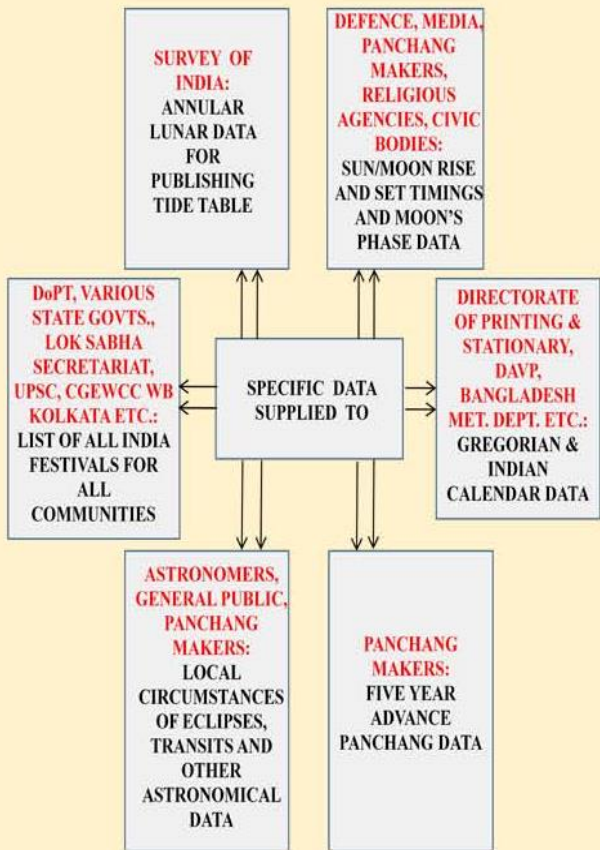


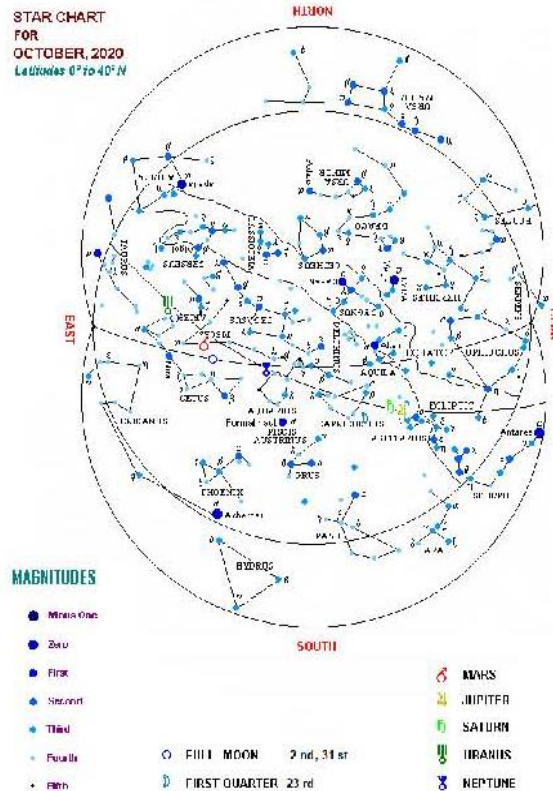
## DATA SERVICES



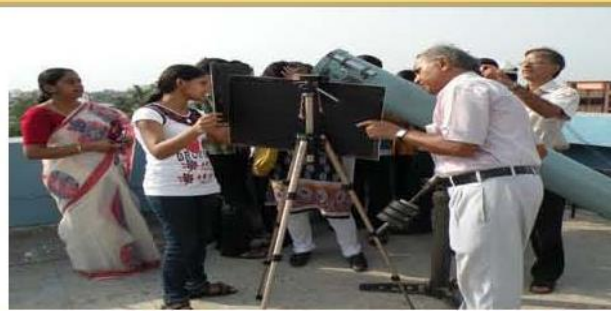
## OTHER ACTIVITIES

- Preparation of monthly star charts and astronomical bulletins for website
- Supply of 5-year advance data to enlisted panchang makers
- Astronomical observations by portable telescope on different astronomical phenomena
- Public-outreach programme
- Issue of press bulletins on different astronomical phenomena

## MONTHLY STAR CHART



## ASTRONOMICAL OBSERVATIONS (OUTREACH PROGRAMME)



खगोल विज्ञान केंद्र  
Positional Astronomy Centre  
भारत मौसम विज्ञान विभाग  
India Meteorological Department  
पृथ्वी विज्ञान मंत्रालय  
Ministry of Earth Sciences  
भारत सरकार  
Government of India



## CONTACT DETAILS

Positional Astronomy Centre  
Block-AQ, Plot-8, Sector-V, Salt Lake  
Kolkata-700091

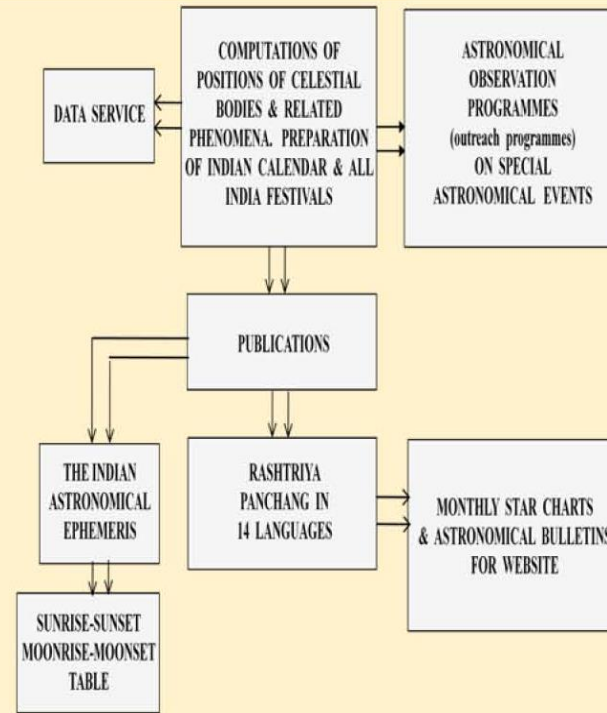
E-mail: [pac.kolkata@imd.gov.in](mailto:pac.kolkata@imd.gov.in)  
Phone: (033) 2367-1200/1201/1205  
Website: [www.packolkata.gov.in](http://www.packolkata.gov.in)



## HISTORY

- At the time of independence, India had a large number of different calendars with divergent methods of reckoning time
- It was felt desirable to have uniformity in the calendar throughout the country for civic, social and other purposes
- The Government appointed a Calendar Reform Committee in November, 1952, under CSIR with Prof. Meghnad Saha as Chairman with a view to develop a unified National Calendar on the basis of most accurate modern astronomical data for the interest of national integrity
- The committee recommended preparation of the Indian Ephemeris and Nautical Almanac calculated with most modern astronomical formulae, the National Calendar of India (using Saka Era) with timings of tithis, nakshatras, yoga etc, and also festival dates.
- The work of the Committee was taken up by the India Meteorological Department from 1<sup>st</sup> December, 1955. The work was entrusted to a unit named Positional Astronomy Centre at Kolkata
- The unit undertook the preparation of 'The Indian Astronomical Ephemeris' for 1958, the first issue was published in 1957. Simultaneously the first issue of Rashtriya Panchang (containing data of National calendar along with usual panchang parameters to serve as a standard panchang for whole of the country) was started from 1879 Saka Era (1957-58 AD)

## FUNCTIONS



## ANNUAL PUBLICATIONS

### THE INDIAN ASTRONOMICAL EPHEMERIS CONTAINS OVER 500 PAGES OF DATA ON:

- Astronomical Time Scale
- Positions of the Sun, Moon and planets in different astronomical co-ordinate systems
- Ephemeris of the physical observations of the Sun and the Moon
- Mean and apparent places of bright stars
- Data on astronomical reference systems
- Times of rising and setting of the Sun and Moon

- Eclipses and occultations
- Astronomical Phenomena
- Indian Calendar

## RASHTRIYA PANCHANG

Published in fourteen languages namely, Hindi, English, Sanskrit, Urdu, Assamese, Bengali, Gujarati, Marathi, Punjabi, Tamil, Telugu, Kannada, Malayalam and Odia: aims to provide a standard unified calendar for whole country

Salient features are:

- Tithi, Nakshatra, Yoga and Karana in IST based on modern astronomical data. All phenomena are calculated for central point (82° 30'E, 23° 11' N)
- Lunar months commences from the ending moment of New Moon-traditional luni-solar arrangement
- Tables of longitudes, beginning of lagnas, transits of the Sun, Moon and planets in different rasis and nakshatras
- All India fairs and festivals for all communities

## TABLES OF SUNRISE-SUNSET MOONRISE-MOONSET

Off-prints from the main publication, The Indian Astronomical Ephemeris, to cater to specific need of different users

## OTHER PUBLICATIONS

- Booklet on Total Solar Eclipse of 1980, 1995, 1999, 2009
- Bharatiya Jyotish Sastra, translated into English from original Marathi version