The controversy of 1199 Kanni 1

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1 Background

There are two controversies happening about the 2023 calendar in Kerala.

1. Kerala Government calendar (Figure 1) shows 1199 Chingam has 32 days and 1199 Kanni starts on September 18. Popular calendars like Mathrubhoomi (Figure 2) and Manorama (Figure 3) Calendars show that Chingam has 31 days and Kanni starts on September 17.
2. The Government holiday for Sree Narayana Guru Samadhi is on September 22. It should coincide with Kanni 5, but popular calendars show it on Kanni 6.

We investigate how this happened.

2 When does a Malayalam month start?

Malayalam calendar is an astronomical calendar, and the various details are based on astronomical events. The ecliptic is divided into 12 equal parts of 30 degrees each, and the duration in which the Sun traverses one part is called a month.

The Sun may transit from one month to another during the day. This is the rule to determine whether the day 1 of the next month is the day of the transit or the next day.

Rule 1 *If the transit happens before the* madhyaahnam *is over, the current day is considered day 1. If it is after, the next day is the day 1.*

Now, let us see when *madhyaahnam* ends.



Figure 1: Kerala Government Calendar: September 2023



Figure 2: Mathrubhoomi Calendar: September 2023



Figure 3: Manorama Calendar: September 2023

Table 1: Computation of Kanni 1 for various places

Place	Sunrise	Sunset	Day length	0.6 x Day length	End of 0.6 x day	Kanni 1
Kanjangatu	06:21 am	06:26 pm	725m (12h 5m)	435m (7h 15m)	01:36 pm	Same day
Kozhikode	06:19 am	06:23 pm	724m (12h 4m)	434m (7h 14m)	01:33 pm	Same day
Trichur	06:18 am	06:21 pm	723m (12h 3m)	433m (7h 13m)	01:31 pm	Same day
Kochi	06:18 am	06:21 pm	723m (12h 3m)	433m (7h 13m)	01:31 pm	Same day
Kottayam	06:17 am	06:20 pm	723m (12h 3m)	433m (7h 13m)	01:30 pm	Same day
Kollam	06:16 am	06:19 pm	723m (12h 3m)	433m (7h 13m)	01:29 pm	Next day
Palakkadu	06:16 am	06:19 pm	723m (12h 3m)	433m (7h 13m)	01:29 pm	Next day
Pathanamthitta	06:16 am	06:18 pm	722m (12h 2m)	433m (7h 13m)	01:29 pm	Next day
Trivandrum	06:15 am	06:18 pm	723m (12h 3m)	433m (7h 13m)	01:28 pm	Next day

The day (the duration between sunrise and sunset) is divided into five equal parts: *praahnam*, *poorvaahnam*, *madhyaahnam*, *aparaahnam* and *saayaahnam*. Madhyaahnam is the third of the five parts. So, it ends when 60% of the day ends, and its happens around 1:30pm.

3 What happened in CE 2023 / ME 1099?

So, it is clear the first day of a month is computed based on the sunrise and sunset on that day.

Normally, the small change in the sunrise/sunset time in Kerala doesn't cause the date to change, but this year is an exception.

The Sun moves from *Chingam* to *Kanni* on September 17 at 01:30pm IST. If this is within 60% of the daytime, September 17 is Kanni 1, otherwise September 18 is Kanni 1.

Table 1 tabulates these computations for various places in Kerala.

In more eastward places, the Sun rises and sets a little (a few minutes) earlier than the westward places, so the 60% line happens a bit earlier. In this case, the 60% time falls before the transit time for eastward places, and if the calendar is computed for those places, the next day (Sep 18) is considered as Kanni 1. For other places, Sep 17 is considered Kanni 1.

The map in Figure 4 shows this divide. If the calendar is computed for a place east of the red line, September 18 is Kanni 1. If the place is west of the red line, September 17 is the Kanni 1.



Figure 4: Map of Kerala

4 Why is there is a difference between calendars?

Mathrubhoomi Calendar is computed for Kozhikode, west of the line. Manorama Calendar is computed for Kottayam, west of the line. Hence, both these calendars show September 17 as Kanni 1.

Kerala Government's official Calendar computes for Trivandrum, the capital of Kerala. It lies east of the line, and hence September 18 is fixed as Kanni 1.

5 What is the problem?

The problem is, there is no standard way to compute calendars. Each calendar computes based on the place of its preference. Should we compute for a place in the middle, like Trichur? Or should we compute based on the capital? (It is a common practice to compute based on the Capital. For example, Chinese government computes Chinese Calendar based on Beijing, even though it is situated on the east coast of the big country of China and not in the middle.)

Unless this is standardized, we'll have this problem.

6 What is the controversy about Sreenarayana Samadhi?

The death anniversary of Sreenarayana Guru is observed on Kanni 5, and it is a Government holiday. Since the Government holiday was fixed based on the Government calendar, it is observed on September 22. When it is shown on a calendar that has September 17 as Kanni 1, like the Manorama and Mathrubhoomi calendars (See Figure 3), it is shown on Kanni 5 instead. This caused a big uproar and people accused that the calendar makers deliberately made this mistake.