

Jaya Jaya Shankara Hara Hara Shankara

# **Sethubandhanam Endowment for Panchanga Jyautisha Research and Education**

## **What is Jyautisha?**

Jyautisha is our Bharatiya study of the “lights” (jyotis) in the sky. In our Bharatiya Jnana Parampara (Indian Knowledge Systems) it comprises both mathematics as well as astronomy, both theoretical and computational.

Phalita or astrology is a separate discipline based on Jyautisha for those who seek such supernatural solutions to mundane problems, but core Jyautisha has applications other than that as well.

One use is no doubt to satiate pure scientific curiosity about the heavens, but with regard to benefiting the general public, the main importance of Jyautisha is time reckoning. This is reflected in our Bharatiya calendars called panchanga-s and has numerous implications.

## **Celestial Movements Defining Time Reckoning For Civil And Cultural Purposes – Panchanga**

The Tarka shastra defines time as that aspect of an action or occurrence which demarcates other actions or occurrences. For example, the rise and set of the Sun is an occurrence which we use to demarcate daily activities of humans, animals and plants and defines the time unit called day. Likewise his northward and southward apparent movement causing the seasons defines the year.

Likewise, apart from the Sun, the movements of the Moon and other planets also demarcate various aspects of civil and cultural/religious/dharmic life in our Bharatiya parampara. These are all recorded in the book called panchanga, which is thus much more than a calendar showing days of 12 months in grids.

## **Speciality Of Bharatiya Panchanga/Calendar**

Unlike the common months January etc, our traditional Bharatiya months are defined and named by the position of the sun and moon among the stars. This definition is the basis of all the cultural observances and festivals in our Bharatiya tradition such as Dipavali, Rama Navami, Krishna Ashtami, Navaratri, Shivaratri and so on.

Not only cultural, but even civil activities such as agricultural practices of irrigation, sowing seeds or reaping harvest, or Ayurvedic guidelines of ritu-charya or what kind of food and practices we must follow in what season, are also dependent on the seasons which are shown in the panchanga.

To illustrate such widespread civil utility: Even the simplest among farmers in rural areas of Karnataka still take up particular steps of agriculture by asking the local temple priest the date in the panchanga. Last year a police department in Uttar Pradesh issued a circular to take advantage of the amavasya dates given in panchanga-s to enhance security monitoring on dark nights.

## **Contents of Panchanga-s**

The word panchanga is derived from the pancha=five anga=aspects ascribed to each day: tithi (waxing and waning of the moon), vasara (weekday), nakshatra (position of moon among stars), yoga (combined solar and lunar phase) and karana (half tithi).

However, panchanga-s also provide other interesting observable details of the movement of the planets in the skies, such as when they appear to move backwards (vakra), are lost in the glare of the sun (maudhya), when they meet with the moon at night (samagama) and with each other (yuddha). Many other such celestial alignments (mahapata etc) and of course eclipses (grahana) have been studied in much detail by our forebears and recorded in the panchanga-s with significant accuracy, considering the lack of modern equipment in the olden days.

## **Developing A Panchanga – Calculation And Dissemination**

By nature, astronomical calculations are complicated, and today's modern computer-based calculations run into thousands of steps. Our ancients have however manually computed the celestial positions with accuracy sufficient for practical

purposes, and these also involve tens of careful steps for each celestial position for each day through the 365 days of a year.

The help of calculators or computers can only be in the matter of raw number crunching. It is up to humans to teach the computer what numbers to process and how they should be processed correctly to determine such celestial positions. The intricacies involved in this would be totally bewildering to the common person.

As such, computing a panchanga is so involved a task that our ancient society had at least one family called panchangakara in each local community. Their needs of life were taken care of by the community so that they could dedicate their whole time for developing the panchanga to serve the civil and cultural needs of that community.

Today in each state, a varying number of panchanga publishers exist, who publish for a wider audience. They still need to be aware of the correct calculation procedures for providing proper computation services via panchanga-s to the society.

## **Dharma Shastra Input for Panchanga-s**

However, apart from calculations, for the preparation of a panchanga, input from Dharma Shastra texts is also essential to determine on which day a particular festival or observance should be done. This requires scholars of Dharma Shastra capable of giving attention to the nuances of the rules in the scriptures.

Dharmic institutions of high standing regularly conduct sadas-es which bring together those doing the calculations and/or publishing panchanga-s and those expert in Dharma Shastra. In these programmes, the panchanga details of each day of the upcoming year is examined, and the festivals and observances determined. These annual sadas-es take up to three days.

We know that nowadays, with the internet and social media providing rapid dissemination facilities, along with good information, a lot of misinformation regarding such traditional observances also exists. So it is important for the common people to receive authoritative guidance from dharmic institutions based on a correct understanding of both ancient traditional scriptures and up-to-date modern computations.

It is to be noted that scholars with high expertise in computational jyautisha (jyotir ganita) and dharma shastra are both very few in number. However, it is reassuring that we see upcoming scholars who are eager to learn from senior experienced ones and come to participate in the aforementioned sadas-es.

As these fields of knowledge are lesser known or even thought of, but are so essential to our day-to-day cultural and civil life, it is important to support both senior scholars who spend time in discharging these dharmic duties for the benefit of the public and also students and younger scholars so that they can spend time in gaining knowledge from those more experienced.

## **Endowment for Panchanga Jyautisha**

For this, Sethubandhanam proposes the “***Endowment for Panchanga Jyautisha Research and Education***”, which will support:

1. Such Panchanga Sadases conducted by dharmic institutions or groups of high standing.
2. Programmes targeted at educating both the general public and particularly students of both traditional/cultural and modern/civil streams regarding the greatness of our traditional panchanga-s, to give them a taste in the subject and show how seriously our ancients have taken this matter of time reckoning and how much based on scientific concepts it is.
3. Educating the potential next generation of panchanga makers on the calculations and dharma shastra rules required for developing panchanga-s.
4. Creating educational material for the above two purposes.
5. Other activities conducive to the above purposes.

***We invite the astika public dedicated to the preservation of Bharatiya culture to munificently donate to this cause.***