

# **Bodhi Samvachhar**

(Indian Buddhist Luni-Solar Calendar System)



**Dr Ashok K. Tapase**



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(Indian Buddhist Luni-Solar calendar System)

**Dr. Ashok K. Tapase.**

**Puris-Damma Prakashan.**

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The photograph on the back cover was taken by me personally at the Jantar Mantar Astronomy Centre in Jaipur on May 19, 2004.

If anyone in India first conceived the concept of  
calculating and accounting for time,  
it could be none other than Emperor Ashoka.  
He therefore, considering the time of his coronation  
as the starting point, and in accordance,  
inscribed the times of many subsequent events  
in his rock and pillar inscriptions.  
I respectfully dedicate the efforts of  
reformation of this new concept,  
Luni-solar Bodhi-chronology  
to **Emperor Ashoka the Great**.

**Dr. Ashok Tapase**

Saturday, February 13, 2025

Magh Purnima, Bodhi Samvachhar 2541

(Magh Festival)

नक्खत्तं पटिमानेत्तं, अत्थो बालं उपच्चगा।  
अत्थो अत्थस्स नक्खत्तं, किं करिस्सन्ति तारका' ॥

A fool, believing in the stars, goes beyond his desires and expectations.

(Where) will & expectation are the (right) constellation,

(there) what is the cause and effect of the stars?

**- Tathagata Buddha**

Nakkhatt Jataka, Atthakaam Vagga,

Khuddaka Nikaya, Sutta Pitaka.

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## .... The Story

Ever since I was a teenager, when I began to understand the concept of the full moon and new moon, I've been curious to know how the makers of these calendars knew in advance when the full moon and new moon would occur. Then I began observing such calendars. I wanted to understand how many days this full moon and new moon cycle lasted. Sometimes it was 29 days, sometimes 30, and there was no fixed time for it. In a month with 29 days, the date would be written as a loss on one day, while in a month with 30 days, the same date would sometimes be written twice. There was no clear cycle for this.

After learning more, I realized that the average duration of a lunar phase-based date was a few minutes shorter than the solar day. It would be appropriate to call it an average duration because some dates were longer than the solar day, and some were significantly shorter than the solar day. Even then, I transformed this understanding into practical arithmetic for myself. It was that the duration of 64 tithis equals 63 solar days. In the Buddhist nation of Myanmar, this ratio is considered to be



703 tithis equal to 692 solar days. (Today, when I understand this ratio, I feel that I was almost correct.) The study of this subject remained incomplete. The reason was that as I studied more, new concepts like zodiac signs, constellations, sidereal months, etc. kept emerging. These concepts were also increasingly complex. In reality, I was only interested in the phases of the moon and how time calculations are based on them.

Even today, if someone searches for any term related to luni-solar time calculation on the computer network, they find more astrology and other superstitions than information related to time calculations. In India, it is almost impossible to find a calendar that everyone feels is their own without the help of astrology and auspicious and inauspicious moments. Reading Alexander Cunningham's book, "Book of Indian Era", it felt as if Indian scholars on this subject were more confusing than explaining.

The earliest calendar concepts in the world began with an understanding of the day and month, and the apparent movement of the sun and moon. The year then proved to be the longest period, this was because agriculture was the primary basis for livelihood. Determining the timing of the seasonal cycle was essential for agriculture. The timing of the seasonal cycle was called the year. To observe the year in detail, it was necessary to divide it into smaller parts and understand them. Only then would advance determination of each time of the year be possible. This is how humans calculated the calendar by linking the day, month, and year into a single formula.

Today, European calendars are mostly solar calendars, and their calculations are very simple. There, too, there is superstition based on the zodiac and constellations. But this has nothing to do with practical chronology. Some religious occasions are certainly based on the phases of the moon, but these do not play a major role in chronology.

If the lunar month and solar year are the primary basis for chronology from the very beginning, then their calculations should be more easily

made, their mutual correspondence should also be easily calculated, and there should be no unnecessary elements introduced into them. This would be true chronology, knowledge and science. I am attempting to bring this understanding to its true conclusion.

Creating a chronology system, especially one with luni-solar chronology concepts, is a complex task. An even more complex task is determining the starting day of this chronology. This starting day should be acceptable to most learned people, and the time of this day should be determined accurately and with solid evidence. In my mind, the date of **Buddha's Mahaparinirvana** was crucial for the beginning of chronology. However, many questions remain unanswered regarding the date of this day. Various options are proposed for Buddha's Mahaparinirvana, including 483 BCE, 486 BCE, and 544 BCE. Determining which of these options is more acceptable is complex. None of these options is backed by any solid reference from before Christ Calendar. The literary works that support this claim were all written long after the beginning of the Christian era, and yet these works claim Buddha's Mahaparinirvana to have occurred in the fifth or sixth century BCE. This is like an illiterate child confidently stating the date of death of his great-great-grandfather.

This literature is based on literature from some southern countries (Sri Lanka) and some northern countries (Tibet). These are called the Long Chronology and Short Chronology. Apart from this, another chronology is also considered famous, which is called the Dotted Chronology. In my opinion, all these chronologies cannot be considered reliable, because they were created several centuries after the Tathagata's Mahaparinirvana.

"Buddha Purnima" is a universally accepted festival in the Buddhist world. It is said that Siddhartha Gautama was born on this day, attained enlightenment on this day, and attained Mahaparinirvana on this day. This is why it is celebrated. ... And when is it celebrated? In India, it occurs on the full moon day of Vaishakh. Vaishakh month is the second

month of the Samvachhara according to the Indian Vedic calendar system. In countries other than India, it is celebrated on the full moon day in May according to the Universal Calendar (CE). In reality, these days, Vaishakha Purnima and the full moon of May, never fall on two different days. But this was not the case for once. (Actually after every 19 years, I realised the fact after more studies.) In 2018, Vaishakh Purnima, according to the Indian Vedic calendar, fell on April 30th. Meanwhile, other nations around the world were celebrating Buddha Purnima on May 30th. Not only were ordinary Indian Buddhists confused, but the Indian bhikkhu community was also divided on this issue. Would Buddha Purnima be in April or May?

Why did this happen? Is there a similar dilemma regarding celebrating Easter Sunday? Is there a similar dilemma regarding celebrating Eid? Is there a similar dilemma regarding celebrating Navroz? ...**No**. The reason is that each of these communities has its own calendar system. Generally, everyone follows the global calendar, but when it comes to religious celebrations, the calendar is based solely on the one's own sectarian beliefs. In India, there was a dilemma regarding celebrating Buddha Purnima in 2018 because the Indian Buddhist community does not have its own calendar system.

During this time, I had studied Emperor Ashoka's inscriptions extensively and had even visited them in person. Reading the text of these inscriptions, I felt that the English/Hindi translations, done by many scholars, lacked a comparative study of these inscriptions. Consequently, some errors were present in the translation. I attempted to correct these errors with understanding Pali Language. This process revealed some untold truths. Emperor Ashoka must have written his minor inscriptions in the tenth year after his coronation. By this time, 256 years had passed since the Buddha's Mahaparinirvana, a fact Emperor Ashoka inscribes in his minor inscriptions. The evidence of Emperor Ashoka's major inscriptions provides references to Indian and foreign kings of his time. While continuous (uninterrupted) chronology did not exist in India at

that time, such chronology existed in the countries of the foreign kings referred to in his inscriptions. This context determines the year of creation of Emperor Ashoka's Minor rock inscriptions. It's then easy to determine the year of Buddha's Mahaparinirvana. From this context, I have determined the year of Buddha's Mahaparinirvana. Starting the chronology around this time, I have established a new chronology system.

Creating a new chronology system isn't everything. Researching it and proving it infallible through logical tests is crucial. I worked tirelessly on this until I achieved success. I have never counted the time spent on this. The result of all these efforts is my book, **Bodhi Samvachar**, and this is its story.

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During these efforts, I had no co-workers. I did all this with the spirit of "go it alone." Yet, throughout this journey, there has been a silent supporter, an inspiring witness to my efforts. She is my companion, Harshada. If she had not understood the importance of my work and not appreciated it from time to time, I would hardly have been able to achieve this success. I have no words to express her inspiration and appreciation, nor do I want to find any such words. It is my endeavour that her inspiration should not be disrespected at all.

*Sache Labheth Nipak Sahayein Sadhin Charan Sadhuvihari Dheeram.*

*Abhibhuyya sabbani parisyaani chareyya ten'ttamno satima //9 //*

*No cha labheth nipaka sahayam sadhin charam sadhuvihari dhiram.*

*Raja'va Rattham Vijitam Pahay Eko Chare Matang'Rannyaev Nago //10 //*

*(Dhammapada – Nagavagga)*

- Dr. Ashok Tapase

## Minor Rock Inscriptions of Emperor Ashoka

Most of the inscriptions of Emperor Ashoka discovered in India to date are in the form of minor rock Inscriptions. Their names and locations are as follows:

1	Bahapur, Delhi	10	Udegolam, Karnataka
2	Gujarra, Madhya Pradesh	11	Rajula Mandagiri, Andhra Pradesh
3	Ratanpurwa, Bihar	12	Palkigundu, Karnataka
4	Ahraura, Uttar Pradesh	13	Gavimatha, Karnataka
5	Sahasram, Bihar	14	Yeragudi, Karnataka
6	Rupnath, Madhya Pradesh	15	Jating Rameshwara, Karnataka
7	Panguraria, Madhya Pradesh	16	Brahmagiri, Karnataka
8	Maski, Karnataka	17	Siddhpur, Karnataka
9	Nittur, Karnataka	18	Bairat, Rajasthan (Kolkata)

Of these eighteen rock Inscriptions, some locations contain two rock Inscriptions. (Nittur, Udegolam, Brahmagiri, Rajula Mandagiri, and Yeragudi) All other sites have only one inscription. Where there are two inscriptions, the first one, and where there is only one, the same one, bear remarkable similarities. Some minor differences are due to the local language, or the scribe's knowledge of the language. To understand the text of these inscriptions, we will look at the texts of the two most well-preserved of these inscriptions.

# ROCK AT BURNATH near Jabalpur.

1. ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥
2. ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥
3. ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥
4. ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥
5. ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥
6. ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥

## Devnagari Transliteration

१. देवानं पिये हेवं आहासातिरके कानि अढति (या) नि (व) पसुमिपकास.. किनोवबाढिपकते सातिलेके चुछतवरेयसुमिहकसंघपापीते
२. बाढिचपकते यिइमायं कालायं जंबुदिपसि अमिसा देवाहु सुते दानिमसा कटापकमसि हि ए सफलेनो च एसामहततापापोतं ते खुदके नहि
३. पिपकममाने नासकिये पिपुले पास्वग आराधे वे एतिय अठाय च सावने कटे खुदका च उडाला चपकमतुति अतापी च जानुं तु इयपकराव
४. आतिचिरठितिके सिया इयहि अठे वढि वढिसिति विपुल च वढिसिति अपलधिये नादियढिय वढिसत इयच अठे पवतिसले खापेत वालत हधच अथि
५. साला तु भेसिला ठं भसिला खापेत वयत एति नाच वये जने नायावत कतुपक अहाले सवरवि नसेत वायाति व्युठे नासावने कटे | २०० | ५० | ६ | स
६. तविवासात

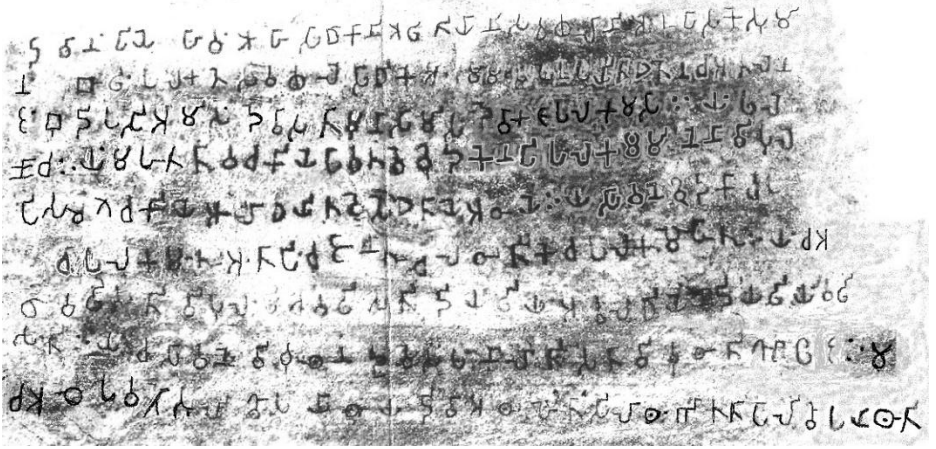
## Meaningful word-sentences in Prakrit language after Devanagari transliteration.

देवानंपिये हेवं आहा. सातिरकेकानि अढति(या)नि (व) प सुमि पकास सके. नो च  
बाढि पकते. सातिलेके चु छतवरे य सुमि हक संघ पापीते उपेते बाढि च पकते. यि  
इमायं कालायं जंबुदिपसि अमिसा देवा हुसु ते दानि मिसा कटा. पकमसि हि एस फले.  
नो च एसा महतता पापोतंते खुदकेन हि पिक पि पकममानेना सकिये पिपुले पा स्वग  
आराधेवे. एतिय अठाय च सावने कटे खुदका च उडाला च पकमतु ति अंतापी च  
जानंतु इय पकरा व आति चिरठितिके सिया. इय हि अठे वढि वढिसिति विपुल च  
वढिसिति अपलधियेना दियढिय वढिसत. इय च अठे पवतिस लेखापेत वालत. हध च  
अथि सिलाठुभे सिलाठंभसि लेखापितवय त. एतिना च वयेजनेना यावतक तुपक  
अहाले सवर विनसेतवाया ति. व्युठेना सावने कटे (२००) (५०) (६) सत विवासात.

### English Translation

This is how the beloved of the gods said this. I have been in Shakyapa  
Prakash for more than two and a half years, but there has been no  
progress. I have been close to the Sangha for more than a year. During  
this time, the gods in Jambudweep did not meet the common people,  
but now they do. This is the fruit of hard work. And it is not only the  
great who receive it; ordinary people also attain heaven through  
abundant hard work. For this, it has been declared that ordinary and  
great people should work hard, and even those living on the outskirts  
should know this. And the glory of this hard work should be everlasting.  
This will lead to development, and abundant development,  
uninterrupted development day after day. For this, (this text) should be  
written repeatedly on rocks (mountains). Wherever there are stone  
pillars, it should be written on pillars. This text should be sent  
everywhere within your jurisdiction. This is announced after 256 (times),  
while remaining awake and away.

## Minor Rock Inscription at Ratanpurva



The Drawing created from actual Photograph taken at Ratanpurva.

### Meaningful word-sentences in Prakrit language after Devanagari transliteration

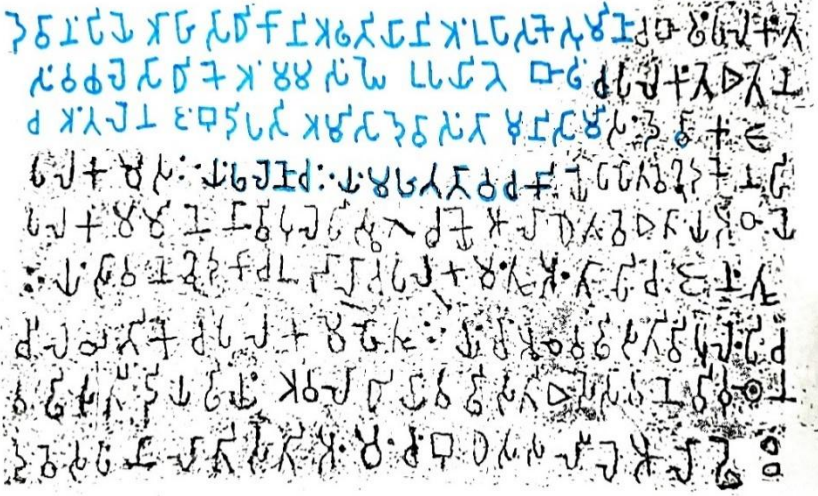
देवानंपिये हेवं आह. साधिकानि अढातियानि सवछलानि अं उपासके सुमि.  
न चु बाढं पलकंते. सवछले साधिके अं मम संघे उपयीते. एतेन च अंतलेन  
जंबुदीपसि अमिसं देवा संता मुनिसा मिसं देवा कटा. पलकमसा इयं फले  
नो च इयं महतता व चकिये पावतावे खुदकेन पि पलकमिनेना विपुले  
पि स्वगे चकिये आलाधयितवे से येताये अठाये इयं सावने खुदका च उडाला च  
पलकमंतु अंता पि च जानंतु चिलिठीतीके च पलकमे होतु. इयं च  
अठे वढिसति विपुलं पि चा वढिसति दियढियं अवलधियेना दियढियं वढिसति. इयं च  
सावने विवुथेन दुवे सपंना लाति सता. विवुथाति (२००) (५०) (६). इमं च अठं पवतेसु  
लिखापयाथा यदि वा अथि हेता सिला थभो ततापि लिखापयाथा ति.



## English Translation

The one who is dear to the gods said, "I have been a devotee for more than two and a half years, but there has been no progress. Now I have been with the Sangha for more than a year. During this period, there was no union of gods (& humans) in Jambudweep. Now, gods are mingling with humans. This is the result of diligence (hard work). It is possible not only for great people but also for ordinary people to ascend to heaven through immense hard work. For this, common and great people have been advised to work hard. People living on the border should also know this. Such diligence will continue forever." It will grow like this, it will grow abundantly day by day, it will grow day by day without any interruption. This declaration is made by staying awake (in remembrance) for two consecutive nights away from home. 256 (Time) away. This writing should be written on stone rocks or on pillars in a place where there are pillars.

## Aharaura Inscription



### Meaningful word-sentences in Prakrit language after Devanagari transliteration

देवानंपिये आहा साधिकानि अढतियानि अं उपासके सुमि नो च बाढं पलकंते  
संवछले साधिके अं मम संघे उपयिते बाढं च पलकंते एतेन  
च अंतलेन जंबुदिपसि अमिसा देवा संता मुनिसा मिसं देवा कटा.  
पलकमस इयं फले. नो च इयं महतता व चकिये पापोतवे खुदकेन पि  
पलकममिनेना विपुले पि स्वगे चक्ये आलाधेतवे एताये अठाये  
इयं सावने खुदकाच उडालाच पलकमंतू अंतापि च जानंतू  
चिलठितिके च पलकमे होतू. इयं च अठे वढीसति विपुलं पि च  
वढिसती दियढियं अवलधिया वढिसती एसे सावने विवुथेन  
दुवे सपंना लाति सति. अमंच बुधस सलीले आलोढे :

(The Brahmi and Devanagari letters written in blue are damaged on the inscription, but I have reconstructed them for study purpose.)

The two inscriptions seen here before presenting this inscription, contained a letter cluster of three numbers (200)(50)(6). However, this number is missing here. Instead of this, a sentence "Ammamcha budhas salile alodhē" is written. (Perhaps the final letter "ch" is missing an anuswar; it is a stone defect.) According to some scholars, the scribe mis-engraved the three letters "Am mam cha" in this sentence. This is because such letters are not found in any other minor inscriptions, and in other Minor inscriptions, a letter cluster of three numbers (200)(50)(6) is found written at this point of text. It is not impossible to believe that "Am mam Cha" was written instead of (200)(50)(6) due to misunderstanding of the scribe. Some scholars understand the meaning of Am mam Cha to be similar to 'Ours'. In Pali language, Amam means non-greedy. According to this logic, the word Amam can also be an adjective of Tathagata Buddha. In Pali language, the letter Cha is used for the words And, Now, then (And, But, Even). "Amam Cha Budhas" means (of the non-greedy Buddha). Whatever the meaning of Amam Cha is, undoubtedly, Budhas Salile Alodhe means "ascension of the body of Buddha", that is, Mahaparinirvana of Buddha. Could it be mere coincidence that the words "Amman cha Budhas Salile Alodh" are written instead of "(200)(50)(6) Satvivasat" or "Vivuthati (200)(50)(6)"? If this is not mere coincidence, then it is certain that the words "Vivuthati (200)(50)(6)" and "Budhas Salile Alodhe" have some connection.

Sometimes, Emperor Ashoka's scribes wrote something more than they understood in the inscriptions, for example, a scribe named Chapada wrote his own name Chapada and a word, Lipikaren, in Kharosthi script at the end of the Brahmagiri inscription. The Maski, Nittur, Udegolam inscriptions in Karnataka and the Gujarra inscription in Madhya Pradesh also mention King Asoko along with Devanampiya, which is not found anywhere else.

## The Misinterpretation of the Meaning of 256

Although all these inscriptions share many similarities, a difference is that the phrase "Duve Sapana Laati Sata" appears in the Ratanpurva inscription but not in the Rupnath inscription. Such a phrase is absent in any inscription in the provinces south of Rupnath and Gujarra. The inscriptions in the north, Ratanpurva, Ahraura, and Sahasram (Sasaram), which are located closer to Pataliputra than other places, contain this phrase.

Since almost all scholars to date have interpreted the words "vivuthen," "vivutha," and "vivasat" as "staying away" the meaning of "staying away" has been interpreted as "while traveling". This attempt has been made to distort the meaning of the next number, 256, from reality. It seems that Emperor Ashoka made this declaration while traveling for 256 days. This controversial sentence with number 256 is found in ten inscriptions out of seventeen minor inscriptions. The eleventh inscription (Aharaura) contains "Duve Sapna Laati Sati" but not Vivuthathi 256. The details of all these are as follows.

1. Brahmagiri - Iyam Cha Savane Savapite Vyuthen 256.
2. Erragudi - Iyam Cha Savane Savapite Vyuthen 256.
3. Gujarra - Iyam Cha Savane Vivuthen 256.
4. Jatinga-Rameshwar - I.. ..Savan Vivuthen 256.
5. Nittur- Iyam Cha Savapiteen Savapite Vyuthen 256.
6. Udegolam - Savane Savapite Vyuthen 256.
7. Panguraria - Savanam Viyuthen 256.
8. Roopnath - Vyuthen Savane Kate 256 Sat Vivasat.
9. Sahasram - Iyam Cha Savane Vivuthen Duve Sapna Laati Sati  
Vivuthathi 256.
10. Aharaura - ese savane vivuthen duve sapna laati sati  
amamcha budhas salile alodhe.
11. Ratanpurva - iyan cha savane vivuthen duve sapna laati sata.  
Vivuthathi 256

In fact, there is no chronological (or other) magnitude associated with the number 256. Then the meaning of a 256-days journey (Dhamma Yatra) becomes incomprehensible. In the group of words "Duve Sapna Laati" (Sata/Sati), the word "Sata" (Sati) is understood to mean "hundred," whereas there is no such word "Sata" or "Sati" in Sanskrit. In Sanskrit, the word "Shata" means "hundred." The word "Laati" means "nights" (in Prakrit, "L" is sometimes written instead of "R"). Therefore, it has become customary to understand the meaning as "staying away from home for two hundred nights (i.e., two hundred days) on the Dhamma Yatra. "Immediately after" two hundred nights away," the numerical group "(200)(50)(6) Vivuthati" or "(200)(50)(6) Sat Vivasat" appears. This then translates to "during the 256 (times/days) (Dhamma Yatra)." Now, understanding two hundred and 256 together with the same meaning seems contradictory. Some ancient scholars also derive the meaning of the number fifty-six from the word sapanna.

In India, the word denoting the century is added immediately to the number-word denoting the century-digit, in a three-digit number; there is no other word between these two words. (For example, two hundred, five hundred, eight hundred... there is never any other word between two and hundred, five and hundred, and eight and hundred.) Keeping this in mind, the meaning of two hundred and fifty-six nights from this group of words, Duve sapanna laati sata, seems impossible, because the presence of two words, sapanna laati, between Duve and sata, makes the meaning of two hundred seems impossible. If the meaning of sapanna is taken instead of fifty-six, then it would be a two hundred of prosperous nights.

Now, if we believe the text for this article was announced during the voyage, it would be either two hundred days later or two hundred and fifty-six days later. Therefore, the simultaneous mention of two hundred and two hundred and fifty-six days seems beyond common understanding or even confusing. It is a difficult task to simultaneously balance two such statements with meaning and way in proper.

Here, two forms of the word vivutha appear in two places. This also requires special attention. We read the word vivutha in these two words -groups, "Iyam cha sawane vivuthen duve sapanna laati" and "vivuthati 256." If we want to understand the meaning of vivutha as "staying away," then it is necessary to understand the context of "staying away from whom / what" In the first place, the context is with duve sapanna laati, and in the second place, it is with 256. Trying to reconcile these two distinct contexts seems difficult and futile. Therefore, the meaning of "staying away for two nights" in the first word group, and "staying away for 256 years" in the second word group, is more likely to be supported.

In this word group, the word laati in duve sapanna laati sata/sati needs to be discussed once again. Whenever a period is to be indicated, it is usually used as "a period of so-and-so days." "A period of so-and-so nights" is less common. If the word "nights" is used here, it must have a specific purpose. Nights are not counted because, since ancient times, no ordinary work has been done at night. If nights are counted, it is obvious that it is a count of some specific tasks. Nights are spent resting and sleeping, so that one can return to work refreshed and fully equipped the next day.

### **Duve Sapamna Laati Sati/Sata**

When interpreting this phrase, it is necessary to reconsider the meaning of the word Sati/Sata. Is the assumed meaning of "Sat" a hundred, the true meaning ? Emperor Ashoka wrote all his inscriptions in the regional Prakrit of that time, making it futile to search for the meaning of the word Sati/Sata in the Sanskrit dictionary. To find the meaning of the word "sata" or "sati," it would be worth consulting a dictionary of the Pali language (a form of contemporary Prakrit). In Pali, "sata" means "one hundred" and "awakened," and "sati" means "memory." If "sapanna" does not mean "fifty-six," it could mean "संपन्न" or "सपञ्चा" The phrase "duve sapamna laati sata" would mean "accomplished by staying

awake for two nights," or "duve sapanna laati sati" would mean "accomplished by remembering for two nights." Staying awake for two nights, remembering for two nights, is not a common act but a special one. This also provides a strong justification for the reason for counting the nights here. Here, the two nights spent awake and in remembrance coincide with the time of Buddha's Mahaparinirvana. This is accomplished by staying awake for two nights, while being away from the Tathagata for vivuthati (200)(50)(6), i.e., 256 times (years).

It is also universally accepted in the Buddhist world that the Buddha's Mahaparinirvana occurred on the full moon day<sup>@</sup> of the month of Vaisakha. This full moon day is known as Buddha Purnima. In Pataliputra and surrounding areas, the practice of staying awake for two nights (i.e., two full days and nights) in remembrance of Buddha and paying homage to him during the period of Buddha Purnima may have been prevalent. The phrase "Duve Sapna Laati Sata/Sati" is found in inscriptions located in North India and near Pataliputra. This may be because Emperor Ashoka initiated the practice of staying awake for two nights and days in Pataliputra during the period of the Buddha's Mahaparinirvana. Therefore, this practice may have been prevalent in Pataliputra and surrounding regions. But this practice may not have been so widespread in areas far from Pataliputra, so this sentence is not recorded in inscriptions from further south.

The three aspects of the Buddha's life—his birth in Lumbini, his enlightenment in Gaya, and his Mahaparinirvana in Kusinara—were certainly of immense reverence to Emperor Ashoka, and this is not fiction but written truth. Therefore, the tax exemption<sup>#</sup> for the village of Lumbini, the pilgrimage to Enlightenment (Bodhgaya) (care of the Bodhi tree), and the observance of the vigil for two whole nights and days during the Mahaparinirvana described here are not fiction but written truth.

Now, as proven by the study of the Minor Rock Inscriptions, the first fact is that Emperor Ashoka followed the Buddhist tradition even before the Kalinga War. After the Kalinga War, his Buddhist sentiments intensified. The second fact is that Emperor Ashoka commissioned the Minor Rock Inscriptions 256 years after the Buddha's Mahaparinirvana. This means that the Buddha's Mahaparinirvana occurred 256 years before Emperor Ashoka's writing of the Minor Rock Inscriptions. If the Buddha Samvachhara is to be calculated from the Buddha's Mahaparinirvana, this reference will undoubtedly depend on written references. The third fact is that the people of Pataliputra and surrounding areas, along with Emperor Ashoka, used to stay awake for two days and nights during Buddha Purnima to pay their respects to the Buddha. In my opinion, this fact is exemplary even today.

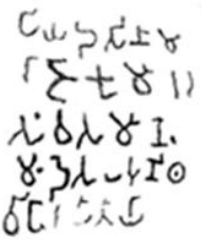
@ - The fact that the Buddha's Mahaparinirvana occurred on the full moon day of the month of Vaisakha is also doubtful. Additional references to this are found in the Mahaparinibbana Sutta. But Vesak Purnima is the right time for this discussion.

# - The words “उबलिके कटे अठभागियेच” written on the Lumbini pillar are used to indicate that the village of Lumbini is exempted from taxes up to one-eighth. However, German scholar Harry Falk says that the tax exemption was not up to one-eighth, but rather that Emperor Ashoka brought one-eighth of the Buddha's bodily remains and built a stupa on it. In any case, Emperor Ashoka had immense reverence for Lumbini, the birthplace of the Buddha.



## When did Ashoka embrace Buddhist philosophy?

Emperor Ashoka wrote in his Major Rock Edict 13 that the Kalinga War took place eight years after his coronation. It also mentions that he travelled to Bodhi (Bodh Gaya) ten years after his coronation, and that he visited Lumbini, the birthplace of the Buddha, and the Konagamana Stupa twenty years after his coronation. This means that the emperor travelled to Bodhi (Bodh Gaya) only two years after the Kalinga War. There is no mention of this trip in the Minor Rock Edicts, which means the Minor Rock Edicts were written before the Bodhi journey. At the time of the writing of the Minor Rock Edicts, a period of two and a half years as a lay devotee and approximately one and a half years with the Sangha, totalling approximately four years, must have preceded the Bodhi journey, so this period would have begun six years after his coronation. This suggests that Emperor Ashoka was already engaged with Buddhist philosophy before the Kalinga War. There is one more evidence to prove further this.

Bramhi Inscription	Devanagri Transcription	Englidsh Translation
	पियदसि नाम राजकुमार व संवसमाने* (इ)मं देस पपुनिथ* विहारयाताये	Piyadassi Named Prince (with his) Consort came to this Place on Pleasure Tour.

\* संवसमाने = संवसति = (To) Mate, (consort) पपुनिथ - पापुणाति = To reach

An inscription, approximately two and a half meters high, on the Pangurariya rock edict in Madhya Pradesh, states that Piyadassi, as a prince, visited the site with his Mate for a pleasure tour. Some historical evidence suggests that this site was a residence for Buddhist monks. The fact we understand is that, Prince Piyadasi's Mate, came to visit this site, which is fairly close to Vidisha, with the prince, was Devi (the future mother of Mahendra and Sanghamitra) is undoubtedly true. Vidisha

Devi and her family were adherents of the Buddhist tradition. Prince Ashoka's visit to the Buddhist monks' residence with a Buddhist young woman is evidence of his respect for the Buddhist Philosophy, even as a young man.

The Bramhi rock edicts do not provide information on when Emperor Ashoka began writing rock edicts, but in 1958, on a mountain called Chil-Zena or Chehel-Zena, near the city of Kandahar in Afghanistan, an inscription of Emperor Ashoka was discovered. This inscription is written in two languages: Greek and Aramaic. The first sentence of both inscriptions clearly states that it was written at the end of the tenth year of his coronation. The texts of this inscription match the first phase of the emperor's major rock edict in the first half and the second minor rock edict in the second half. This also proves that this inscription was written at the same time (or shortly after) the writing of the Bramhi minor rock edict. That is, the Bramhi minor rock edict was written in the tenth year of his coronation. The major rock edict was written twelve years after his coronation, and the pillar edict twenty-seven years later. Ten years after his coronation, the pilgrimage to Bodhi (Bodh-Gaya) was undertaken. This minor rock edict (Bramhi in India and bilingual in Kandahar) was written before this pilgrimage to Bodhi. Twenty years after his ordination, visits to Lumbini, the Buddha's birthplace, and the Konagamana Stupa were made. These visits were not consecutive. Therefore, it is impossible for this 256-day journey (or any other such journey) to coincide with the writing of the Minor Rock Edicts. Both periods described in the Minor Rock Edicts (as a Buddhist lay devotee and staying close to the Sangha) would have ended ten years after his ordination, before the journey to Bodhi (Bodh-Gaya). If this had not happened, it is possible that the journey to Bodhi (Bodh-Gaya), would have been mentioned in the Minor Rock Edicts. Furthermore, it is also unlikely that a Chakravarti emperor would have undertaken a continuous (Dhamma) journey of 256 days, i.e., eight and a half months. A commoner of ordinary nature would have been able to tour Emperor

Ashoka's vast empire in 256 days. A distinguished Dhamma pilgrim, Deepak Anand, who recently walked from Bodh Gaya to Sarnath, completed his journey in just thirteen days. Even the world conqueror Alexander returned from India after fighting various wars for two years. The territorial distance of his war journey was many times greater than the distance of the Buddhist pilgrimage. It is impossible for Emperor Ashoka to undertake a 256-day journey during the Second phase, as he remained close to the Sangha during this period. If he undertook a journey before this period, the timing of that journey coincides with the Kalinga War.

Considering all these factors together, a 256-day journey is absolutely impossible.

The meaning of "staying away for 256 nights" is incorrect. Further evidence exists within Emperor Ashoka's inscriptions. During the time of Emperor Ashoka, such time calculation concepts as lunar month, two lunar fortnights, each fortnight having fifteen days, were in existence. Evidence of this is present in Topra Pillar Edict No. 5. Not only this, but this same pillar edict clearly mentions the Tishya and Punarvasu nakshatras. The Dhauli and Jaugad inscriptions also mention Tishya nakshatra. In this context, the statement of 256 nights cannot be made because, just as it is said to be two and a half months, it is meaningful to say eight and a half months, not 256 nights. Therefore, it is impossible to say 256 days for a period of eight and a half months.

(Ayushyaman **Deepak Anand**, educated secondary studies in Balachadi, Gujarat, engineering education from Bhavnagar and higher education from Chandigarh, is a staunch believer of the Buddhist way of life.)

### Delhi (Topra) Pillar, South Face, Lower Part

1. የገቢዎች ምዝገባ ለሰጠው ሰነድ ለሰነድ ለሰነድ  
 2. ለሰነድ ለሰነድ ለሰነድ ለሰነድ ለሰነድ  
 3. ለሰነድ ለሰነድ ለሰነድ ለሰነድ ለሰነድ  
 4. ለሰነድ ለሰነድ ለሰነድ ለሰነድ ለሰነድ  
 5. ለሰነድ ለሰነድ ለሰነድ ለሰነድ ለሰነድ  
 6. ለሰነድ ለሰነድ ለሰነድ ለሰነድ ለሰነድ  
 7. ለሰነድ ለሰነድ ለሰነድ ለሰነድ ለሰነድ  
 8. ለሰነድ ለሰነድ ለሰነድ ለሰነድ ለሰነድ  
 9. ለሰነድ ለሰነድ ለሰነድ ለሰነድ ለሰነድ  
 10. ለሰነድ ለሰነድ ለሰነድ ለሰነድ ለሰነድ

**Devanagari Transcription :**

११. जीवेनजीवे नोपुसितविये तीसुचातुंमासीसु तिसायंपुंनमासियं  
१२. तिनिदिवसानि चावुदसं पंनडसं पटिपदाये धवायेचा  
१३. अनुपोसथ म्छेअवधाये नोपिविकेतविये एतानियेवादिवसानि  
१४. नागवनसि केवटभोगसि यानिअंनानिपि जीवनिकायानि  
१५. नोहंतवियानि अठमिपखाये चावुदसाये पंनडसाये तिसाये  
१६. पुनावसुने तासुचातुंमासीसु सुदिवसाये गोनेनोनीलखितविये  
१७. अजके एडके सूकले एवापिअंने नीलखियति नोनीलखितविये  
१८. तिसाये पुनावसुने चतुंमासिये चातुंमासिपखाये अस्वसा गोनसा  
१९. लखने नोकटविये यावसडुवीसतिवस अभिसितेनमे एताये  
२०. अंतलिकाये पंनवीसति बंधनमोखानिकटानी

## English Translation :

(One) creature should not feed on (another) creature. Chaturmas, the four rainy months (Ashadha, Sawan, Bhadon, Ashwin) and (Tisaya = Tishya) Tishya and Punarvasu (&), Purnima/Amavasya of every Lunar Month and Chaturdashi of each Paksha (Paksha is one of the two parts of fifteen days of the month), and Pratipada (the first day of the Paksha), should be observed Complete **Non-violence Day**. As fixed routine, fast (Upasatha) should observed and should not do fishing nor sold fishes on these days. Similarly, the creatures living in the elephant forest (dense forest, where elephants live) or in the fish pond, fishes should not be killed on these days (i.e. do not hunt in the dense forest or in a big pond on these days). Do not castrate bulls on the Ashtami, Chaturdashi, fifteenth day (new moon/full moon) of every fortnight (of all months) and on the auspicious days (festivals) of the months of Tishya and Punarvasu(@), and the four months of Chaturmas (rainy season). Similarly, do not castrate goats, Sheeps, pigs and others which are to be castrated. Do not slaughter bulls and horses on the (full moon day) in Tishya and Punarvasu, and in the four fortnights of Chaturmas (rainy season). This is the twenty-sixth year after the coronation; during this period, I have freed prisoners twenty-five times.

Now, after reading and understanding the time calculation terms written in this column, the meaning of numeric 256, as 256 nights (days) is illogical. 256 days make eight and a half months; it is inexplicable that someone who knows Units of time counting, would say 256 nights instead of eight and a half months. Therefore, it is not wrong to interpret the words 256 vivasat as meaning "256 of times (years) away from the Tathagata."

(@) It's understandable that Emperor Ashoka considered the four rainy months sacred, as they are the time of the Varshavasa (the rainy season). However, the sanctity of the months of Tishya and Punarvasu requires further study. I will share my findings on this matter sometime soon.

## When were the Minor Rock Edicts written?

Inscriptions from Chehel Jhina, Kandahar (Afghanistan)

An Eye-Copy of the Greek text from a bilingual rock Inscription.

Ashokan Inscription at Chil Zena  
Kandahar, Afghanistan

- 1 Δέκα ἐτῶν πληρῆ[θέντ]ων βασιλεὺς
- 2 Πιοδάσσης εὐσέβεια[ν] ἔδειξεν τοῖς ἀν-
- 3 θρώποις, καὶ ἀπὸ τούτου εὐσεβεστέρους
- 4 τοὺς ἀνθρώπους ἐποίησεν καὶ πάντα
- 5 εὐθηνεῖ κατὰ πᾶσαν γῆν, καὶ ἀπέχεται
- 6 βασιλεὺς τῶν ἐμψύχων καὶ οἱ λοιποὶ δὲ
- 7 ἄνθρωποι καὶ ὅσοι θηρευταὶ ἢ ἀλιεῖς
- 8 βασιλέως πέπαινται θηρεύοντες, καὶ
- 9 εἴ τινες ἀκρατεῖς, πέπαινται τῆς ἀκρα-
- 10 σίας κατὰ δύναμιν, καὶ ἐνήκοοι πατρὶ
- 11 καὶ μητρὶ καὶ τῶν πρεσβυτέρων παρὰ
- 12 τὰ πρότερον, καὶ τοῦ λοιποῦ λαοῦ
- 13 καὶ ἄμεινον κατὰ πάντα ταῦτα
- 14 ποιοῦντες διάξουσιν.

## Transcription

Greek Inscription

- ΔΕΚΑΣΤΕΤΩΝ ΠΛΗΡΗΘΕΝΤΩΝ ΒΑΣΙΛΕΥΣ  
2 ΠΙΟΔΑΣΣΗΣ ΕΥΣΕΒΕΙΑΝ ΕΔΕΙΞΕΝ ΤΟΙΣ ΑΝ  
ΘΡΩΠΟΙΣ ΚΑΙ ΑΠΟ ΤΟΥΤΟΥ ΤΟΥ ΕΥΣΕΒΕΣΤΕΡΟΥΣ  
4 ΤΟΥΣ ΑΝΘΡΩΠΟΥΣ ΕΠΟΙΗΣΕΝ ΚΑΙ ΠΑΝΤΑ  
ΕΥΘΗΝΕΙ ΚΑΤΑ ΠΑΣΑΝ ΓΗΝ ΚΑΙ ΑΠΕΧΕΤΑΙ  
6 ΒΑΣΙΛΕΥΣ ΤΩΝ ΕΜΨΥΧΩΝ ΚΑΙ ΟΙ ΛΟΙΠΟΙ ΔΕ  
ΑΝΘΡΩΠΟΙ ΚΑΙ ΟΣΟΙ ΘΗΡΕΥΤΑΙ Η ΑΛΙΕΙΣ  
8 ΒΑΣΙΛΕΥΣ ΠΕΠΑΥΝΤΑΙ ΘΗΡΕΥΟΝΤΕΣ ΑΚΡΑ  
ΕΙΤΙΝΕΣ ΑΚΡΑΤΕΙΣ ΠΕΠΑΥΝΤΑΙ ΤΗΣ ΑΚΡΑ  
10 ΣΙΑΣ ΚΑΤΑ ΔΥΝΑΜΙΝ ΚΑΙ ΕΝΗΚΟΟΙ ΠΑΤΡΙ  
ΚΑΙ ΜΗΤΡΙ ΚΑΙ ΤΩΝ ΠΡΕΣΒΥΤΕΡΩΝ ΠΑΡΑ  
12 ΤΑ ΠΡΟΤΕΡΟΝ ΚΑΙ ΤΟΥ ΛΟΙΠΟΥ ΛΑΟΥ  
ΚΑΙ ΑΜΕΙΝΟΝ ΚΑΤΑ ΠΑΝΤΑ ΤΑΥΤΑ  
14 ΠΟΙΟΥΝΤΕΣ ΔΙΑΞΟΥΣΙΝ

## **English Translation**

Ten years (of reign) having been completed, King Piodasses made known (the doctrine of) Piety (εὐσέβεια, Eusebeia) to men; and from this moment he has made men more pious, and everything thrives throughout the whole world. And the king abstains from (killing) living beings, and other men and those who (are) huntsmen and fishermen of the king have desisted from hunting. And if some (were) intemperate, they have ceased from their intemperance as was in their power; and obedient to their father and mother and to the elders, in opposition to the past also in the future, by so acting on every occasion, they will live better and more happily.

**(The Drawings and Translations are taken from  
Epigraphica Indica 34<sup>th</sup> Edition.)**

### An Eye-Copy of Aramaic text from a bilingual inscription

### Aramaic Inscription

שן - ותתן וטעם וזו חזקתך ששאלתה שאלתה ש  
 2 חן חזקתך וטעם שאלתה חן חזקתך שאלתה חן  
 2 וטעם שאלתה חן חזקתך וטעם שאלתה חן  
 4 חן חזקתך וטעם שאלתה חן חזקתך וטעם  
 4 חן חזקתך וטעם שאלתה חן חזקתך וטעם  
 6 חן חזקתך וטעם שאלתה חן חזקתך וטעם  
 6 חן חזקתך וטעם שאלתה חן חזקתך וטעם  
 8 חן חזקתך וטעם שאלתה חן חזקתך וטעם  
 8 חן חזקתך וטעם שאלתה חן חזקתך וטעם

## Transcription

ARAMIC TEXT<sup>2</sup>

1 שֵׁן - פִּתְחוּ עֵבֶר זֶי מֵרָאן פִּרְדֵּרשׁ מִלְכָּא קְשִׁיטָא מִהֶקְשֵׁם  
2 מִן אֲדִין זְעִיר מֵרַע לְכֻלָּהֶם אֲנִשְׁן וְכֻלָּהֶם אֲרוּשֵׁי הַבֵּד  
3 וְכָל אֲרָקָא רֵאשִׁישֵׁי וְאִף זֶי זָנָה בְּמֵאכְלָא לְמֵרָאן מִלְכָּא זְעִיר  
4 קְטָלָן זָנָה לְמַחֲזָה כֻלָּהֶם אֲנִשְׁן אֲתַחְסִינָן אוּי גִּזְיָא אַחֲרָן  
5 אֲלֵךְ אֲנִשְׁן פְּתִיזְכָּת כְּנֶם זֶי פִּרְבֶּסֶת הוּיָן אֲלֵךְ אֲתַחְסִינָן מִן  
6 פִּרְבֶּסֶתִי וְהוֹפְתִּיסִתִּי לְאַמְוֵי וְלֵאבֹוֵי וּלְמוִישִׁתִּיא אֲנִשְׁן  
7 אִיךְ אִסְרָהִי חִלְקֻתָא וְלֹא אִיתִי דִּינָא לְכֻלָּהֶם אֲנִשֵּׁי חֲסִין  
8 זָנָה הוֹתִיר לְכֻלָּהֶם אֲנִשְׁן וְאוּסָף יְהוֹתֵר



## **Translation in English**

1. Ten years having elapsed. It so happened that our lord, king Priyadasin, became the institutor of Truth,
2. Since then, evil diminished among all men and all misfortunes lie caused to disappear; and [there is] peace as well as joy in the whole earth.
3. And, moreover, [there is] this in regard to food: for our lord, the king, [only] a few
4. [animals] are killed; having seen this, all men have given up [the slaughter of animals]; even those men who catch fish (the fishermen) are subject to prohibition.
5. Similarly, those who were without restraint have ceased to be without restraint.
6. And obedience to mother and to father and to old men [reigns] in conformity with the obligations imposed by fate on each [person].
7. And there is no (harsh) Judgement for all the pious men,
8. This [Morality] have been profitable to all men and will be more profitable [in future].

**(The Drawings and Translations are taken from  
Epigraphica Indica 34<sup>th</sup> Edition.)**

Thus, the message appears to be exactly the same in both Greek and Aramaic. Another point to consider is that this inscription is not Emperor Ashoka's own statement, but rather someone else who understands his ideals. Perhaps one of his (the royal minister), a Mahamatra, or a Dharma-Mahamatra, is delivering this message. Considering the distance of this place from the emperor's capital, Pataliputra, it is absolutely certain that this message would have reached this province some time after the implementation of the results of the emperor's public-interest orders described here. If this inscription was made after the completion of ten years of his coronation, then this message from the emperor to the local people must have been delivered some time before, perhaps some time before Emperor Ashoka's journey to Sambodhi, since Sambodhi was undertaken in the tenth year of his coronation. This is also a sure proof that the Bramhi short inscription was written before the Sambodhi journey. During this period, a journey of 256 or more days (more than eight and a half months) is not possible, rather this talk of journey is a fabrication.

These Minor inscriptions prove that the Buddha attained Mahaparinirvana 256 years before the writing of these inscriptions. (&)  
Now we must establish when Emperor Ashoka wrote these inscriptions, according to proven chronology. To prove this, Emperor Ashoka's own inscriptions provide us with certain clues. Where is that inscription, and what is its indication?

**(&)** - Dr. George Buhler confirmed this a century and a half ago, in a book available in the journal (The Indian Antiquary, Vol. VI, page 156).  
A reference to this is given on the next page.

## Dr. Buhler's Views about the Numeric 256 in Minor Rock Inscriptions.

### ROCK AT RUPNATH.

*Translation by* DR. G. BÜHLER.

See *Indian Antiquary*, 1877, page 156.

"The beloved of the gods speaketh thus: [*It is*] more than thirty-two years and a half that I am a hearer [*of the law*], and I did not exert myself strenuously. But it is a year and more that I have entered the community [*of ascetics*], and that I have exerted myself strenuously. Those gods who during this time were considered to be true [*gods*] in Jambudvīpa have now been abjured. For through exertion [*comes*] this reward, and it cannot be obtained by greatness. For a small [*man*], who exerts himself somewhat can gain for himself great heavenly bliss. And for this purpose, this sermon has been preached: 'Both great ones and small ones should exert themselves, and should in the end gain [*true*] knowledge, and this manner [*of acting*] should be what? Of long duration. For this spiritual good will grow the growth, and will grow exceedingly, at the least it will grow one [*size*] and a half.' And this matter has been caused to be written on the hills; [*where*] a stone pillar is, [*there*] it has been written on a stone pillar. And as often as [*man brings*] to this writing ripe thought, [*so often*] will he rejoice, learning to subdue his senses.\* This sermon has been preached by the DEPARTED. 256 [*years have elapsed*] since the departure of the TEACHER."

### ROCK AT SAHASARAM.

*Translation by* DR. G. BÜHLER.

See *Indian Antiquary*, 1877, page 156.

"The beloved of the gods speaketh thus: [*It is more than thirty-two*] years [*and a half*] that I am a worshipper [*of Buddha*], and I have not exerted myself strenuously. [*It is*] a year and more [*that I have exerted myself strenuously*]. During this interval those gods that were [*held to be*] true gods in Jambudvīpa have been made [*to be regarded as*] men\* and false. For through strenuous exertion comes this reward, and it ought not to be said to be an effect of [*my*] greatness—For even a small man who exerts himself can gain for himself great rewards in heaven. Just for this purpose a sermon has been preached.

"Both small ones and great ones should exert themselves, and in the end they should also obtain [*true*] knowledge. And this spiritual good will increase; it will even increase exceedingly; it will increase one [*size*] and a half, at least one [*size*] and a half.' And this sermon [*is*] by the DEPARTED. Two-hundred [*years*] exceeded by fifty-six, 256, have passed since; and I have caused this matter to be incised on the hills; or where those stone pillars are, there too I have caused it to be incised."

---

\* This phrase probably alludes to the Buddhist belief that the *Devas* also have shorter or longer terms of existence.

(Now preserved at Kolkata ASI office in the Memory of James Princep)

1 ርብ ኃይሉ ጋደ ርላጋ ሲጠቅም ስለሆነ ለዚህ ምክር ቤቱ ማስታወሻ  
 2 ማድረግ አለበት፡፡ ለዚህ ምክር ቤቱ ማስታወሻ ማድረግ አለበት፡፡  
 3 ለዚህ ምክር ቤቱ ማስታወሻ ማድረግ አለበት፡፡ ለዚህ ምክር ቤቱ  
 4 ማስታወሻ ማድረግ አለበት፡፡ ለዚህ ምክር ቤቱ ማስታወሻ ማድረግ  
 5 አለበት፡፡ ለዚህ ምክር ቤቱ ማስታወሻ ማድረግ አለበት፡፡ ለዚህ  
 6 ምክር ቤቱ ማስታወሻ ማድረግ አለበት፡፡ ለዚህ ምክር ቤቱ ማስታወሻ  
 7 ማድረግ አለበት፡፡ ለዚህ ምክር ቤቱ ማስታወሻ ማድረግ አለበት፡፡  
 8 ለዚህ ምክር ቤቱ ማስታወሻ ማድረግ አለበት፡፡ ለዚህ ምክር ቤቱ

पियदसिलाजामागधेसंघंअभिवादेमानंआहाअपाबाधंतंचफासुविहालतंच  
विदितेवेभंतेआवंतकेहामाबुधसिंधंमसिसंधसीतिगलवेचंपसादेचएकेंचिभंते  
भगवताबुधेनभासितासवेसेसुभासितेवाएचुखोभंतेहमियायेदिसेयांहेवंसंधंमे  
चिलठितीकेहासतीतिअलहामिहकंतवितवेइमानिभंतेधंमपलियायानिविनयसमुकसे  
अलियवसाणिअनागतभयानिमुनिगाथामोनेयसूतेउपतिसपसिनेएचालाघुलो  
वादेमुसावादंअधिगिच्यभगवताबुधेनभासितेएतानभंतेधंमपलियायानिइछामि  
कितिबहुकेभिखुपायेचाभखुनियेचाअभिखिनंसुनयचाउपधालेयेयुचा  
हेवंमेवाउपासकाचाउपासिकाचाएतेनिभंतेइमंलिखापयामिअभिपेतंमजानंतति

## Conversion to Prakrut sentences from Transcription

पियदसि लाजा मागधे संघं अभिवादेमानं आहा अपाबाधंतं च फासुविहालतं च. विदिते वे भंते आवंतके हामा बुधसि धंमसि संघसी ति गलवे चं पसादे च. ए केंचि भंते भगवता बुधेन भासिता सवे से सुभासिते वा. ए चु खो भंते हमियाये दिसेयां. हेवं सधंमे चिलठितीके हासती ति अलहामि हकं त वितवे इमानि भंते धंमपलियायानि विनयसमुक्से अलियवसाणि अनागतभयानि मुनिगाथा मोनेयसूते उपतिसपसिने ए चा लाघुलो वादे मुसावादं अधिगिच्य भगवता बुधेन भासिते एतान भंते धंमपलियायानि इछामि. किंति बहुके भिखुपाये चा भिखुनिये चा अभिखिनं सुनय चा उपधालेयेयु चा. हेवंमेवा उपासका चा उपासिका चा एतेनि भंते इमं लिखापयामि अभिपेतं म जानंतति.

Priyadarshi, King of Magadha, greets the Sangha and expresses his desire for a less hampered and comfortable stay. You know how much pride and reverence I have for the Buddha, the Dhamma, and the Sangha. O Bhikkhu ! Everything the Buddha has said is well-spoken. But O Bhikkhu ! As I see (understand), this true Dhamma will be established forever. I feel it worthy to tell you, O Bhikkhu ! This is the essence of the Dhamma, everything the Buddha has said regarding Vinaya-Samutpada, Arya-Parampara (the duty of the virtuous), Anagat-Bhay (fear of the future), Munigatha, Moneyasutta, Upatissa-Prashna (Sariputta's question), Rahula-Vada, and Musavada. Therefore, O Bhikkhu ! I wish that this Dhamma-teachings may be heard and practiced by all monks and nuns at all times. And also, the worshippers and their female devotees. O Bhikkhu ! For this reason, I am having this written, so that you understand my intention.

Here, Emperor Ashoka is greeting the Sangha, but this greeting is in his capacity as the King of Magadha, not as someone living near the Sangha.

This also proves that, this inscription was written shortly after Emperor Ashoka spent approximately one and a half years in close proximity to the Sangha. This close association with the Sangha likely led the emperor to undertake reading Buddhist Pali Canon Literature and a pilgrimage to Bodh-Gaya. This journey occurred after the writing of the Minor Rock Inscriptions, making it unlikely to be mentioned in the Minor Rock Inscriptions. It is highly likely that all these inscriptions, written in North India, were written within close time to each other. The writing style also indicates this.

## Kalsi Inscription South Face

### कालसी शिलालेख

दक्षिण प्रतल

INDICOT

XIII

१. ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥  
 २. ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥  
 ३. ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥  
 ४. ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥  
 ५. ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥  
 ६. ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥  
 ७. ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥  
 ८. ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥  
 ९. ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥  
 १०. ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥  
 ११. ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥  
 १२. ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥  
 १३. ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥  
 १४. ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥  
 १५. ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥  
 १६. ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥  
 १७. ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥  
 १८. ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥  
 १९. ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥  
 २०. ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥

अंतियोगेना तुलमयेना अंतिकिन माकाना अलिक्यसदलेना

## Five contemporary Kings of Hellenistic word

The names written in colour in Indian Vocabulary in above figure.

- (1) Antigonus -II, (2) Ptolemy -II, (3) Antiochus -II,
- (4) Magas, (5) Alexander -II

## Devnagari Transcription of Kalsi Inscription (South Face)

.....

.....वनप .. नके इछस .....

सवत ..... इयम ..... लिय मदवं ति इयं वू सु .....

देवानंपियेसा ये धंमविजय स च पेना लधे देवानंपि....

सवेस च अतेसु अससु पि छाजने...सतेस अते अंतियोगे नाम योने ... ल चा तेना

अंतियोगेना च तलि ४ लजाने तुलमये नाम अंतिकेन नाम मका नाम अलिक्यसदले नाम

नीचं चोड पांडिया अवं तंबपंनिया हेवमेवा. हेवमेवा रप ...लजा विश्मवसि योन

कबाजेसु नेभकु नाभपंतिसं भज पितिनिकेसु अधपुलदेसु सवता देवानपियसा

धंमानुचुथी अनवतंति यात पि दुत

देवानंपियसि नी यंति ते पि सुतु देवानंपिनिय लववुतं माचुनं

धंमानपसथी धंम अनुविधियं अ अनुविधियि सा अचा ये...लाच

एतकेना होति सवत विजये पितिलसे से गधा सा होति पिति होति धंमविजयंसि लहका वे

खो सा पिति पालंतिक्यमेवे महफला मनंति देवानंपिये.

एताये चा अठाये इयं धंमलिपी लिखिता किति पुता पायोता मे अन

नव विजयम विजतविय मनिसु सयकसि नो विजय से खंति चा लंव

दडतेवा लोचे प तमेव चा विजयं मनत ये धंमविजये से हिदलोकिक्क पललोकिक्के सवा

च कु निलतिहे..उयाम लति पा पि हिदालोकिक्क पललोकिक्कया

### Inscription No.14 (line No 19 onwards)

इयं धंमलिपि देवानंपियेना पियदसिना लजिना लिखापिता अथिये वा संखि

तेना अथि मझिमेना अथि विथटेना नो हि सवता सवे घंटिते महालकेहि

विजिते बहु व लिखिते लेखापेशामि चेव निक्कं अथि मि हेता सुन पुनलपि

तेत सत असथसा मधुलियिये येन जने तथा पटिपजेया से लोया अतकिछि असमति

लिखिते दिसा वा संखिते कालनं वा अलोचयिस लिपिकलपलाधेन वा



### **English Translation of Kalsi Inscription – South Face (No. 13)**

(Devanampriya desires the welfare, restraint, and impartiality of all beings. - According to Shahabazgadhi's writings for damaged letters)

This is the great victory, according to Devanampriya. Devanampriya has achieved it here and in all neighboring kingdoms. For six hundred yojanas, there is a Greek king named Antyoga, and beyond Antyoga, four kings named Turmay, Antyken, Maga, Alikyasdal, and below, Choda, Pandya, and Tambapanni. Similarly, the Greek kings of this kingdom, Kamboja, Nabhaka, Nabhapanti, Bhoja, Pitanika, Andhra, and Pulinda, are observing the discipline of the Dhamma everywhere. Even where Devanampriya's messengers have not reached, the people, after hearing Devanampriya's words, laws, and practice of the Dhamma, behave accordingly. Thus, victory has been achieved everywhere. Victory has been achieved through love. Love is obtained through victory through Dhamma. But this is a small (fame). Devanampriya considers only altruism as a great victory. That is why I had this Niti-edict written. Why? So that my sons and grandsons do not accept such (armed) victory, but continue to believe in this new victory. They continue to find pleasure in forgiveness and minor punishment. They continue to believe in this victory, which is the victory of the Dhamma. In this, there is both this worldly and the otherworldly. It gives supreme joy, in this world and the next.

### **Inscription No. 14 English Translation**

This Niti-edict was written by Devanampiya Priyadarshi King. It is concise, moderate, and detailed. Not everything will be consistent everywhere. I have won a vast victory, I have had much written, and I will have more to write. Whatever is sweet here, I have had it written again and again, so that people may express it accordingly. One or two (places) in the writing will not be straight because that area (region – place) will be damaged, or because of someone else's (wrong) saying or because of the writer's mistake.

This inscription, located in Kalsi (Uttarakhand), contains the names of some of Emperor Ashoka's contemporary kings. While no continuous calendar existed in India at this, there are indications that continuous calendar existed in Macedonia and Babylonia for several centuries before Christ. When Alexander the Great set out to conquer the world, he established an extra month in the prevailing lunisolar calendar. This was because, according to their beliefs, the month in which he planned his conquest was considered inauspicious for war. Several clay tablets written in cuneiform describing calendar concepts have been recovered from many sites.

According to this existing calendar, the chronology of the kings mentioned in Emperor Ashoka's inscriptions has been determined by aligning them with the Christian Era calendar. Comparative studies have also been used to determine the chronology of Emperor Ashoka. Accordingly, the year of the Buddha's Mahaparinirvana can be determined by reference to small inscriptions.

The corresponding chronology (time determination) table is given on the next page. According to this table, the Buddha's Mahaparinirvana year must have been 516 BCE. This is a clear-cut statement. This fact is based on the recognition of Emperor Ashoka the Great on stone inscriptions at various places across India, a few centuries before other concepts of determining the year of Mahaparinirvana.

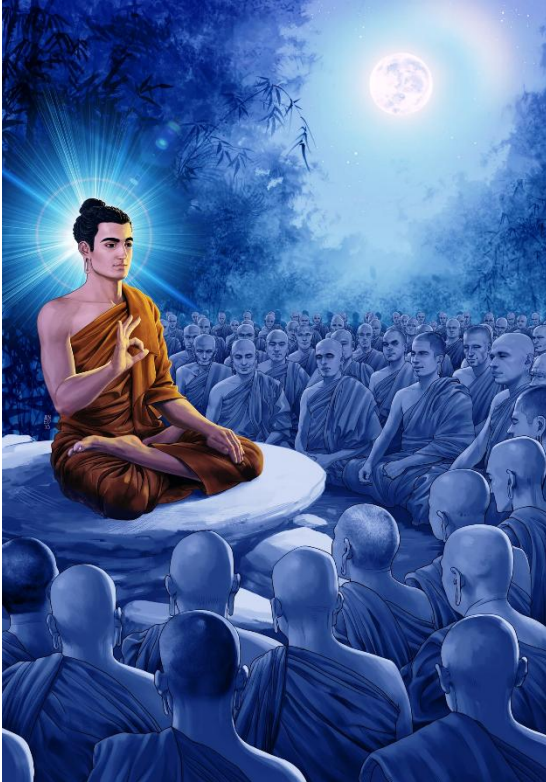
## Emperor Ashok's time in the History of India

Time period from Alexander the Great and Emperor Ashok (BC Years)		Five Kings Contemporary with Emperor Ashok (BC Years)		
Alexander returns from India	323	Ptolemy - II	286 to 246	
Reign of Chandragupta Maurya	322 to 298	Antigonus - II	277 to 239 (Two times)	
Reign of Bindusar Maurya	298 to 272	Magas	276 to 250	
Ashok's Accession to the Throne	272	Alexander - II	272 to 255	
Emperor Ashok's Coronation	269	Antiochus - II	262 to 246	
Emperor Ashok's Time	Emperor Ashok's reigning time reference	Before Christ Years	Period of Five Contemporary Kings	Year Counting After Tathagat Buddha
Prince Ashok		275		241
		274		242
		273		243
King Ashok before Coronation	Accession to the Throne	272		244
		271		245
		270		246
1	Coronation	269		247
2		268		248
3		267		249
4		266		250
5		265		251
6	Lay follower of Buddha	264		252
7	Lay follower of Buddha	263		253
8	Kalinga War	262	Common period of Five Contemporary Kings	254
9	With Sangha, Announcement of Minor Rock Inscription and Sambodhi Tour	261		255
10		260		256 @
11	Kandahar Inscription	259		257
12	Major Rock Inscriptions	258		258
13		257		259
14		256		260
15		255		261
16		254		262
17		253		263
18		252	264	
19		251	265	
20	Lumbini & Konagaman Stupa Tour	250		266

@ - 256<sup>th</sup> Year of Tathagat Buddha's Mahaparinirvan.

Tathagat **Buddha's Mahaparinirvan year** must be **516 Before Christ**.

## The First Vaishakh Purnima



The year of Buddha's Mahaparinirvana has been a mystery in Indian history. While this is true, it is equally true that the exact date of Buddha's Mahaparinirvana has not been determined. Nevertheless, Vaishakh Purnima is a highly significant day in Buddhist tradition, a belief held by the entire Buddhist world. Therefore, if we consider 516 BCE as the year of Buddha's Mahaparinirvana, the exact date of this year's Vaishakh Purnima must be determined.

Such determination would make it more logical to consider this day as the starting point of the Buddhist calendar.

Across the world, researching pre-Christian chronology reveals that the earliest written records on this subject are found in Babylon and Mesopotamia. The world's oldest lunar eclipse record was discovered in Mari, a city in Mesopotamia, dating back to the 18th century BCE, during the reign of King Hammurabi. An Assyrian scribe mentioned a solar eclipse observed from the city of Assur during the month of Simanu (May-June) in 763 BC. This mention has been of great help in determining the period of world history.

In modern times, NASA, an organization working in astronomy, has compiled a list of lunar eclipses for a total of 5000 years, from 2000 BC to 3000 AD. Volume 255 of this list contains a list of lunar eclipses from 600 BC to 501 BC. According to the details obtained from this list...

There was a lunar eclipse on March 3, 516 BC, hence it was a full moon.  
There was a lunar eclipse on August 27, 516 BC, hence it was a full moon.

The calculations between these full moon dates...

In 516 BC, March 3,

30 days later, April 2,

**30 days later, May 2,**

29 days later, May 31,

30 days later, June 30,

29 days later, July 29, and

29 days later, August 27 are the full moon days.

(The month of 29 and 30 days is just an adjustment, for 29.53058 days.)

In the entire Buddhist world, the full moon of May is considered to be Vaishakh Purnima. Therefore, with the help of this scientific logic, we prove that **Vaishakh Purnima occurred on May 2, 516 BC**. This day was a Sunday. We will see this with evidence in the next few pages.

**Special Note:** NASA has given the date of lunar eclipse in 516 BC Till October 1582, it is given in Julian system and after that in Gregorian system.

I have presented several revisions to accurately determine the year of Buddha's Mahaparinirvana based on Emperor Ashoka's minor edicts. In this revision booklet, I have included a sentence from the Aharaura minor edict, "Amancha Budhas Salile Aalodhe." I haven't provided the precise meaning of the word "Amancha" but only some approximate meanings. A friend of mine read this booklet. He immediately contacted me by phone and said, "There's no need to guess at the meaning of the word 'Amancha' here. Because the three letters 'Amancha' mean 256." When I asked how, I share his answer with you.

In ancient India, letters were used to write numbers. In this number writing system, the letters in our alphabet, divided into five groups from 'Ka' to 'Pa', are assigned to numbers from 1 to 25, respectively.

क	१	ख	२	ग	३	घ	४	ङ	५
च	६	छ	७	ज	८	झ	९	ञ	१०
त	११	थ	१२	द	१३	ध	१४	न	१५
ट	१६	ठ	१७	ड	१८	ढ	१९	ण	२०
प	२१	फ	२२	ब	२३	भ	२४	म	२५

स्वर अक्षर 'अ' से 'औ' तक ....

अ -	१०	आ -	१००	इ -	१०००	उ -	१००००
ए -	१०००००	ऐ -	१००००००	ओ -	१०००००००	औ -	१००००००००

... such values were given.

According to this, numbers from 1 to 25 were written directly with the designated letter. Numbers after this were written with two or more letters as ....

Vowel multiplier (x) (Consonant for 1 to 25) + Consonant for 1 to 25

For example, the अखछ of 27 = 10 x 2 + 7, and for 48, 10 x 4 + 8 = अघज.

Similarly, 10 x 25 + 6 = 256, meaning अमच (अमंच). This 256 = अमंच is written in the Ahraura Minor Inscription.

The name of this friend of mine, who lives in Lucknow is...

**Dr. Somesh Chandra Srivastava**, and his degrees are...

B.Sc., MBBS, MS(ENT), MA (History).



## Institute of Social Science & Management Studies & Great Ashoka Foundation

One Day National Conference on Multidisciplinary Research in



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## The Calendar Systems

Many methods of time calculation are used throughout the world. Each country has its own Calendar System. To ensure that people's communication with each other is synchronous with the time, a Common Calendar, which is universally understood has been adopted. The Christian calendar has been accepted globally as the common Calendar for all countries. However, almost all countries follow their own Calendar. The Indian National Calendar is based on the Saka Samvatsara but based on the solar Calendar system. This calendar was established on March 22, 1957, as Chaitra 1, 1879.

The most important and universally understood component of the Calendar process is the solar day. The period from one sun-rise to the next is called a solar day. The duration of the solar day varies according to the seasons, with the duration of day and night changing according to the seasons. Therefore, the average duration of all solar days in the entire year is considered to be one solar day. (Here, we have not specified what a year is, but have written based on that concept. In the next few articles, we will explain this period of time.)

With the rise of the concept of time measurement, the second major time period humans observed was lunar rotation. During this lunar rotation, two distinct phases of the moon are observed. The day when the moon is fully spherical or fully circular is visible in the sky throughout the night is called the **Purnima** or full moon, and the day when the moon is not visible in the sky at all is called **Amavasya**, the new moon. This time period from one full moon to the next (or from one new moon to the next) is called the **Lunar Month**. Most of the world's time measurement systems rely on this time period (the lunar month).

After this, humans observed the third major time period through time measurement: the seasonal cycle. The main ones among these are the **Grishma Rutu** (summer season) and the **Hemant Rutu** (winter season).

These seasons were observed to occur one after another after a specific period of time. The sun was observed to shift in position in the sky during these seasons. In India, the sun is seen to be in the north during summer, and in the winter season, it is seen to be tilted towards the south. Furthermore, the duration of day and night in a solar day was observed to change during these periods. In summer, the nights of a solar day are shorter and the days are longer, while in winter, the nights are longer and the days are shorter. This change in the duration of night and day has been observed minutely. A particular day in the winter season has been observed to be the shortest day of the entire year, and a particular day in the summer season has been observed to be the longest day. Twice a year, between these two special days, the nights and day of a solar day have been observed to be of exactly the same duration. The period between these two long days (or the period between the two short days) was observed to be approximately 365 solar days. This period (of approximately 365 days) was considered a solar year. Various calendar systems were created using these three time periods. We will first understand them properly.

## Lunar Calendar System

The world's oldest calendar system was first inspired by the observation of the Moon's fixed orbital period. During this lunar orbit, two distinct phases of the Moon are observed. The day when the Moon is fully spherical or fully circular is visible in the sky throughout the night is called the Full Moon Day, and the day when the Moon is not visible at all is called the New Moon Day or No Moon Day. This cycle of time, from one full moon to the next (or from one new moon to the next), is called the lunar month. Initially, it was observed that there are (on average) 12 full moons and 12 new moons in a year. Therefore, the period of twelve lunar months was considered a lunar year. A lunar month was calculated to contain approximately 30 days. Later, it was realized that it is of bit shorter period, the duration of these 12 lunar months is less than a solar year. After careful observation, the average duration of a lunar month was determined to be 29.5 days. (Modern revisions give the lunar month a length of 29.530587981 days, or approximately 29.5305). Therefore, in conventional chronology, this period is considered to be 29.5 solar days. The lunar month is considered to have two parts: one from the new moon to the full moon, and the other from the full moon to the new moon. The order of these parts of the lunar month depends on the belief about the beginning of the lunar month. (Whether the lunar month begins with the new moon or the full moon depends on this belief.) A lunar month of 29.5 solar days results in a year having 354 solar days. However, this period does not coincide with the seasonal cycle. (That is, this lunar year does not coincide with the solar year.) Today, Islamic chronology is observed in this manner. Therefore, the festival of Eid never coincides with any single solar Christian date nor does it coincide with any single season of the year.

## Solar Calendar System

The system of calculating time based on the seasonal cycle is called solar calendar. In this system, the shortest day (or the day when the Sun is at its southernmost point in the Indian sky) is determined by closely observing the Sun's changing position in the sky and the duration of day and night. The period between two such days is considered a solar year. The Christian calendar, familiar to us, is of this type. Since it is well known, let's understand it first.

Initially, this period was considered to be 365 days. However, after closer observation, it was found to be  $365.1\frac{1}{4}$  solar days (Julian calendar). Even then, a researcher named Gregory Paul proved that this period is 365.2425 solar days. After this, in the reformed Christian calendar, the solar year was considered to be of 365.2425 days and the reformed Gregorian calendar was created in October 1582 AD. During this creation, ten days of the month of October were skipped and the next date is followed. (After Thursday, October 4, 1582, Friday, October 15, 1582 was considered.)



When the solar year is divided into twelve parts, this period is called a month. (Months one to twelve are January, February, March, April, June, July, August, September, October, November, December respectively) These months sometimes have 30 and sometimes 31 days. According to the Julian calendar, the second month (February) has 28 days, and it becomes 29 days once every four years. This year is called a leap year. The Gregorian calendar has leap years like the Julian calendar, but centennial years are not always leap years. Only one centennial year

every four centuries is a leap year. Besides the Christian solar calendar, several other solar calendars are also used in the world.

The Indian National Calendar is also a solar calendar. The Indian National Calendar, or National Calendar of India, is the official calendar used in India. It is based on the Saka Samvatsar and was adopted alongside the Gregorian calendar from March 22, 1957.

Month No.	Month Name	No. of days	Months starts on C.E. Date
1	Chaitra	30/31	March 22/21
2	Vaishakh	31	April 21
3	Jyeshtha	31	May 22
4	Ashadh	31	June 22
5	Shravan	31	July 23
6	Bhadrpad	31	Aug 23
7	Ashwin	30	Sept 23
8	Kartik	30	Oct 23
9	Margsheersh	30	Nov 22
10	Pausha	30	Dec 22
11	Magha	30	Jan 21
12	Phalgun	30	Feb 20

In India, it is used alongside the Gregorian calendar in the Gazette of India, news broadcast by All India Radio, and communications issued by the Government of India. In leap years, Chaitra has 31 days and begins on March 21. All months in the first half of the year have 31 days, because the Sun's rotation slows down during this time. The names of the months are derived from the ancient Hindu lunisolar calendar. Therefore, spelling variations exist, and confusion persists about which date corresponds to which calendar.

## Lunar-Solar Calendar System

We have already seen that this cycle of time from one full moon to the next (or one new moon to the next) is called a lunar month. The lunar year, formed by the addition of twelve such lunar months, and the solar year (of 365.2425 days) based on the seasonal cycle of the solar calendar system, differ by approximately 11 solar days. To compensate for this difference, a special concept has been devised to align the lunar calendar with the solar calendar (in effect, with the natural seasonal cycle). Since the lunar month is the main component of this system, it is essential that the 11-day difference be compensated solely by adjusting the lunar month. Reconciling the difference of 11 days with the lunar month of 29.5305 days is a complex mathematical process. This is why the concept of lunisolar calendar is complex.

As early as the sixth century BCE, Babylonian astronomers and learned kings had observed (understood) that the total days of 235 lunar months and 19 solar years were approximately the same. In 432 BCE, Meton, an astronomer from Athens, Greece, made a revision, observing that the total days of 19 solar years and 235 lunar months were exactly the same.

$$365.2425 \times 19 = 6939.6075 \text{ days in 19 solar years}$$
$$235 \times 29.5305 = 6939.6675 \text{ days in 235 lunar months}$$

(The difference is approximately 1 hour 26 minutes and 24 seconds.) Consequently, the lunisolar phase occurring every 19 years matches the lunisolar phase of the previous 19 years with a very small difference, allowing the calculation of the previous 235 months to begin anew from that day. Because of Meton's Research mention, this period of 19 solar years or 235 lunar months is called the Metonic cycle. These 235 lunar months are divided into 19 lunisolar years, giving  $19 \times 12 = 228$  lunar months plus 7 extra lunar months. These 7 extra lunar months are adjusted by adding one extra month each to the seven different years of the 19 lunisolar year. This extra lunar month is called the intercalary month of that year. The placement of this extra month in each of the 19

years, and between which two normal lunar months, is determined by the calendar system used. In the ancient Hebrew calendar system, the extra month was added to the following year in the order of 3, 6, 8, 11, 14, 17, and 19 in this 19-year cycle. The placement of an extra month in its corresponding year is also based on a calculation concept. Different calendar systems treat this extra month differently.

The Buddhist calendar adopted in Myanmar (formerly known as Burma Desh) uses a variant of the Metonic cycle, which is tripled (57 years) and has  $7 \times 3 = 21$  more lunar months. Additionally, 11 additional days are added. However, the calculation system for these is somewhat complex.

### **Indian traditional calendar system**

Many historians believe that the Kushan emperor Kanishka introduced the Saka Samvatsara calendar system in India in 78 AD. (Rabatak Inscription) Initially, this calendar system may have been a solar calendar system.

The Vikram Samvachhar calendar is said to have begun in 57 BC, but no historical or archaeological support for this calendar has been found until the fifth century AD.

There is no undisputed archaeological evidence as to when the system known as the Indian Vedic (Hindu) calendar began in India. However, its origin is generally considered to be the Saka Samvatsara and Vikram Samvatsara. This calendar system is a lunisolar calendar, but it includes not only the movements of the Moon, Sun, and Earth, but also prominently includes the positions of the constellations relative to the Sun. The Moon takes 27.321,661 days to complete one revolution around the Earth relative to all stars other than the Sun. Therefore, a daily constellation of stars visible close to the Moon along the path it appears to take in the night sky was identified and given a name. This

observation also revealed that after passing through each constellation for 27 days, the Moon passes again near the first constellation on the 28th day. These 27 constellations were called Nakshatras, and this period of circumambulation was called the constellation month.

Twelve more constellations were determined along this same lunar orbit. As the Earth orbits the Sun, each constellation from these 12 Rashis is seen in turn at a specific time in the sky for a month. Then, in the next month, the next constellation is seen at the same time in the same place. (This constellation is called a 'Rashi' or a zodiac sign.)

In Indian history, no simple system was developed to reconcile the lunar month and the solar year (to adjust for the 13th month). Instead, a complex system was developed by linking the lunar month and the Rashis (Zodiac constellations) in the sky. Combining the three concepts of constellation month, lunar month, and solar year together is complex. In traditional Indian chronology, the solar year also depends on the position of the constellations (sidereal year). In fact, such complex concepts are not necessary for chronology.

When a constellation (rashi) is observed near a specific location in the sky for a month, the lunar month is repeated, resulting in the 13th extra month. These 12 constellations were called rashis and given 12 names. From this, we can now understand that this chronology is impossible without incorporating the positions of the zodiac signs and constellations. The beginning of each lunar month is determined by the position of the zodiac sign and constellation. Furthermore, this system is not just a chronology; it is also related to the Nakshatras in the sky, planets, and zodiac signs, and based on these, good and bad times and astrology are predicted. For this reason, this system is difficult to understand without sufficient knowledge of astronomy.

Myanmar is a Buddhist nation. Here, along with the global temporal chronology, the Buddhist chronology, which is a luni-solar chronology, is



also followed. It consists of 12 lunar months, each with a total of 354 or 355 days. To adjust this calendar to the solar year, an extra lunar month is added every few months. Some months also add an extra day. The extra month is often calculated using complex mathematics. The method for calculating the extra day is similarly complex.

Names of lunar months	Nakshatra in which the moon appears on or lives very close to, on the full moon.
1. Chaitra	<b>Chitra</b> , Swati.
2. Vaishakh	<b>Vishakha</b> , Anuradha.
3. Jyeshtha	<b>Jyeshtha</b> , Mula.
4. Ashadh	<b>Purvashadh</b> , <b>Uttarashadh</b> .
5. Shravan	Satbhisha, <b>Shravan</b> , Dhanishtha.
6. Bhadrapada	<b>Purvabhadra</b> , <b>Uttarbhadra</b> .
7. Ashwin	Revati, <b>Ashwini</b> , Bharani.
8. Karthik	<b>Kritika</b> , Rohini.
9. Margashirsha	<b>Mrigashira</b> , Ardra.
10. Paush	Punarvasu, <b>Pushya</b> (Tishya).
11. Magha	<b>Magha</b> , Ashlesha.
12. Phalguna	<b>Purvaphalguna</b> , <b>Uttaraphalguna</b> , Hasta.

Since this is somewhat difficult for the average Indian to understand, a community of **Almanac-makers** has emerged in India. These individuals prepare calendars containing this calendar every year, and the general public follows it without any doubt.

## Pali Buddhist Literature and Constellations

In fact, there is no need for things like zodiac signs and Nakshatras for time calculation. Instead, the concepts of planets, constellations, auspicious times, and astrology promote superstition. Against this backdrop, I feel it necessary to create a time calculation based on easily visible realities like the Moon and Sun, without the zodiac signs and planets that give rise to superstition. The Buddha called the spread of superstition based on zodiac signs and Nakshatras inferior knowledge. We read about this in the Brahmajala Sutta, under the Digha Nikaya, of the Sutta Pitaka of the Tipitaka.

### Brahmajalasuttam, Mahaseelam

(दीघनिकायो, सीलक्खंधवग्गपाली)

यथा वा पनेके भोन्तो समणब्राह्मणा सद्भादेय्यानि भोजनानि भुज्जित्वा ते एवरूपाय तिरच्छानविज्जाय मिच्छाजीवेन जीवितं कप्पेन्ति, सेय्यथिदं – चन्दग्गाहो भविस्सति, सूरियग्गाहो भविस्सति, नक्खत्तग्गाहो भविस्सति, चन्दिमसूरियानं पथगमनं भविस्सति, चन्दिमसूरियानं उप्पथगमनं भविस्सति, नक्खत्तानं पथगमनं भविस्सति, नक्खत्तानं उप्पथगमनं भविस्सति, उक्कापातो भविस्सति, दिसाडाहो भविस्सति, भूमिचालो भविस्सति, देवदुन्दुभि भविस्सति, चन्दिमसूरियनक्खत्तानं उग्गमनं ओगमनं संकिलेसं वोदानं भविस्सति, एवंविपाको चन्दग्गाहो भविस्सति, एवंविपाको सूरियग्गाहो भविस्सति, एवंविपाको नक्खत्तग्गाहो भविस्सति, एवंविपाकं चन्दिमसूरियानं पथगमनं भविस्सति, एवंविपाकं चन्दिमसूरियानं उप्पथगमनं भविस्सति, एवंविपाकं नक्खत्तानं पथगमनं भविस्सति, एवंविपाकं नक्खत्तानं उप्पथगमनं भविस्सति, एवंविपाको उक्कापातो भविस्सति, एवंविपाको दिसाडाहो भविस्सति, एवंविपाको भूमिचालो भविस्सति, एवंविपाको देवदुन्दुभि भविस्सति, एवंविपाकं चन्दिमसूरियनक्खत्तानं उग्गमनं ओगमनं संकिलेसं वोदानं भविस्सति इति वा इति एवरूपाय तिरच्छानविज्जाय मिच्छाजीवा पटिविरतो समणो गोतमो'ति।

## Brahmajālasuttam, Mahasīlam : English Translation

Bhikkhus! Just as many Shramanas and Brahmins live a life of condemnation after eating food offered with devotion, such as a lunar eclipse, a solar eclipse, a star eclipse, the moon and sun remaining on their respective paths, the moon and sun shifting from their paths, a star remaining on its path, a star shifting from its path, a meteor shower, a directional burning, an earthquake, thunder, the rising and setting of the moon, sun, and stars being defective and needing to be purified, this will be the result of a lunar eclipse, and this will be the result of the rising and setting of the moon, sun, and stars being defective or innocent; Shramana Gotama does not live a life of condemnation with such inferior knowledge.

In addition to the Brahmajālasuttam, the Jataka tales are written in the Suttapitaka of the Tipitaka under the Khuddaka Nikaya. Among these Jataka tales, there is a story called the Nakkhatta Jataka in the Atthakaama Vagga. Here too, the Buddha strongly opposes the superstition associated with the Nakshatras.

नक्खत्तं पटिमानेत्तं, अत्थो बालं उपच्चगा।  
अत्थो अत्थस्स नक्खत्तं, किं करिस्सन्ति तारका'ति॥

While respecting the constellations, the fool goes beyond his desires and expectations. Where desires and expectations are the only worthy Nakshatras, what is the purpose of the stars ?

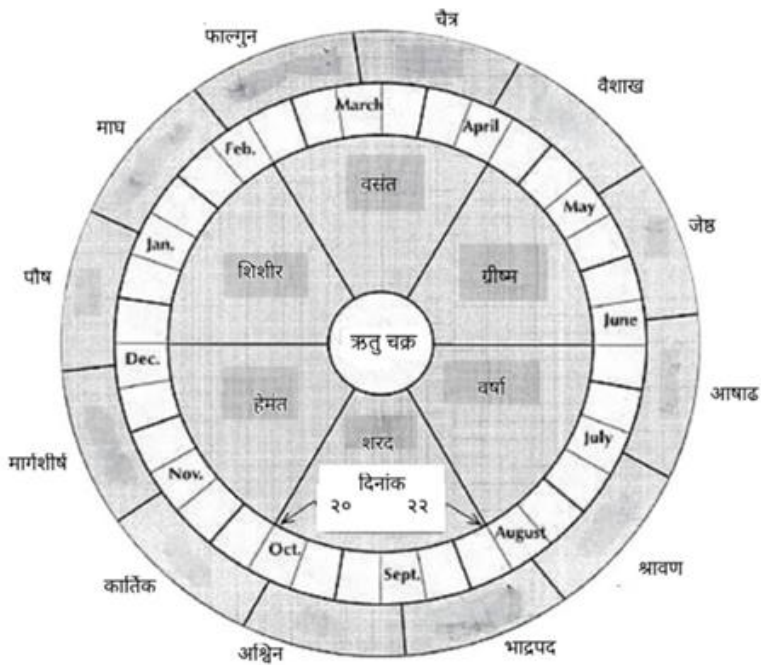
According to the philosophy of the Buddha, the concept of Nakshatras only spreads superstition, which is not at all suitable for human life but is harmful. Therefore, the Buddhist community of India should not give

importance to the concept of Nakshatras in any of their work. If for some reason they are associated with it, try to remove it.

Rashi and Nakshatra are groups of stars visible in space. The visible stars in each of these clusters are millions of miles apart.\* They are also millions of miles apart from our Earth. Therefore, it is beyond imagination that they have any connection with humans or any other living being. Studying them under the science of space is one thing, but the connection between zodiac signs and Nakshatras in our time calculation is quite strange.

\*- तारोभरा आकाश – Author – Gunakar Mule.

Relevance of zodiac signs and constellations in Indian lunisolar calendar.



## Bodhi Calendar System - My Concept

In Burma or Myanmar, the lunisolar calendar based on the Surya Siddhanta system, prevalent in India, was previously prevalent. However, a refinement (probably from 638 AD) introduced a lunisolar calendar based on the 19-year Metonic cycle, and its first year was fixed at 544 BC, the same as in Sri Lanka. King Popa Sorahan of Pagan, a province of Burma, established this year. This year is now considered Budhabd by Indian Buddhists (Neo-Buddhists). Indian Buddhists recognize the Budhabd system prevalent in Sri Lanka and Myanmar, but they follow the calendar system as same as the Vedic (Hindu) Surya Siddhanta system.

We have already understood the basic concept of lunisolar calendar. Under this concept, we have to discuss with due wisdom, the lunar month of 29.5 solar days (29.5305 solar days), the solar year of 365.2425 solar days, the adjustment of the 19-year (Metonic) cycle for the correlation of the solar year and the lunar year, that is, the adjustment of the 7 extra lunar months that occur in this 19 solar year. That is why I am calling this calendar system the Bodhi Calendar.

1. In this system, to ensure the successful combination of a lunar month of 29.5 solar days with Solar year, the lunar months will have alternately 30 and 29 days. The lunar month will have two divisions of 15 solar days each. These divisions are called Pakshas (fortnights). Each Paksha will have 15 tithi. One tithi will be one solar day of the lunar month. These tithi are called Prathama, Dwitiya, Tritiya, Chaturthi, Panchami, Shashthi, Saptami, Ashtami, Navami, Dashami, Ekadashi, Dwadashi, Trayodashi, Chaturdashi & Purnima/Amavasya. Each tithi will be considered from one sun-rise to the next sun-rise.
2. From the new moon to the full moon, there will be the **Tej Paksha** (Shuddha Paksha), and from the full moon to the new moon, there will be the **Tam Paksha** (Vadya Paksha). If the lunar month is of 29

days, one tithi will be skipped, meaning that the next tithi will be considered without counting that tithi. This tithi will be the same in all 29-day lunar months, which will be (Vadya) **Tama Ashtami**.

3. The first month of the year will be Vaisakha, and the 12 months of the year will be from Vaisakha to Chaitra. The names of the months will be as follows:

Vaisakha, Jyeshtha, Ashadha, Shravan, Bhadrapada, Ashwin, Kartik, Margashirsha (Agrahan), Paush, Magh, Phalguna, Chaitra.

The names of the lunar months can be written in Pali as follows:

Vaisakha, Jyeshtha, Ashadha, Savan, Potthapada, Assayuj, Kattik, Magsira, Phuss, Magh, Phagguna, Chitta.

The days of the months will alternately 30 and 29. For example, Vaisakha – 30, Jyeshtha – 29, Ashadha – 30, ..... Chaitra – 29.

4. In this calendar system, we will call each year Bodhi Samvachara, because during the time of Emperor Ashoka, a year was called Samvachhara (Samvachhla), as mentioned in the small rock edicts of Emperor Ashoka. In modern parlance, Samvachhara is called Samvatsara.
5. To calculate Bodhi Samvachhara, the lunar month will begin on the next day of the new moon and end on next new moon (Amāntā).
6. The cycle of 19 solar years (Metonic cycle) will be called the **Siddhartha Chakra**. The extra (Intercalery) month will be called the **Maitreya** month. To accommodate the 7 (extra) Maitreya lunar months in the Siddhartha Chakra, the 235 lunar months will be divided into seven (approximately) equal parts, and these seven parts will be called the extra month pillars or **Maitreya pillars**. There are 33.5 lunar months in these seven pillars ( $235 \div 7 = 33.571428\dots$ ). Therefore, these will be adjusted in the seven pillars in turn as 33 normal lunar months and 1 Maitreya lunar month and 32 normal lunar months and 1 Maitreya lunar month. Maitreya lunar month will be of 30 days. Due to this, there will be 34, 33, 34, 33, 34, 33, 34

Lunar Months respectively in these seven pillars, making a total of 235 months.

7. There are  $365.2425 \times 19 = 6939.6075$  solar days in 19 solar years. There are  $19 \times 12 = 228 + 7$  Maitreya (extra) months, thus 235 lunar months. Thus,  $228 \times 29.5 = 6726$  and all the 7 extra months give  $7 \times 30 = 210$  days, totalling  $6726 + 210 = 6936$  solar days. This will result in 3.6075 solar days short to 19 solar years period. To compensate for this deficiency, once every five years (i.e., in the fifth year after every four years), the month of Chaitra will have 30 days instead of 29, but in the 100<sup>th</sup> year (century year), it will remain at 29 days. Similarly, in the 200<sup>th</sup>, 400<sup>th</sup>, 600<sup>th</sup>, and 800<sup>th</sup> year (bi-century year), the month of Chaitra will have 30 days instead of 29, but in the 1000<sup>th</sup> (tenth century) year, the month of Chaitra will have only 29 days. ... Let us understand this easily.

A year whose last digit is 0 or 5 will be an **Ashoka Samvachhar**.

A year whose last **two digits are 00** will not be **Ashoka Samvachhar**.

However, a year whose last three digits are **200, 400, 600, or 800** will be an **Ashoka Samvachhar**. If the **last three digits are 000**, it will not be an **Ashoka Samvachhar**. The Chaitra month of Ashoka Samvachhar will have 30 days instead of 29.

To understand how this adjustment is made ....

19 solar years have - 6939.6075 days.

The Siddhartha Chakra table has only - 6936 days.

According to this, 1900 solar years will have - 693960.75 days.

Similarly, 100 Siddhartha Chakras will have - 693600.00 days.

That means there is a difference of 360.75 (=361) days in these 1900 years.

If we divide 1900 years by five, there will be 380 parts of five years. If we consider one day to each part, then we will have 380 days. If we subtract 19 days (1 per every Century year) from this, then this number becomes 361. If we add one day every five years in 1900

years, but do not add the same for all century years, then we will be adding 361 days.

If we add these 361 days to the .... 693600 days of  
100 Siddhārtha Chakras then it will be .... 693961 days.

This number is almost equal to the number of days  
of 1900 solar years, which is .... 693960.75 days.

Actually, a lunar month is 29.530587981 solar days, but for ease of calculation, we have calculated 29.5 solar days per lunar month. After careful study, I have determined that, except for the century year, the month of Chaitra should have 30 days instead of 29, once every five years, and except for the ten-century year, but the bi-century years, month of Chaitra will have 30 days instead of 29. Now, according to this adjustment, the total number of days in 100 lunar months will be 2953, this will also hold true.

By adjusting the lunar months and the tithis falling within these lunar months in the Siddhartha cycle of 235 months, in this way, our desired lunar-solar calendar will be successful.

Under this concept, we consider Vaisakha to be the first month of the year because it is universally believed that Siddhartha Gautama attained enlightenment on the full moon day of the month of Vaisakha.

The first Calendar concepts developed in the world were based on

- (1) the daily cycle of sun-rise and sunset,
- (2) the cycle of changes in the apparent size of the moon, i.e., the cycle of the full moon and new moon, and finally,
- (3) the cycle of the four seasons: spring, summer, autumn, and winter.

Therefore, it would be more practical to call it **Natural Calendar**.



## Description of the Siddhartha Chakra Table

Now let's look at the method for constructing the Siddhartha Chakra Table.

1. We create a table with 8 columns and 36 rows.
2. Leave the first row of the first column blank. In the first row of the next seven columns, write the numbers 1 to 7 (Maitreya column number) in order.
3. In the first column, leave the first row blank and write the numbers 1 to 34 in subsequent rows in order. This is the counting number of the month in the Maitreya column.
4. Write the symbol XXX in the 34th row of the third, fifth, and seventh columns. (We will not use these boxes.)
5. Write Maitreya in the fifth row of the first five columns of this table and in the seventh row of sixth and seventh Column.
6. From the second row of the second column to the 34th row, write the names of the months in sequence: Vesakh, Jyeshtha, Asalha, Savan, Potthapada, Assayuj, Kattik, Magsir, Phuss, Magh, Phaggun, Chitta (or the Hindi-Marathi names of the months). In the row where **Maitreya** is already written, skip this row for writing sequentially, but continue in the next row. After completing one column, write the names of the months in the next column in sequence, following the order of the months, and complete the table in this manner.

The Siddhartha Chakra, consisting of seven Maitreya pillars, as described here, is given in tabular form on the next page.

In the table on the next page, for quick reference, the number of days of each month is given in one column, and in an additional row (36th row), the total number of days in this Siddhartha Chakra, up to the end of that Maitreya pillar, is given. This number will be used for calculating Tithi and month for any Common Era Date.

We must consider how to write the date of a day according to this Bodhi calendar. Its description should be something like this: (Paksha), (Tithi), (Month), Bodhi Samvachhar (Samvachhar).

For example, the next day after **Tej Chaturdashi, Vaisakha, Bodhi Samvachhar 2539** will be Buddha Purnima of Bodhi Samvachhar 2539.

This date number can be written as Tej 14-01-2539 Bodhi Samvachhar. The last page of the Bodhi calendar based on the Bodhi Samvachhar should include the Siddhartha Chakra table, and the current Samvachhar should be specifically highlighted.

In this article, I haven't mentioned the week and week days, because the week and week day are independent systems that are independently associated with each calendar system. Just as the day is independently associated with the date of any calendar system (Christian calendar, Indian national calendar, or Hindu calendar).

It would be more meaningful to begin the Bodhi calendar with the year of the Buddha's Mahaparinirvana. I believe all Buddhists share this sentiment.

There was no continuous (uninterrupted) calendar in India before the Christian era. Therefore, accurate knowledge of the time period of Indian history before the Christian era is not available. Consequently, the year of the Buddha's Mahaparinirvana is also a complex topic in the Indian history. Not only here, but the chronology of almost all history before Emperor Ashoka is a complex conundrum.

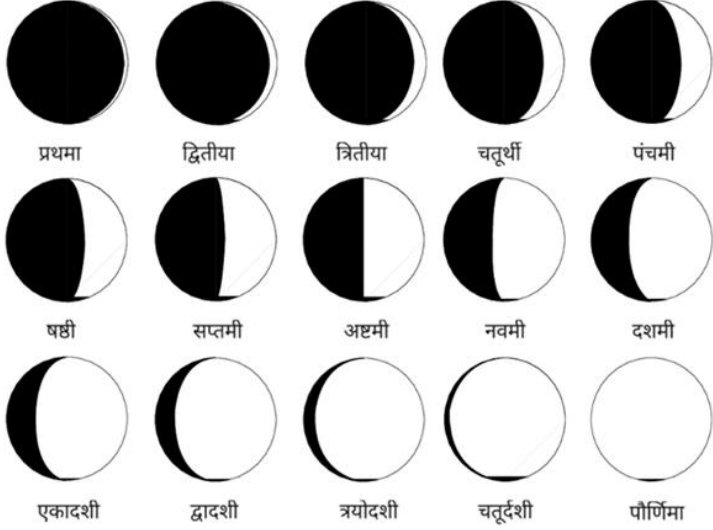
While India may not have a continuous calendar, it existed in other countries around the world. For example, the world-conqueror Alexander was born in Macedonia on the sixth of the Greek month of Hekatombayon. According to Christian chronology, this would

have been July 20, 356 BCE. This date would have been Shravan Tej Chaturthi.

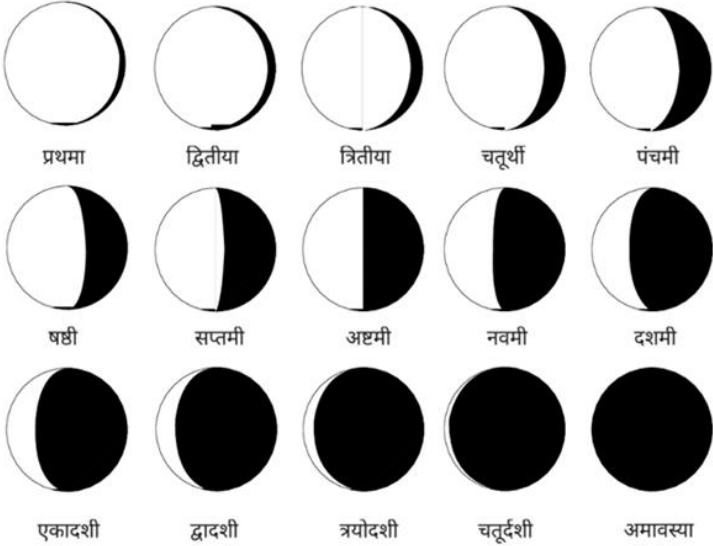
Emperor Ashoka's eleven minor edicts mention the Buddha's Mahaparinirvana. The thirteenth edict of the major edict series mentions the names of five kings residing in the northwest of Emperor Ashoka's empire. These kings' countries had a continuous calendar. By closely studying the context of this period, I have determined the year of Buddha's Mahaparinirvana based on the written support of these edicts. Consequently, Buddha's Mahaparinirvana occurred in 516 BCE. Therefore, I believe the Bodhi calendar should begin in 516 BCE.

## Lunar Month Tithis with Moon view.

### तेज पक्ष



### तम पक्ष



## Improved Siddharth Cycle Table (7 Column, 235 Lunar Months)

		Col. 1	Col. 2	Col. 3	Col.4	Col. 5	Col.6	Col.7
1	30	वैशाख	माघ	अश्विन	आषाढ़	फाल्गुन	मार्गशीर्ष	श्रावण
2	29	जेष्ठ	फाल्गुन	कार्तिक	श्रावण	चैत्र	पौष	भाद्रपद
3	30	आषाढ़	चैत्र	मार्गशीर्ष	भाद्रपद	वैशाख	माघ	अश्विन
4	29	श्रावण	वैशाख	पौष	अश्विन	जेष्ठ	फाल्गुन	कार्तिक
5	30	मैत्रेय	मैत्रेय	मैत्रेय	मैत्रेय	मैत्रेय	चैत्र	मार्गशीर्ष
6	30	भाद्रपद	जेष्ठ	माघ	कार्तिक	आषाढ़	वैशाख	पौष
7	29	अश्विन	आषाढ़	फाल्गुन	मार्गशीर्ष	श्रावण	मैत्रेय	मैत्रेय
8	30	कार्तिक	श्रावण	चैत्र	पौष	भाद्रपद	जेष्ठ	माघ
9	29	मार्गशीर्ष	भाद्रपद	वैशाख	माघ	अश्विन	आषाढ़	फाल्गुन
10	30	पौष	अश्विन	जेष्ठ	फाल्गुन	कार्तिक	श्रावण	चैत्र
11	29	माघ	कार्तिक	आषाढ़	चैत्र	मार्गशीर्ष	भाद्रपद	वैशाख
12	30	फाल्गुन	मार्गशीर्ष	श्रावण	वैशाख	पौष	अश्विन	जेष्ठ
13	29	चैत्र	पौष	भाद्रपद	जेष्ठ	माघ	कार्तिक	आषाढ़
14		वैशाख	माघ	अश्विन	आषाढ़	फाल्गुन	मार्गशीर्ष	श्रावण
15		जेष्ठ	फाल्गुन	कार्तिक	श्रावण	चैत्र	पौष	भाद्रपद
16		आषाढ़	चैत्र	मार्गशीर्ष	भाद्रपद	वैशाख	माघ	अश्विन
17		श्रावण	वैशाख	पौष	अश्विन	जेष्ठ	फाल्गुन	कार्तिक
18		भाद्रपद	जेष्ठ	माघ	कार्तिक	आषाढ़	चैत्र	मार्गशीर्ष
19		अश्विन	आषाढ़	फाल्गुन	मार्गशीर्ष	श्रावण	वैशाख	पौष
20		कार्तिक	श्रावण	चैत्र	पौष	भाद्रपद	जेष्ठ	माघ
21		मार्गशीर्ष	भाद्रपद	वैशाख	माघ	अश्विन	आषाढ़	फाल्गुन
22		पौष	अश्विन	जेष्ठ	फाल्गुन	कार्तिक	श्रावण	चैत्र
23		माघ	कार्तिक	आषाढ़	चैत्र	मार्गशीर्ष	भाद्रपद	वैशाख
24		फाल्गुन	मार्गशीर्ष	श्रावण	वैशाख	पौष	अश्विन	जेष्ठ
25		चैत्र	पौष	भाद्रपद	जेष्ठ	माघ	कार्तिक	आषाढ़
26		वैशाख	माघ	अश्विन	आषाढ़	फाल्गुन	मार्गशीर्ष	श्रावण
27		जेष्ठ	फाल्गुन	कार्तिक	श्रावण	चैत्र	पौष	भाद्रपद
28		आषाढ़	चैत्र	मार्गशीर्ष	भाद्रपद	वैशाख	माघ	अश्विन
29		श्रावण	वैशाख	पौष	अश्विन	जेष्ठ	फाल्गुन	कार्तिक
30		भाद्रपद	जेष्ठ	माघ	कार्तिक	आषाढ़	चैत्र	मार्गशीर्ष
31		अश्विन	आषाढ़	फाल्गुन	मार्गशीर्ष	श्रावण	वैशाख	पौष
32		कार्तिक	श्रावण	चैत्र	पौष	भाद्रपद	जेष्ठ	माघ
33		मार्गशीर्ष	भाद्रपद	वैशाख	माघ	अश्विन	आषाढ़	फाल्गुन
34		पौष	✕	जेष्ठ	✕	कार्तिक	✕	चैत्र
		1004	1978	2981	3955	4959	5933	6936

Let's write each year of our Siddhartha Cycle chart in a new chart of 13 Rows (1 per lunar Month) and 19 columns (1 per year). This chart is the Siddhartha Cycle 19 Year Column Chart, which will look something like the following.

	0	1	2	3	4	5	6	7	8	9
1	वैशाख	वैशाख	वैशाख	वैशाख	वैशाख	वैशाख	वैशाख	वैशाख	वैशाख	वैशाख
2	जेष्ठ	जेष्ठ	जेष्ठ	मैत्रेय	जेष्ठ	जेष्ठ	जेष्ठ	जेष्ठ	जेष्ठ	जेष्ठ
3	आषाढ़	आषाढ़	आषाढ़	जेष्ठ	आषाढ़	आषाढ़	आषाढ़	आषाढ़	आषाढ़	आषाढ़
4	श्रावण	श्रावण	श्रावण	आषाढ़	श्रावण	श्रावण	श्रावण	श्रावण	श्रावण	श्रावण
5	मैत्रेय	भाद्रपद	भाद्रपद	श्रावण	भाद्रपद	भाद्रपद	भाद्रपद	भाद्रपद	भाद्रपद	भाद्रपद
6	भाद्रपद	अश्विन	अश्विन	भाद्रपद	अश्विन	अश्विन	अश्विन	अश्विन	अश्विन	अश्विन
7	अश्विन	कार्तिक	कार्तिक	अश्विन	कार्तिक	कार्तिक	कार्तिक	कार्तिक	मैत्रेय	कार्तिक
8	कार्तिक	मार्गशीर्ष	मार्गशीर्ष	कार्तिक	मार्गशीर्ष	मार्गशीर्ष	मार्गशीर्ष	मार्गशीर्ष	कार्तिक	मार्गशीर्ष
9	मार्गशीर्ष	पौष	पौष	मार्गशीर्ष	पौष	पौष	पौष	पौष	मार्गशीर्ष	पौष
10	पौष	माघ	माघ	पौष	माघ	मैत्रेय	माघ	माघ	पौष	माघ
11	माघ	फाल्गुन	फाल्गुन	माघ	फाल्गुन	माघ	फाल्गुन	फाल्गुन	माघ	फाल्गुन
12	फाल्गुन	चैत्र	चैत्र	फाल्गुन	चैत्र	फाल्गुन	चैत्र	चैत्र	फाल्गुन	चैत्र
13	चैत्र			चैत्र		चैत्र			चैत्र	
	384	732	1092	1476	1830	2214	2568	2922	3306	3660

	10	11	12	13	14	15	16	17	18
1	वैशाख	वैशाख	वैशाख	वैशाख	वैशाख	वैशाख	वैशाख	वैशाख	वैशाख
2	जेष्ठ	जेष्ठ	जेष्ठ	जेष्ठ	मैत्रेय	जेष्ठ	जेष्ठ	जेष्ठ	जेष्ठ
3	आषाढ़	मैत्रेय	आषाढ़	आषाढ़	जेष्ठ	आषाढ़	आषाढ़	आषाढ़	आषाढ़
4	श्रावण	आषाढ़	श्रावण	श्रावण	आषाढ़	श्रावण	श्रावण	श्रावण	श्रावण
5	भाद्रपद	श्रावण	भाद्रपद	भाद्रपद	श्रावण	भाद्रपद	भाद्रपद	भाद्रपद	भाद्रपद
6	अश्विन	भाद्रपद	अश्विन	अश्विन	भाद्रपद	अश्विन	अश्विन	अश्विन	अश्विन
7	कार्तिक	अश्विन	कार्तिक	कार्तिक	अश्विन	कार्तिक	कार्तिक	कार्तिक	कार्तिक
8	मार्गशीर्ष	कार्तिक	मार्गशीर्ष	मार्गशीर्ष	कार्तिक	मार्गशीर्ष	मार्गशीर्ष	मार्गशीर्ष	मार्गशीर्ष
9	पौष	मार्गशीर्ष	पौष	पौष	मार्गशीर्ष	पौष	पौष	पौष	पौष
10	माघ	पौष	माघ	माघ	पौष	माघ	मैत्रेय	माघ	माघ
11	फाल्गुन	माघ	फाल्गुन	फाल्गुन	माघ	फाल्गुन	माघ	फाल्गुन	फाल्गुन
12	चैत्र	फाल्गुन	चैत्र	चैत्र	फाल्गुन	चैत्र	फाल्गुन	चैत्र	चैत्र
13		चैत्र			चैत्र		चैत्र		
	4014	4398	4752	5106	5490	5844	6228	6582	6936

## Quick Reference Guide for Bodhi Samvachara

1. Bodhi Samvachhar begins on **Sunday, Tej Prathama Vaisakha Bodhi Samvachhar 0001**, which is **April 18, 516 BCE**, according to global chronology. (CE)
2. The lunar month begins on the day after the new moon and ends on the next new moon. (**Amanta** lunar month)
3. Each lunar month will have two parts: **Tej Paksha** (bright phase) from the new moon to the full moon, and **Tama Paksha** (dark phase) from the full moon to the next new moon. A year consists of 12 such months.
4. The months of Vaisakha, Ashadha, Bhadrapada, Kartik, Paush, Phalguna, and Maitreya will have 30 days.
5. The months of Jyeshtha, Shravan, Ashwin, Agrahana (Margashirsha), Magha, and Chaitra will have 29 days. There will be **No Tama Ashtami** in these months.
6. The 19-year cycle will be called the **Siddhartha Chakra** and will contain 235 lunar months.
7. The Siddhartha Chakra will have seven parts, each part called a **Maitreya Stambha**. Maitreya Stambhas one through seven will have 34 and 33 lunar months alternately, and each Maitreya Stambha will have one **Maitreya month**.
8. The position of Maitreya month in which Samvachar will be calculated from the previous Samvachar number (as per the Siddhartha Cycle 19-year table) using the following rules:
9. (Samvachar number - 1) <sup>@</sup> ÷ 19 (After the integer ratio of)
  - a) If the remainder is 0, the **fifth** month will be Maitreya month.
  - b) If the remainder is 3, the **second** month will be Maitreya month.
  - c) If the remainder is 5, the **tenth** month will be Maitreya month.
  - d) If the remainder is 8, the **seventh** month will be Maitreya month.



- e) If the remainder is 11, the **third** month will be Maitreya month.
- f) If the remainder is 14, the **second** month will be Maitreya month.
- g) If the remainder is 16, the **tenth** month will be Maitreya month.
- h) If there is any other remainder, there will be no Maitreya month in that Year.

@ - This calculation is the number of complete Years passed till the desired date.

- 10. If the **last digit of the running Samvachhar is 0 or 5**, then this Samvachhar **will be an Ashoka Samvachhar**.
- 11. If the **last two digits of the running Samvachhar are 00**, then this Samvachhar **will not be an Ashoka Samvachhar** even if the last digit is 0.
- 12. If the **last three digits of the running Samvachhar are 200, 400, 600, or 800**, then this Samvachhar **will be an Ashoka Samvachhar** even if the last two digits are 00. (That is, if the last three digits are 100, 300, 500, 700, 900, and 000, then this Samvachhar will not be an Ashoka Samvachhar.)
- 13. **In the Ashoka Samvachhar, the month of Chaitra will have 30 days instead of 29.**
- 14. The total number of days **from the Epoch** (start day of the Bodhi Samvachhar) to **any day** will be called **Bodhi Dinank**.

The calculation of the Ashoka Samvachhar will be as follows:

There will be 19 Ashoka Samvachhars every 100 years, and 2 Ashoka Samvachhars will be added every 500 years. That is,  $(\text{total Samvachhars} \div 5) - \text{total century} + (\text{total Samvachhars} \div 500) \times 2$ . This number will be the same as the total Ashoka Samvachhar. (Integers only)

The concept of Bodhi Dinank is similar to the Julian day number in global temporal chronology. Julian day number is the number of days from

January 1, 4713 BC, to the desired Christian date. Bodhi Dinank is the number of days from April 18, 516 BC, to the desired day.

The Bodhi Dinank (Number) for any date in any Bodhi Samvachhar is very useful for us. It is also used to find out the week day (day) of any Bodhi Samvachhar date.

Any normal Samvachhar has 354 days. A normal Ashoka Samvachhar has 355 days. If the Samvachhar has Maitreya month, then that Samvachhar has 384 days. If the Ashoka Samvachhar has Maitreya month, then that Samvachhar has 385 days.

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## Calculating the (Starting Day) Epoch of Bodhi Samvachhar

In the previous chapters, we saw that the Buddha's Mahaparinirvana occurred in 516 BCE. We have seen this with more than adequate evidences. If the full moon day of Vaisakha is determined this year, we can begin the Bodhi Samvachhar from the first day of this year. Therefore, we calculate and determine the full moon day of Vaisakha in 516 BCE.

According to NASA, a lunar eclipse occurred on May 5, 2023 C.E. (Christian Era)

Vaisakh Purnima is Friday, May 5, 2023, C.E.

According to Christian calendar rules...

Total years to calculate...  $2023 + 515 = 2538$

Total days  $2538 \times 365 = 926370 + \text{leap days}$

Leap days  $2538 \div 4 = 634.5$

Three century years (1700, 1800, 1900)  $(-)$  3 days (century year)

Gregorian revision of 1582 AD skipped  $(-)$  10 days.

$926370 + 634.5 - 13 = 926991.5$  (926991)

According to the Bodhi Samvachhar rule...

$2538 \text{ years} = 2538 \div 19 = 133 \text{ Siddhārtha cycles} + 11 \text{ years}$

$= 6936 \times 133 + 11 \times 354 + 120$  (4 Maitreya months)

+ Ashoka Samvachhar days

Ashoka Samvachhar days  $= (2538 \div 5) - 25 + (2538 \div 500) \times 2$   
 $= 492.6$

$(6936 \times 133) + (354 \times 11) + (120) + (492.6)$

$922488 + 3894 + 120 + 492.6 = 926994.6$  (=926995)

$(926994.6 - 926991.5 = 3.1)$

There is a difference of about 3 days between these two calculated values. This means that Vaishakh Purnima occurred 3 days before May 5, 516 BCE, i.e....

**Vaishakh Purnima was on May 2, 516 BCE.**

In between May 5, 2023 CE and May 2, 516 BCE is 926995. This is divided by 7 (days of the week) ( $926995 \div 7 = 132427.71428$ ), meaning there are 132427 weeks with 5 days more. Therefore, this is 5 days prior to Friday, i.e., **Sunday**.

Furthermore, the day of the week on the full moon and on the first day of the month (the first tithi) is the same. So, if this is the first day of the month of Vaisakha, the beginning day (Epoch) of the Bodhi Samvachhar, **Sunday, 1 (Tej Prathama), Vaisakha Bodhi Samvachhar 0001**.

According to Christian chronology, this is **Sunday, April 18, 516 BCE**.

The duration of this day until the Vaishakh Purnima of 2023 is  
 $926995 + 14$  (1<sup>st</sup> to 15<sup>th</sup> of Vaishakh Month) = 927009

We will call this number **927009** is the **Bodhi Dinank** of **May 5, 2023 CE**.

The duration of days from the Bodhi Samvachhar Epoch Day until any day is called the "**Bodhi Dinank**". Using the Bodhi Dinank number, it will be easy to calculate the day's day of week and its Bodhi Samvachhar Tithi. We will look at this in more detail in the next few pages.

Let us compare this result to NASA's lunar eclipse list.

There was a lunar eclipse on March 3, 516 BC, so it was a full moon.

There was a lunar eclipse on August 27, 516 BC, so it was a full moon.

So, calculating between these full moon dates...

In 516 BC... March 3,

30 days later April 2,

**30 days later May 2,**

29 days later May 31,

30 days later June 30,

29 days later July 29, and

29 days later August 27 are the full moon dates.

(This is just an adjustment for the 29 and 30 days months, for 29.53 days.)

**Special Note:** NASA gives the dates of lunar eclipses until October 1582 AD using the Julian system and thereafter using the Gregorian system.

We now calculate the day of **Buddha's enlightenment**.

Buddha was 35 years old when he attained enlightenment, and his Mahaparinirvana occurred after he was 80 years old. There is a difference of 45 years between these two events. Based on Emperor Ashoka's inscriptions, Buddha's Mahaparinirvana is dated to 516 BCE. Based on this, Buddha's enlightenment would be 561 BCE.

To calculate Vaishakh Purnima 561 BCE...

According to Christian Era calendar rules...

Total years to calculate...  $2023 + 560 = 2583$

Three centuries (1700, 1800, 1900) (–) 3 days

Gregorian revision made in 1582 AD, correction (–) 10 days

Total days =  $2583 \times 365 + \text{leap days}$

$$= 942795 + (2583/4) - 13$$

$$= 942795 + 645.75 - 13$$

$$= \mathbf{943427.75 \text{ days}}$$

According to the Bodhi Samvachara rule...

2583 years =  $2583/19 = 135$  Siddhārtha cycles + 18 years

$$= 6936 \times 135 + 18 \times 354 + 180 \text{ (6 extra months)} + \text{Ashoka}$$

Samvachar days

Ashoka Samvachar days =  $2583 \div 5 = 516.6$  | 1 Ashoka Samvachar day

| every 5 years

$$- 25 \text{ (century years)} + 10 \text{ (2 days every 500 years)}$$

$$= 501.6$$

2583 years =  $936360 + 6372 + 180 + 501.6$

$$= \mathbf{943413.6 \text{ days (943414)}}$$

There is a difference of about 13 days between these two calculations.

This means that Vaishakh Purnima was 13 days after May 5, 561 BCE.

That means Vaishakh Purnima was on May 18, 561 BCE.

If we convert this period of 943414 days into weeks...

$(94308 \div 7 = 134773.43)$  i.e. 134773 weeks + 3 days.

This means that this date is 3 weekdays before Friday, May 5, 2023, so it is **Tuesday, May 18, 561 BCE**.

According to Bodhi Samvachara, this day is,

**Tuesday, Vaishakh Purnima (-45) Bodhi Samvachhar**, as this is 45 years before Mahaparinirvana. This will be called **Sambodhi Diwas**.

Let us compare this result with NASA's lunar eclipse list.

February 20, 561 BC, was a lunar eclipse, so it was a full moon.

August 15, 561 BC, was a lunar eclipse, so it was a full moon.

So, calculating between these two full moon dates...

February 20, 561 BC,

29 days later, March 21,

29 days later, April 19,

30 days later, **May 18**,

29 days later, June 17,

30 days later, July 16, and

29 days later, August 15,

these are the full moon dates.

We can determine the day week of any Bodhi Samvachhar tithi according to our Bodhi calendar. We calculate the total number of days (Bodhi Dinank) from the start day of the Bodhi Samvachhar. Divide this by 7. Then refer following table to get week day.

Remainder	0	1	2	3	4	5	6
Week Day	Sat	Sun	Mon	Tue	Wed	Thu	Fri

The remainder after dividing by 7 determines the day of the week according to this table.

To prepare a calendar for the entire year according to the Bodhi Samvachhar, we need to know the day of the Vaisakha Shukla Prathama of that Samvachhar. We also need to know whether this year has Maitreya month and whether this year's Chaitra month has an extra day.

Here, we have also determined the day of Vaishakh Purnima in 2023 AD according to the Bodhi Samvachhar. Fifteen days before this, on Friday, April 21, 2023 (AD), Vaishakh Shuddha Prathama, Bodhi Samvachhar 2539, or Bodhi New Year, will fall. The last digit of this year's number is not 0 or 5, so Chaitra will have 29 days this year. Also, Its last three digits are not 200, 400, 600, or 800, so Chaitra will have 29 days this year. Now, we need to determine whether there is an extra month in this year. We need to determine how many Siddhartha cycles and how many months have passed since the beginning of our Bodhi Samvachhar 2538 until the end of that month. We've already determined this, but let's review the process here. In the year 2538,  $2538 / 19 = 133.578947368$ , i.e., 133 Siddhartha cycles have passed, and the current Siddhartha cycle is the 134<sup>th</sup>.  $0.578947368 \times 19 = 11$  years have passed in this current Siddhartha cycle. This year 2539 is the 12<sup>th</sup> year of the Siddhartha cycle. The beginning of Bodhi year 2539, i.e., Vaisakha 2539, is the fourth month in the fifth Maitreya pillar. Now, with this information, calendars can be prepared for all the 12 months starting from the month of Vaisakha 2539 onwards. The next Bodhi Samvachhar 2040 ends with a digit 0, so the month of Chaitra will have 30 days. The calendar for 2040 will be prepared with this in mind.

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## Bodhi Samvachhar Synchronization with the Global Calendar (Christian Calendar)

When we create a calendar based on Bodhi Samvachhar, it will be necessary to synchronize it with the global calendar. Today, the Christian calendar is accepted for global calendar. To synchronise this, we will calculate the number of days since Bodhi Samvachhar until the starting day of the Christian calendar, i.e., January 1, 0001.

In fact, the Christian calendar we follow today is the Gregorian calendar, and it has been in use since October 1582. Until the 4th of this month, which was Thursday, the old Christian calendar, the Julian calendar, was in effect. The following day, Friday, was adopted as October 15th instead of October 5th.

The Bodhi Samvachhar year begins on Sunday, 1st (Teja Prathama) Vaisakha Bodhi Samvachhar 0001. According to Christian calendar, this is Sunday, April 18, 516 BCE. We have already seen this in previous pages.

Now we need to calculate the number of days that have passed from April 18, 516 BCE, to January 1, 0001, Christian calendar.

From April 18th to the end of the month....

April ...	13 days (including April 18th)
May...	31 days
June...	30 days
July...	31 days
August...	31 days
September...	30 days
October...	31 days
November...	30 days
And December...	31 days
<b>Total...</b>	<b>258 days</b>



Here the year 515 BCE begins, meaning 515 solar years from here will be January 1, 0001.

In these 515 years...

$$(365 \times 515) = 187975$$

More leap days...

$$+ (516 \div 4) = 129$$

Total = **188104** days.

(To calculate leap days, we have taken 516 solar years instead of 515, because the year 0001 BC is a leap year.)

From April 17, 516 BC, to January 1, 0001...

$$188104 + 258 = \mathbf{188362 \text{ days.}}$$

Therefore, the period between the beginning of the Bodhi Samvachhar and the beginning of the Christian calendar is 188362 <sup>(A)</sup> days. This is 26908 weeks plus 6 days. ( $188362 \div 7 = 26908 \frac{6}{7}$ ). That is, January 1, 0001, is 6 days ahead of April 17, 516 BC, i.e., a Saturday.

(See the weekday table on earlier page.)

Now let's confirm this further.

In 2023 years until January 1, 2024...

$$2023 \times 365 = 738395$$

$$(+ ) 2023 \div 4 = 505 (\div 4 \text{ leap years})$$

$$(- ) 10 \text{ Gregorian year corrections}$$

$$(- ) 3 \text{ century years (1700, 1800, 1900)} \\ = 738887 \text{ days.}$$

This gives ( $738887 \div 7 = 105555 \text{ weeks} + 2 \text{ days}$ ).

This proves that the weekday of January 1, 2024, is two days ahead of the weekday of January 1, 0001 (Saturday), i.e., Monday. This is absolutely correct according to the calendar of 2024.

The total number of days of any Christian date from January 1, 0001, can be easily calculated according to the Julian-Gregorian calendar. Adding **188362** <sup>(A)</sup> days to this number of days gives the number of days from the beginning of Bodhi Samvachhar. (This is nothing but Bodhi Dinank.) Now, if this period is calculated according to the Bodhi Samvachhar rules, we will get the Bodhi Samvachhar tithi for this day. The need is to understand the rules of Bodhi Samvachhar calculation properly and use them. I explain the method of calculation in next text.

For example, we calculate for the Bodhi Samvachhar date of April 17, 2024. In Christian Era 2024 (until the beginning of month of Vaisakha / approximately April), there are  $2024 + 516 = 2540$  Bodhi Samvachhars.

In 2023 years until January 1, 2024...

$2023 \times 365 = 738,395$  total days.

Add leap days to this.

(+)  $2023 \div 4 = 505$  ( $\div 4$  leap days)

(-) 10 Gregorian year corrections

(-) 3 century years (1700, 1800, 1900)

= 738,887 days.

From here until April 17th...

in January      31 days

in February    29 days (2024 is a leap year.)

in March        31 days and...

in April        17 days {We need the date of the 17th of April. <sup>(k)</sup>}

**Total            108 days**

That means there are  $738887 + 108 = 738995$  days until April 17th, 2024.

Adding 188362 BCE days to this gives a total of 927357 Bodhi Samvachhar days. So, this number will be **927357**<sup>(A)</sup>. (This number the Bodhi Dinank of April 17, 2024)

According to the 2540 Bodhi Samvachhar...

$2540 \div 19 = 133$  Siddhartha cycles, plus 11 years.

One Siddhartha cycle has 6936 days (excluding the extra days of the Ashoka Samvachhar). Therefore, 133 Siddhartha cycles have...

$133 \times 6936 = \mathbf{922488 \text{ days}}$ . (This is  $133 \times 19 = 2527$  years.)

Subtracting this year from the total year 2539 leaves 11 years of the incomplete Siddhartha cycle. In 2538 years...

$2538 \div 5 = 507.2$  years will have the last digits 0 or 5.

$2538 \div 100 = 25$  years will have the last two digits 00. And...

$2538 \div 500 \times 2 = 10$  years will have the last three digits 200, 400, 600, or 800.

That is, there will be  $507.2 - 25 + 10 = 492$  Ashoka Samvachars.

In a total period of 2538 years (+ 1 incomplete year), there are...

$922488 + 492 = \mathbf{922980 \text{ days}}$  plus the days of the incomplete Siddhartha Cycle.

The duration of this incomplete Siddhartha cycle that remains until our desired date is...

The duration of the incomplete Siddhartha cycle is  $927357^{(A)} - 922980 = 4377$  days.

If we subtract the days of the Maitreya Column last row, which are nearest small number for days of Incomplete Siddharth Cycle, we will be left with the days of the remaining days, in the final incomplete Maitreya Column.

Column	1	2	3	4	5	6	7
No of Days	1004	1978	2981	3955	4959	5933	6936

Maitreya Pillar (4)  $4377 - 3955 = 0422$  remaining days.

These remaining days are for the 5th Maitreya Column, which includes the first two months of Phalguna and Chaitra (59 days). Subtracting 59 days from these,  $422 - 59 = 363$  days remains. This number of days is less than the 384 days of the Samvachar (5<sup>th</sup> Column, first Year) including the Maitreya month.  $384 - 363 = 21$  days.

From this it is understood that this is 21 days less than the last year of our calculation period. And this is less than 1 month. Hence, this is 21 days less than the 29 days of Chaitra, the last month of the year.

That is, this day is  $29 - 21 = 8^{\text{th}}$  day of Chaitra. Because this is less than 15 days of the first fortnight of the month, it is **Tej Paksha**. The 8<sup>th</sup> day is called **Ashtami**. That is, this is Tej Ashtami (Tej 8) of Chaitra month. This date is **Tej Ashtami, Chaitra Bodhi Samvachhar 2540**. This day is the birth anniversary of Emperor Ashoka. The number  $927357^{(A)}$ , which is the Bodhi Dinank, divided by weeks gives 132479.4286, which is 132479 weeks plus 3 days. The fourth day after the Bodhi Samvachhar start day, Sunday, is **Wednesday**, and this is the correct day for **April 17, 2024**.

On the earlier page, there is a small table of days, which contains the same elements. Seven days are written in the seven boxes from 0 to 6, and seven days in the corresponding boxes below. The day corresponding to the number 3 is Wednesday. Using this table and the Bodhi date, we can easily find the day of the desired day. We did this calculation with raw method.

Let us understand the **refined method** in detail step by step in the next chapter.

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## Conversion of the Common Era Date to the Bodhi Samvachhar Tithi (Step-by-Step Refined Method)

Conversion of the Common Era Date to the Bodhi Samvachhar Tithi and Month is an essential process. Without this, the process of understanding the Bodhi Samvachhar is incomplete. Therefore, this lesson is written for this purpose.

This process has two main parts. The first part will be calculating the **Bodhi Dinank** from the Common Era Date. We already know that the Bodhi Dinank is the total number of days from the beginning of the Bodhi Samvachhar to the desired date.

Now let's learn the practical method of calculating it. To do this, we calculate the period from January 1, 516 BCE, to the last day of the Christian year before the desired date, and subtract the days from January 1, 516 BCE to April 17, 516 BCE. Then, we add the Leap days from January 1, 516 BCE, to the desired date.

Let us understand the computation of this method step by step.

### First Computation

1) Add the Christian Era Year of the desired date + 515. (Add 516 if the desired date is before Christ.) This will be our estimated Bodhi Samvachhar year. Multiply it by 365 and divide it by 4. The number obtained by multiplying will be equal to the number of days in these years (BD1), and the integer obtained by dividing by 4 will be equal to the number of leap years elapsed in this period (LipDys).

2) Now subtract 107 from this number. (There are 107 days from January 1, 516 BC, to April 17, 516 BC.) Add the number of leap years to this. (BD1 – 107 + LipDys)

3) The Julian calendar was reformed in October 1582 AD. Under this Gregorian reform, the next day after October 4, 1582, was considered

October 15th. That is, 10 days were subtracted from the interval. Therefore, if our desired date is after October 15, 1582, we subtract 10 days for the Gregorian reform.

4) For the Gregorian reform for our desired date, if it is ...

a) in the Christian year from 1701 to 1799, then 1 day.

b) in the Christian year from 1801 to 1899, then 2 days.

c) in the Christian year from 1901 to 1999, then 3 days.

d) in the Christian year from 2101 to 2199, then 4 days.

This is to be subtracted from **LipDays** calculated by dividing Total CE Year by 4.

Because the centuries 1700, 1800, 1900, and 2100 are not leap years. However, the Christian Era 1600 and 2000 centuries are leap years.

5) Add the days (RD) from January 1, CE Year of the desired date to the earlier calculation days (BD1) ....  $(BD1 - 107 + \text{LipDys} - \text{Gre.Reform} + \text{RD})$

The number obtained from this calculation is the Bodhi Dinank (BS) of the desired Christian Era date. The remainder after dividing the Bodhi Dinank by 7 is used to obtain the day of the desired date using the following table.

Remainder	0	1	2	3	4	5	6
Week Day	Sat	Sun	Mon	Tue	Wed	Thu	Fri

## Second Computation

The first Computation has given us the Bodhi Dinank for our desired (CE) date. We will calculate the Bodhi Samvachhar number from this number. Then, we will calculate how many Ashoka Samvachhars have passed since this Period of Bodhi Samvachhar. Subtracting the Ashoka Samvachhar number from the Bodhi Dinank number, will get the Number of days (as per 29.5 days per lunar months), corresponding to the number of days in the elapsed lunar months. From this number, we will subtract the days of the full Maitreya Stambha using the Siddhartha Chakra table. The remaining number will be the number of days of the incomplete Maitreya Stambha. From this number, we will subtract the number of days of the remaining full lunar months after the full Maitreya Stambha. The remaining number is, of course, the day number of the Bodhi Samvachhar month for our desired (CE) date. We will convert this to the date and lunar month according to the Bodhi Samvachhar rules. This will be our desired Bodhi Samvachhar date, lunar month, and Bodhi Samvachhar (year).

Let's understand the calculation of this method step by step.

1) Divide the Bodhi date number by 365.2425. The integer (+1) of this number will be our estimated Bodhi Samvachhar (BSYR).

2) Subtract the Ashoka Samvachhar days from the Bodhi date number (BSYR).

$(BSYR \div 5) - (BSYR \div 100) + (BSYR \div 500) \times 2$ . This gives us the Ashoka Samvachhar days. Here, only the integer number needs to be taken when dividing.

3) Divide the number obtained after subtracting the Ashoka Samvachhar days from the Bodhi date by 6936. The remainder after division will definitely be less than 6936.

4) In our Siddhartha Chakra table, the last row contains a number corresponding to each column. This number represents the total number of days until the end of that column of the Siddhartha Chakra. (See the table below.)

Column	1	2	3	4	5	6	7
No of Days	1004	1978	2981	3955	4959	5933	6936

Find the nearest small number to the remainder from the previous calculation and subtract this number from the remainder. Now, we need to perform the next calculation using the number of days, of the lunar month in the next column.

5) If the number of days, of the first lunar month in the column is greater than the remainder, subtract that number from the remainder. Check the new remainder with the number of days in the next lunar month.

6) If the number of days of the consecutive lunar month is greater than the remainder, subtract it from the remainder. Check the new remainder with the number of days the next lunar month.

7) Repeat this process until the remainder is less than the number of days in the next lunar month.

8) The lunar month whose number of days is less than the lunar month of the desired lunar date is the lunar month of the desired date, and the remainder is the sequential date. If this number is 15 or less than 15, then that number will be the tithi and the paksha will be the **Tej Paksha**. If the remainder is greater than 15, then subtract 15 from it. The remainder will be the tithi and the paksha will be the **Tama Paksha**.

(4) (5) (6) (7) We can also perform this process using the 19-column Siddhartha Chakra table. The last row of this table also gives the total number of days up to the end of that column. The difference is that here there are 19 columns and 13 rows and the first table has 7 columns and 34 rows.



Based on this process, I have written a computer program for Windows (32-Bit) & Windows (64-Bit) and tested it. This Computer Programme has successfully tested the correctness of the calculation process written above.

Now a **web app** is also available for this calculation, the link of which is available on my web page.

<https://piyadassiasok.com> and the page (मेरा संशोधन)

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## New Conceptual Terms for the Bodhi Samvachhar System

**Bodhi Tithi** - The number of days counted from the Bodhi Samvachhar start day.

**Siddhartha Chakra** - A period of 19 solar years. It has a total of 235 lunar months.

**Maitreya Maas** - An extra month for convenient planning of 19 solar years and 235 lunar months. It occurs alternately after 32 or 33 lunar months, 7 times in a Siddhartha Cycle.

**Teja Paksha** - The period from the new moon to the full moon.

**Tama Paksha** - The period from the full moon to the new moon.

**Bodhi Tithi** - The number of days of the lunar phases in the two phases (Teja and Tama Paksha) of a lunar month, calculated according to the Bodhi Samvachhar system, and the sequential numerical names of these days.

**Samvachhar** - The period of the lunar Months from Vaisakha to Chaitra. This period is 12 lunar months, but if Maitreya month falls in between, it becomes 13 lunar months. In modern parlance, this is called Samvatsar.

The remainder after dividing the Bodhi date by 29.5305879 (the scientific calculation of the lunar month's days) is the natural lunar phase number or the moon's age in a lunar month, i.e., **Chandrayu**. If this number is greater than 15, then subtract 15 from it (otherwise, without subtracting 15), and the number obtained is the natural lunar date. Bodhi date and natural lunar date often do not match because Bodhi date is calculated according to the rules of the Bodhi Samvachhara system. This calculation is not a natural calculation, but an approximation.

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## **Variation in the Length of the Lunar Month**

The length of the lunar cycle (from one new moon to the next) is not fixed. It varies throughout the year. The longest lunar cycles typically occur during the Northern Hemisphere winter (approximately December–January). The shortest lunar cycles typically occur during the Northern Hemisphere summer (approximately June–July). The average lunar month is approximately 29.53058 days, but it can vary from approximately 29.27 days to 29.83 days, a difference of more than 13 hours. The lunar months closest to the average value of 29.53058 days occur in spring (approximately March–April) and autumn (approximately October–November).

### **Why does this happen?**

Why does the length of the lunar month vary? The figure of 29.53058 days is only an average. The actual time from one new moon to the next (a lunar month) can vary from approximately 29.27 days to 29.83 days. This variation is due to the elliptical orbits of both the Moon around the Earth and the Earth around the Sun, but the primary cause of this annual pattern is the Earth's elliptical orbit around the Sun.

### **Longest Lunar Month (Northern Winter)**

In early January, the Earth is at its closest point to the Sun – perihelion. At this time, the Earth is rotating at its fastest speed in its orbit. Because the Earth is rotating faster, the Moon has to travel "further" in its orbit to "match" and align with the Sun for the next new moon to begin. This results in a longer lunar month.

## **Shortest Lunar Month (Northern Summer)**

In early July, the Earth is at its farthest point from the Sun – aphelion. Here, the Earth is rotating at its slowest speed in its orbit. Because the Earth is moving slower, the Moon has to travel "less" to keep up with Earth. This results in a shorter lunar month.

## **"Average" Lunar Month**

Since the lunar month is longest in December/January and shortest in June/July, its length should approach the average value at points in between.

These "in-between" periods, when the Earth's orbital speed is closest to its average speed, occur around the equinoxes. This is why lunar months beginning in March-April and October-November have a duration very close to the average of 29.530588 days.

The Moon's own elliptical orbit (its maximum and minimum distance from Earth) also adds another layer of variation from month to month, but the main seasonal trend from longest to shortest lunar month is determined by Earth's orbit around the Sun.

This variation in the length of the lunar month complicates lunisolar calendaring. This is why the dates of our Bodhi-Samvara system do not match those of the traditional Indian chronology. However, if the sole purpose is chronology, it is suitable.





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