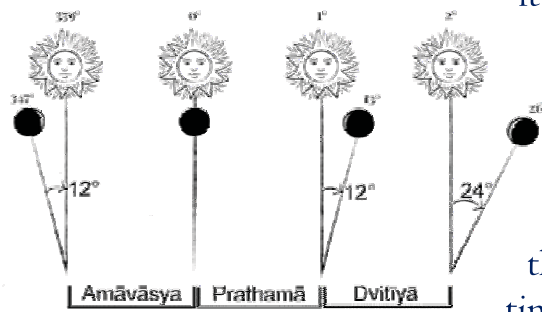


CALENDAR EXPLANATION

महाऋषि वशिष्ठ॥ यस्मिन् पक्षे यत्र काले येन दृग्गणितैक्यम्। दृश्यते तेन पक्षेण कुर्यात्तिथ्यादिनिर्णयम्॥

Biggest misconception is “Indian Hindu festivals observance date in the Indian calendar / panchanga is applicable for all location in world”. Observance dates from Indian Panchanga is valid only in India and is not transferrable to other locations. Another misconception arises due to the time zones differences is as USA/Canada and Europe is behind in time then Festival will come a day later in USA/Canada and Europe. This is incorrect. Tithis, Nakshatras, Yoga and Karana are events, they end at the same time instance all over the world. After calculating tithi and nakshatra end times in local timezone, the different rules help to determine each festival. The local sunrise, sunset, moon-rise, and moonset times are used with Tithi to determine festivals. Hence, sometimes festivals may appear on the same day as India or a day before in the countries west of India. The countries east of India the festival may appear on the same date as India or a day later.

Hindu day changes at the sunrise (not midnight), a Hindu day (Vaara) is from one sunrise to another sunrise. The Hindu date (tithi) doesn't change at the midnight, and it is not always fixed 24 hours long



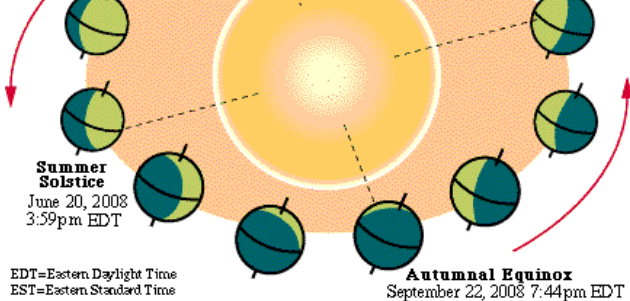
it can be anything between 19 to 26 hours. Each 12 degrees distance between the Sun and the Moon is Tithi. The tithi, nakshatra, yoga and karana are based on geocentric positions of the Sun and the Moon. This astronomical phenomenon happens at the same time on the earth everywhere, and hence thithis, nakshatra will begin and end at the same time all over the world, and we must convert them to our local timezone. Indian panchang makers convert this times to Indian time. Likewise, other countries needs to convert these

times in their time zone from UTC.

For example: October 17th 2008 the Ashwayuja (Ashwin) Krishna Paksha tithi Tritiya ends at 16:39:21 Indian Standard Time, and chaturthi starts. That means at 16:39 hours there is trititiya still prevailing in India. The time difference with Seattle and India is 13 hours 30 minutes (with day light saving time the difference is 12 hours 30 minutes from IST). So, let's subtract 12 hours 30 minutes from the 16:39:21. That gives us 04:09:21 AM on October 17th. So on October 17th after that time we'll have chaturthi tithi and before we have trititiya. The earth doesn't wait for tithi or festivals to arrive in your timezone. **The sun doesn't rise instantly at the same time all over the world Hence we need local sunrise, sunset, moonrise and moonset times, along with Tithi, & Nakshatra ending times to determine festival date and time.**

How festivals are determined? The sankathara chaturthi the chaturthi tithi must be prevailing during the moonrise time. Moonrise in New Delhi on a given date is at 19:36 and in West Bengal, Kolkatta is at 19:25 PM. Now trititiya ends at 19:32 PM IST. So Kolkatta will celebrate karwa chauth/sankathara chaturthi on the Tomm where as people in New Delhi will celebrate on the same day. **Timings in this calendar are end timings of the Tithi and Nakshatra and for Sun/Moon entering time when it enters a new rashi.**

Uttarayana/Dakshinayana: The season occur based on earth's position around the Sun. This is due to Earth's tilt of 23.45 degrees. The Earth orbits around Sun with this tilt. When the tilt is facing the Sun, we get summer and when the tilt is away from the Sun we get winter. **This tilt creates an illusion that the Sun travels north and south of the equator.**



The Uttarayana (Winter Solstice) is the Sun appearing to move north. The Dakshinayana (Summer Solstice) is the Sun appearing to move towards South. This causes seasons, equinoxes and solstices.

There is a common misconception that Makara Samkranti is the Uttarayana. This is because at one point in time Sayana and Nirayana Zodiac were same. Every year equinoxes slides by 50 seconds due to precision of equinoxes, giving birth to Ayanamsha and causing Makara Samkranti to slide further. If you think Makara Samkranti is uttarayana then as it is sliding it will come in June after 9000 years. **All Drigganitha Panchanga makers like mypanchang, Rastriya Panchang, Janmabhumi Panchang, will use the position of the tropical Sun to determine Uttarayana and Dakshinayana. Hence January 14th isn't Uttarayana. Actual Uttarayana occurs on December 21st/22nd of every year. The same for Rutu. Rutus are always observed based on Tropical position of Sun.**

About myPanchang.com: myPanchang.com is the leading panchang maker providing the most accurate panchagam for over more than 394 cities all over the world based on highly accurate driga ganitha. Most temples in the world rely on myPanchang.com for accurate Panchang data and festival observance times. For more details please visit <http://www.mypanchang.com>.

Panchangam Data
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