

Grahan Mala

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Grahan Mala is an astronomical treatise on the calculation of the dates and timings for the lunar and solar **eclipses** written by the Indian Astronomer **Hemangad Thakur** in the 16th century AD.

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1. Introduction of Hemangad Thakur

Hemangad Thakur was the King of **Mithila** between 1571 AD to 1590 AD. He was also an Indian Astronomer in 16th century ^[1]. He was famous for his astronomical treatise **Grahan Mala**. The book told the dates of the eclipses for 1088 years from 1620 AD to 2708 AD. The dates of **lunar** and **solar eclipses** that **Hemangad Thakur** had fixed on the basis of his unique calculations are proving to be true till date ^[2]. Hemangad Thakur was an Alma Mater of the **Ancient Mithila University**. He was awarded with the title "**Mahamahopadhyay**" by the university.

2. Early Life

Hemangad Thakur was born in a **Maithil Brahmin** family in Mithila region of present Bihar state in India. He born in 1530 AD. He was the grandson of **Mahamahopadhyay Mahesh Thakur** and the son of **Gopal Thakur**. Mahesh Thakur was also the King of Mithila in **Khandwala Dynasty**. He belonged to **Shandilya Gotra** in the **Maithil Brahmins**.

3. History of Hemangad Thakur

After the abdication of his father **Gopal Thakur**, he was handed over the throne of Mithila in 1571 AD. But he was not interested in governance. In 1572 AD, he was arrested and taken to Delhi and imprisoned for not paying taxes on time to the **Mughal Empire**. It is said that in prison he started writing mathematical calculations on the surface of the floor of the jail, then the jailer asked him about the mathematical figures drawn on the floor. **Hemangad Thakur** replied that he was trying to understand the motion of the **Moon**. Then the jailer spread the news that **Hemangad Thakur** had been mental mad. After hearing the news, the **Mughal Emperor Akbar** himself went to see Hemangad Thakur and asked about the mathematical calculations and figures drawn on the floor. Then Hemangad Thakur replied that he had calculated the dates of the eclipses for the next 500 years. After hearing the reply, the emperor immediately granted **copperplate** and pen to him for writing the calculations and told him that if his calculations became true, then he would be released from the prison. There in prison, he composed his famous book **Grahan Mala** which explained the eclipses for 1088 years. He predicated the date and time of the next lunar

eclipse and informed the emperor. The prediction of the next lunar eclipse came to true on the same date and time as calculated by him [3]. On composing this book, the **Mughal emperor Akbar** not only released him, but also returned the tax-free kingdom of **Mithila**.

4. Discovery of Grahan Mala

Hemangad Thakur calculated the dates of the eclipses for 1088 years from 1620 AD to 2708 AD on the basis of his unique calculations. The eclipses dates have been proved to be true till date. He composed an astronomical treatise book known as **Grahan Mala** which explains the dates of the eclipses. In making **Panchang**, scholars and **Pandits** take helps of this book. The manuscript of the book was preserved in **Kameshwar Singh Darbhanga Sanskrit University**, which has been stolen a few years back. By the way, in 1983 itself, the university had published this book, which is present in various libraries [4][5][6]. **Indian National Science Academy** started a research project through national commission (2014 - 2022) by **Vanaja V** on the astronomical treatise Grahan Mala. The research project is known as "**A Critical Study of Hemangada Thakkura's Grahaṇamala**" [7].

5. Description of Grahan Mala

Grahan Mala was later edited by the eminent professor **Pandit Shree Vajrakishor Jha** of **Kameshwar Singh Darbhanga Sanskrit University**. It was published in the year of **1983 AD** by the university. In the order of eclipse description, the first mention is made of **Shakabda** which is written with the name **Shaake**. It is also known as **Shaka Samvat**. The difference between the Shaka Samvat and the AD is 78 years. After that the second word used is **Dhuvrind**. The meaning of **Dhuvrind** is **Dingan-Ahargan**, which is written by calculating every year starting from **Mesha Sankranti** till the eclipse day. All the terms of date and time in the book Grahan Mala are mentioned according to the ancient Indian system of time. The other terms used are **Purnima**, **Amavasya**, **Nakshatra**, **Danda**, **Pal**, and Indian names of months etc. The original manuscript of Grahan Mala by Hemangad Thakur was written in Sanskrit literature. Pandit Vajrakishor Jha translated into Hindi language.

6. Relation between Grahan Mala and Chaurchan Puja in Mithila

When the King **Hemangad Thakur** came to Mithila after being released from the jail of the **Mughal Emperor Akbar**, then the Queen **Maharani Hemlata** said that today **Chandra Deva** has become free from stigma, we will darshan and worship him. With the same belief, the people of Mithila also started worshipping **Chaturthi Chandra** to celebrate the return of their kingdom and their king. This festival of **Chandra Deva** is known as **Chaurchan Puja**. It is believed that those who worship the Chandra Deva (the Moon God) along with **Lord Ganesha**, get freedom from **Chandra Dosha**. Thus the festival of Chaurchan Puja was popularised in Mithila region and it is still celebrated every year by the Maithil people across the country. It is a very important fasting for married women in Mithila. On this day, married women keep a fast. Different types of dishes are prepared as prasad. After that in the evening fasting women turn towards the west and offer Arghya to the **Lord Chandra Deva** (Moon God). One by

one, keeping the bowl of sweets, dishes, curd, banana, fruits etc, in their hand is offered to the moon by chanting *Mantras*.

References

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