |
| 13   | .2933 | .2591 | .2274 | .1979 | .1702 | .1443 | .1197 | .0965 | .0745 | .0535 | .0335 | .0144 | 13   |
| 14   | .2927 | .2585 | .2269 | .1974 | .1698 | .1438 | .1193 | .0962 | .0741 | .0532 | .0332 | .0141 | 14   |
| 15   | .2921 | .2580 | .2264 | .1969 | .1694 | .1434 | .1190 | .0958 | .0738 | .0529 | .0329 | .0138 | 15   |
| 16   | .2915 | .2574 | .2259 | .1965 | .1689 | .1430 | .1186 | .0954 | .0734 | .0525 | .0326 | .0135 | 16   |
| 17   | .2909 | .2569 | .2254 | .1960 | .1685 | .1426 | .1182 | .0950 | .0731 | .0522 | .0322 | .0132 | 17   |
| 18   | .2903 | .2564 | .2249 | .1955 | .1680 | .1422 | .1178 | .0947 | .0727 | .0519 | .0319 | .0129 | 18   |
| 19   | .2897 | .2558 | .2244 | .1950 | .1676 | .1417 | .1174 | .0943 | .0724 | .0515 | .0316 | .0126 | 19   |
| 20   | .2891 | .2553 | .2239 | .1946 | .1671 | .1413 | .1170 | .0939 | .0720 | .0512 | .0313 | .0122 | 20   |
| 21   | .2885 | .2547 | .2234 | .1941 | .1667 | .1409 | .1166 | .0935 | .0716 | .0508 | .0309 | .0110 | 21   |
| 22   | .2880 | .2542 | .2229 | .1936 | .1662 | .1405 | .1162 | .0932 | .0713 | .0505 | .0306 | .0116 | 22   |
| 23   | .2874 | .2536 | .2223 | .1932 | .1658 | .1401 | .1158 | .0928 | .0709 | .0501 | .0303 | .0113 | 23   |
| 24   | .2868 | .2531 | .2218 | .1927 | .1654 | .1397 | .1154 | .0924 | .0706 | .0498 | .0300 | .0110 | 24   |
| 25   | .2862 | .2526 | .2213 | .1922 | .1649 | .1392 | .1150 | .0920 | .0702 | .0495 | .0296 | .0107 | 25   |
| 26   | .2856 | .2520 | .2208 | .1917 | .1645 | .1388 | .1146 | .0917 | .0699 | .0491 | .0293 | .0104 | 26   |
| 27   | .2850 | .2515 | .2203 | .1913 | .1640 | .1384 | .1142 | .0913 | .0695 | .0488 | .0290 | .0101 | 27   |
| 28   | .2845 | .2509 | .2198 | .1908 | .1636 | .1380 | .1138 | .0909 | .0692 | .0484 | .0287 | .0098 | 28   |
| 29   | .2839 | .2504 | .2193 | .1903 | .1632 | .1376 | .1134 | .0906 | .0688 | .0481 | .0284 | .0095 | 29   |

समूहक कोष्टक LOGARITHMIC TABLE

Hours of Degrees

| Min. | 12    | 13    | 14    | 15    | 16    | 17    | 18    | 19    | 20    | 21    | 22    | 23    | Min. |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| 30   | .2833 | .2499 | .2188 | .1899 | .1627 | .1372 | .1130 | .0902 | .0685 | .0478 | .0280 | .0091 | 30   |
| 31   | .2827 | .2493 | .2183 | .1894 | .1623 | .1368 | .1127 | .0898 | .0681 | .0474 | .0277 | .0088 | 31   |
| 32   | .2821 | .2488 | .2178 | .1889 | .1618 | .1364 | .1123 | .0894 | .0678 | .0471 | .0274 | .0085 | 32   |
| 33   | .2816 | .2483 | .2173 | .1885 | .1614 | .1359 | .1119 | .0891 | .0674 | .0468 | .0271 | .0082 | 33   |
| 34   | .2810 | .2477 | .2168 | .1880 | .1610 | .1355 | .1115 | .0887 | .0671 | .0464 | .0267 | .0079 | 34   |
| 35   | .2804 | .2472 | .2164 | .1875 | .1605 | .1351 | .1111 | .0883 | .0667 | .0461 | .0264 | .0078 | 35   |
| 36   | .2798 | .2467 | .2159 | .1871 | .1601 | .1347 | .1107 | .0880 | .0663 | .0458 | .0261 | .0075 | 36   |
| 37   | .2793 | .2461 | .2154 | .1866 | .1597 | .1343 | .1103 | .0876 | .0660 | .0454 | .0258 | .0071 | 37   |
| 38   | .2787 | .2456 | .2149 | .1862 | .1592 | .1339 | .1099 | .0872 | .0656 | .0451 | .0255 | .0068 | 38   |
| 39   | .2781 | .2451 | .2144 | .1857 | .1588 | .1335 | .1095 | .0869 | .0653 | .0448 | .0251 | .0065 | 39   |
| 40   | .2775 | .2445 | .2139 | .1852 | .1584 | .1331 | .1091 | .0865 | .0649 | .0444 | .0248 | .0061 | 40   |
| 41   | .2770 | .2440 | .2134 | .1848 | .1579 | .1326 | .1088 | .0861 | .0646 | .0441 | .0245 | .0058 | 41   |
| 42   | .2764 | .2435 | .2129 | .1843 | .1575 | .1322 | .1084 | .0857 | .0642 | .0438 | .0242 | .0055 | 42   |
| 43   | .2758 | .2430 | .2124 | .1838 | .1571 | .1318 | .1080 | .0854 | .0639 | .0434 | .0239 | .0052 | 43   |
| 44   | .2753 | .2424 | .2119 | .1834 | .1566 | .1314 | .1076 | .0850 | .0635 | .0431 | .0236 | .0049 | 44   |
| 45   | .2747 | .2419 | .2114 | .1829 | .1562 | .1310 | .1072 | .0847 | .0632 | .0428 | .0232 | .0046 | 45   |
| 46   | .2741 | .2414 | .2109 | .1825 | .1558 | .1306 | .1068 | .0843 | .0628 | .0424 | .0229 | .0042 | 46   |
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## VIMSOTTARI DASAAND ANTARDASA

| Antardasa | Sun (Ravi)-6 |       |       | Moon (Chandra)-10 |    |       | Mars (Mangala)-7 |    |       |
|-----------|--------------|-------|-------|-------------------|----|-------|------------------|----|-------|
|           | Sub Periods  |       | Total | Sub Periods       |    | Total | Sub Periods      |    | Total |
|           | y            | m     | d     | y                 | m  | d     | y                | m  | d     |
| Sun       | 0            | 3     | 18    | 0                 | 3  | 18    | --               | -- | --    |
| Moon      | 0            | 6     | 0     | 0                 | 9  | 18    | 0                | 10 | 0     |
| Mars      | 0            | 4     | 6     | 1                 | 1  | 24    | 0                | 7  | 0     |
| Rahu      | 0            | 10    | 24    | 2                 | 0  | 18    | 1                | 5  | 0     |
| Jupiter   | 0            | 9     | 18    | 2                 | 10 | 6     | 4                | 3  | 0     |
| Saturn    | 0            | 11    | 12    | 3                 | 9  | 18    | 1                | 1  | 9     |
| Mercury   | 0            | 10    | 6     | 4                 | 7  | 24    | 0                | 11 | 27    |
| Ketu      | 0            | 4     | 6     | 5                 | 0  | 0     | 0                | 4  | 27    |
| Venus     | 1            | 0     | 0     | 6                 | 0  | 0     | 1                | 2  | 0     |
| Sun       | ----         | ----  | ----  | 0                 | 6  | 0     | 10               | 0  | 0     |
| Moon      | -----        | ----- | ----- | --                | -- | --    | 0                | 7  | 0     |

| Antardasa | Rahu -18    |    |       | Jupiter (Brihaspati)-16 |    |       | Saturn (Sani)-19 |    |       |
|-----------|-------------|----|-------|-------------------------|----|-------|------------------|----|-------|
|           | Sub Periods |    | Total | Sub Periods             |    | Total | Sub Periods      |    | Total |
|           | y           | m  | d     | y                       | m  | d     | y                | m  | d     |
| Rahu      | 2           | 8  | 12    | 2                       | 8  | 12    | --               | -- | --    |
| Jupiter   | 2           | 4  | 24    | 5                       | 1  | 6     | 2                | 1  | 18    |
| Saturn    | 2           | 10 | 6     | 7                       | 11 | 12    | 2                | 6  | 12    |
| Mercury   | 2           | 6  | 18    | 10                      | 6  | 0     | 2                | 3  | 6     |
| Ketu      | 1           | 0  | 18    | 11                      | 6  | 18    | 0                | 11 | 6     |
| Venus     | 3           | 0  | 0     | 14                      | 6  | 18    | 2                | 8  | 0     |
| Sun       | 0           | 10 | 24    | 15                      | 5  | 12    | 0                | 9  | 18    |
| Moon      | 1           | 6  | 0     | 16                      | 11 | 12    | 1                | 4  | 0     |
| Mars      | 1           | 0  | 18    | 18                      | 0  | 0     | 0                | 11 | 6     |
| Rahu      | --          | -- | --    | 2                       | 4  | 24    | 13               | 7  | 6     |
| Jupiter   | --          | -- | --    | --                      | -- | --    | 1                | 1  | 9     |

| Antardasa | Mercury (Budha)-7 |    |       | Ketu-7      |    |       | Venus (Sukra)-20 |    |       |
|-----------|-------------------|----|-------|-------------|----|-------|------------------|----|-------|
|           | Sub Periods       |    | Total | Sub Periods |    | Total | Sub Periods      |    | Total |
|           | y                 | m  | d     | y           | m  | d     | y                | m  | d     |
| Mercury   | 2                 | 4  | 27    | 2           | 4  | 27    | --               | -- | --    |
| Ketu      | 0                 | 11 | 27    | 3           | 4  | 24    | 0                | 4  | 27    |
| Venus     | 2                 | 10 | 0     | 6           | 2  | 24    | 1                | 2  | 0     |
| Sun       | 0                 | 10 | 6     | 7           | 1  | 0     | 1                | 6  | 27    |
| Moon      | 1                 | 5  | 0     | 8           | 6  | 0     | 3                | 4  | 0     |
| Mars      | 0                 | 11 | 27    | 9           | 5  | 27    | 1                | 0  | 0     |
| Rahu      | 2                 | 6  | 18    | 12          | 0  | 15    | 1                | 8  | 0     |
| Jupiter   | 2                 | 3  | 6     | 14          | 3  | 21    | 2                | 0  | 7     |
| Saturn    | 2                 | 8  | 9     | 17          | 0  | 0     | 2                | 11 | 0     |
| Mercury   | --                | -- | --    | 1           | 1  | 9     | 3                | 2  | 0     |
| Ketu      | --                | -- | --    | 0           | 11 | 27    | 6                | 0  | 3     |

## Astronomical Observatories in India

### Observatories of Sawai Jai Singh

The first observatory called **Janter Mantar**, a word derived from the Sanskrit word *Yantra Mantra* means instruments and formula, was built by Maharaja Sawai Jai Singh II (1686-1743 A. D.) who was the ruler of princely State of Jaipur from 1699 to 1743 A. D. His first observatory was built in 1719 at Ujjain. He also built four other observatories at Delhi (1724), Jaipur (1728), Varanasi (1734) and Mathura (1737). The last one is no longer extant. Among these four observatories, the Ujjain and Jaipur observatories are effectively existent, Sawai Jai Singh II built observatories to encourage astronomical studies in the country and to popularise astronomy among the people of India. It was his firm faith in astrology that led him to study with a view to obtaining reliable and correct data about the position of heavenly bodies. His inspiration mainly came from the observatory established by Prince Ulugh beigh, who established in 1433 A. D. an enormous observatory at Samarkhand (now in Uzbekistan).

**The Samrat Yantra**, built by Sawai Jai Singh II in 1728 A. D. at Jaipur is the biggest Sundial in the world. It gives local solar time to an estimated accuracy of 15 seconds.

### Kodaikanal Observatory

The Kodaikanal Solar Observatory is situated at Palani Hills in Tamil Nadu, which lies over about 7000 ft. above sea level and started functioning in 1900. This observatory at Kodaikanal initially had a wide array of spectroscoping equipments specially acquired for solar studies. It has, at present, a large solar telescope combined with a powerful spectrograph, a coronagraph and a monochromatic heliograph. It is one of the three major solar observatories in the world. It is now under the administrative control of the Indian Institute of Astrophysics (IIA) of the Govt. of India.

### Nizamiah and Japal-Rangapur Observatories

Nizamiah Observatory was normally set up at Begumpet in 1901 as a private observatory. It was taken over by the then Hyderabad Government of Nizam in 1908. and attached to Osmania University in 1919. Plans for the modernisation of the observatory were initiated by the



University Grants Commission in 1954. A 48-inch reflector telescope was installed in the year 1968 at the new site named Japal-Rangapur. In 1983 the historic Begumpet site was vacated and Nizamiah Observatory shifted to a new building in the Osmania University Campus. The observatory, at Japal-Rangapur is, at present, engaged in various astronomical research programmes involving binary stars, spectroscopic observations, stellar dynamics etc.

### **Uttar Pradesh State Observatory, Naini Tal**

This was the first observatory to be set up in India after independence. It was started in 1954 at the old city of Varansi by the U. P. Government. In November 1955, this observatory with M. K. Vainu Bappu as the Chief Astronomer, shifted to its present site at Manora Peak in Naini Tal. A 40-inch Zeiss reflector telescope was installed in the observatory in 1972. Research works on stars, star clusters and galaxies, sun and solar activity are being carried out here.

### **Vainu Bappu Observatory, Kavalur**

Kavalur Observatory is located amidst sandal wood forests in Jawadi Hills in the North Arcot District of Tamil Nadu and was set up in 1968 as a part of the Kadaikanal Observatory. On April 1, 1971 the Kadaikanal Observatory was made into the Indian Institute of Astrophysics of the Government of India with headquarters at Bangalore. A 40-inch Carl Zeiss telescope was installed at Kavalur in 1972. On January 6, 1986 the 93-inch telescope was installed here and this is, at present, the largest telescope of Asia. This telescope was completely fabricated and built in India indigenously. This telescope and the Kavalur Observatory was named after its founder, M. K. Vainu Bappu in the year 1986. Various types of research work on astrophysics are being pursued here.

### **Udaipur Solar Observatory**

The Udaipur Solar Observatory was set up in 1975 on a small island in the Fatehsagar lake in Udaipur, under the aegis of the Vedhshala Trust, Ahmedabad. In December 1981, the observatory was taken by the Government of India's Department of Space, and attached to the Physical Research Laboratory, Ahmedabad. This observatory began its scientific work with an old 10 ft. solar telescope, which has been completely modified.

This observatory is, at present, completely engaged in helioseismological study.

### **Gurusikhar Infrared Observatory**

The Gurusikhar Observatory is situated on Mount Abu, in South Rajasthan. It is a part of the Physical Research Laboratory (PRL) of Ahmedabad. A telescope of 1.2 m aperture mainly intended for studies in the infrared was installed at Gurusikhar and became operational in 1985. The astronomy group at PRL has developed expertise in focal plane instruments for special studies in infrared astronomy.

### **Ooty Radio Telescope**

The Ooty Radio Telescope is the first major radio astronomical facility available in India. It is situated on Nilgiri Hills in Tamil Nadu. It became operational in 1970. One of the principal objectives of this telescope has been the determination of the brightness distribution of a large number of weak and distant extragalactic radio sources.

### **Giant Metre-wave Radio Telescope (GMRT)**

The Giant Metre-wave Radio telescope is now under construction near Khodad, about 80 Km north of Pune. When completed, it will be one of the most powerful radio telescopes of the world. Both the GMRT and the Ooty Radio telescope, are now under the administrative control of the National Centre for Radio Astrophysics (NCRA) Pune. Which is again under the Tata Institute of Fundamental Research (TIFR). Mumbai.





## वेधशाला स्थित यंत्रों का परिचय

### शंकु यंत्र



क्षितिज वृत्त के धरातल में निर्मित इस चबूतरे के मध्य में एक शंकु लगा हुआ है, जिसकी छाया से सात रेखायें खींची गई हैं, जो बारह राशियों को प्रदर्शित करती हैं। इन रेखाओं में 22 दिसम्बर वर्ष का सबसे छोटा दिन, 21 मार्च, 23 सितम्बर दिन-रात बराबर तथा 22 जून वर्ष का सबसे बड़ा दिन बतलाती है। शंकु की छाया से उन्नतांश भी ज्ञात किये जा सकते हैं।

जब दिन-रात बराबर होते हैं तब मध्याह्न कालीन शंकु की छाया से अक्षांश ज्ञात होते हैं।

### नाड़ी वलय यंत्र



विषुवद वृत्त के धरातल में निर्मित इस यंत्र के उत्तर दक्षिण दो भाग हैं। छः माह तक जबकि सूर्य उत्तरीय आधे गोल में रहता है। उत्तर का गोल भाग प्रकाशित रहता है तथा दूसरे छः मास तक जबकि सूर्य दक्षिणीय आधे गोल में रहता है दक्षिण का गोल भाग प्रकाशित रहता है। इन दोनों भ्रागों के बीच में पृथ्वी को धुरी के समानान्तर लगी कील की छाया से उज्जैन का स्पष्ट समय मालूम होता है।

कोई ग्रह अथवा नक्षत्र उत्तरी गोलार्द्ध में है या दक्षिणी गोलार्द्ध में है यह जानने के लिये इस यंत्र का उपयोग किया जाता है। उत्तरी भाग के गोल किनारे के किसी उपयुक्त बिंदु से सीधे अभीष्ट ग्रह अथवा नक्षत्र को देखिये वह दिखाई दे तो उसे उत्तर गोलार्द्ध में अन्यथा दक्षिण गोलार्द्ध में समझिये।



## सम्राट यंत्र



इस यंत्र के बीच की सीढ़ी की दीवाल पृथ्वी की धुरी के समानान्तर होने के कारण दीवाल के ऊपरी धरातल की सीध में रात्रि को ध्रुवतारा दिखाई देता है। इसके पूर्व तथा पश्चिम की ओर विषुवद् वृत्त धरातल में समय बताने के लिये एक चौथाई गोल भाग बना हुआ है जिस पर घन्टे मिनट एवं सेकेण्ड के भाग खुदे हुए हैं।

जब आकाश में सूर्य चमकता है तब दीवाल के किनारे की छाया पूर्व या पश्चिम तरफ समय बतलाने वाले किसी निशान पर दिखाई देती है। इस निशान पर घण्टा मिनट आदि की गिनती से उज्जैन का स्पष्ट (स्थानीय) समय मालूम होता है। यंत्र के पूर्व एवं पश्चिम बाजू में लगी सारणी में लिखे अनुसार मिनट स्पष्ट समय में जोड़ने से भारतीय मानक समय मालूम होता है।

आकाश में ग्रह नक्षत्र विषुवद् वृत्त से उत्तर अथवा दक्षिण कितनी दूर है यह जानने के लिये इस यंत्र का उपयोग किया जाता है। चौथाई गोल के किनारे पर ऐसे स्थान को मालूम कीजिये जहाँ से सीढ़ी की दीवाल के किनारे के किसी बिन्दु पर ग्रह अथवा नक्षत्र का केन्द्र दिखाई दे दीवाल के इस बिन्दु पर जो अंक हो वह उस देखे गये ग्रह अथवा नक्षत्र की विषुवद् वृत्त से दूरी होती है, जिसे क्रान्ति कहते हैं।

## भित्ति यंत्र



यह यंत्र उत्तर-दक्षिण वृत्त उत्तर-दक्षिण बिन्दु तथा दृष्टा के ख मध्य बिन्दु को मिलाने वाली रेखा के धरातल में बना हुआ है। जब वे उत्तर दक्षिण रेखा को पार करते हैं, यही समय उनका मध्यान्ह काल होता है। इस यंत्र से ग्रह नक्षत्रों के नतांश ज्ञात होते हैं।

यंत्र के ऊपरी सिरे पर दो कीलें हैं। जिस ग्रह अथवा नक्षत्र को देखना हो वह यदि पूर्व-पश्चिम वृत्त पूर्व-पश्चिम बिन्दु तथा ख मध्य को मिलाने वाली रेखा से दक्षिण भाग में हो तो दक्षिण की तथा उत्तर में हो तो उत्तर की कील का उपयोग कीजिये।

जिस समय ग्रह अथवा नक्षत्र उत्तर दक्षिण गोल के पार जाने लगे तब कील में बन्धे डोरे को अपनी आंख के साथ दीवाल पर ऐसी जगह स्थिर कीजिये जिससे पार जाने वाले ग्रह अथवा नक्षत्र कीले की छाया के सीध में दिखाई दे।

सफेद गोल पट्टी पर डोरे के स्पर्श, अंकित अंक ग्रह नक्षत्र के नतांश होते हैं।



## दिगंश यंत्र



इस यंत्र के बीच में गोल चबूतरे पर लगे लोहे के दण्ड में तूरीय यन्त्र लगाने पर ग्रह नक्षत्रों के उन्नतांश (क्षितिज वृत्त से ऊंचाई) और दिगंश (पूर्व-पश्चिम दिशा के बिन्दु के क्षितिज वृत्त से कोणात्मक दूरी) मालूम होते हैं। तूरीय यंत्र को इस प्रकार स्थिर कीजिये कि उसमें बने दो छेद तथा ग्रह अथवा नक्षत्र का केन्द्र अपनी आँख से सीध में हो, दण्ड के सिरे पर लगे चक्र पर तूरीय यंत्र की घूमने वाली सूई दिगंश बतलाती है।

तूरीय यंत्र पर लटकने वाला डोरा यंत्र के किनारे पर जिस जगह होगा, वहाँ के अंक उन्नतांश होता है।



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