

# **Historicity and the most probable time line of the Ramayana**

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## **ABSTRACT**

The epic Ramayana has spreaded light to many untold history of the ancient India. The outlook of the Ramayana emphasizes on two separate but related scenario. Forest exile of Rama is one aspect of the content and another aspect is abduction of Sitaji followed by war to rescue her. Many versions of the Ramayana are on the card expressing different views and different opinions. Many scholars have tried to extract the historicity existed behind the curtain and have enlightened the interested mass of people with their best effort. Many time lines are also manifested. The limiting range of time lines published until now is above 2500 years extending from 5000 BCE to 7500 BCE. This diversity does not conclude any historical date for reference. There is always a dilemma to believe whether the epics of India contain any historicity or they are simply based on some myths or on some divine formula. In this work we have investigated mainly the historicity that might be existed in real scenario and a probable time line to be in agreement with the history. We have computed the probable dates of most important incidents related with the epic using astronomical software Stellarium. We have also tried to establish a link in connection with the time lines of two epics namely the Ramayana and the Mahabharata. The date of birth of Shri Rama is calculated by us as 14<sup>th</sup> February 3348 BCE according to Julian calender and the great war between Shri Rama and the demon king Ravana is calculated as 3308BCE. We have also introduced the Yuga divisions based on precision of earth and also classified the family tree of lord Rama, his consort Sita and the arch rival the great demon king Ravana obliging relevant Puranas.

## **1. INTRODUCTION**

The Ramayana is one of the two epics that India had ever emerged. Before going to the historicity of the Ramayana let us spend few words regarding the authenticity of the epic. The oldest version of the Ramayana is generally recognized to be the Sanskrit version attributed to the sage Narada, the original Ramayana composed by sage Valmiki. A 6<sup>th</sup> century CE sanskrit version of the Ramayana was discovered inside a Purana at Sanskrit library in Kolkata. This version is believed to be the oldest written document of the Ramayana. After that at least 300 versions of the Ramayana written in different languages and by different writers were available till date. But no trace of the version attributed to the sage Narada was found ever. Different research works had tried to establish that the period of Lord Rama was somewhere in between 5000 BCE and 7500 BCE. Even specific date of birth of Lord Rama has been emerged out in several research papers with an approximate separation of 2000 years. So, whatever might be the actual date of birth of Lord Rama, the earliest available date till now lies around 5000 BCE. It is believed that sage Valmiki was contemporary to Lord Rama as he uttered the story of Lord Rama to Luv and Kush, the twin descendant of Lord Rama. Valmiki also composed the epic in Classical Sanskrit which was only available after hard work of Panini when he standardized Vedic Sanskrit in Classical Sanskrit around 600 BCE to 500 BCE. So, if Valmiki, the contemporary to Lord Rama and Valmiki, the composer of the epic Ramayana in Classical Sanskrit are the same and unique person then he had to survive for at least 4500 years or more which seems to be biologically absurd. In this situation two options may be come out. Firstly the period of Lord Rama dynasty lies between 600 BCE and 500 BCE or one century plus minus. So, the Ramayana scenario must have to be occurred after the period of the Mahabharata. But in the epic Mahabharata several references of the

Ramayana did exist. Thus the Mahabharata scenario must have occurred after the Ramayana. Second option challenges the veracity of authorship of the epic Ramayana. The composition of the epic Ramayana which is now available with the tag Valmiki was not composed by Valmiki himself. The original textual version of the epic Ramayana was written by one or may be by several authors which was continued for a comprehensive period. As the original story or history whatever was told by Maharshi Valmiki and that was carried through generation after generation orally by disciples, the original composer or composers had used the name of Maharshi Valmiki to tribute honor to him. Scholars like R.G.Bhandarkar and D.R.Bhandarkar have predicted that the Ramayana was composed not earlier than 4<sup>th</sup> century BCE. while V.Gopala Iyengar in his work “ A Concise History of Classical Sanskrit Literature (p.14) “ has written that the original portion (Part 2 to Part 6) of the Ramayana was composed clearly before 500 BCE, where as additions (which now scholars have identified as Bala Kanda and Uttara Kanda) must have been made some time about 200 BCE.

## **2. DEBATE FOR ORIGINALITY OF BALA KANDA AND UTTARA KANDA**

Nowadays it is believed by the scholars that Bala kanda and Uttara kanda did not exist in the original Ramayana text. Later these two kandas were extrapolated. For such extrapolation so many reasons may be mentioned . A few of them can be summarized as follows:

1. The contents of these two kandas do not agree with the original content of the epic. The content of the epic Ramayana deals with the history of Lord Rama as brave hero and as human being. In Bal kanda and in Uttara kanda, Rama is pictured as an incarnation of Lord Vishnu. Lord Rama might possess some extra quality which an ordinary human being does not possess. But after all he was human and his human character was narrated in the epic throughout the story from Aranyakanda to Yudhyakanda without putting any special reference related to an incarnation nature. In Balkanda and in Uttarakanda we find something different which has stated detailing of some Pauranic character irrelevant with the original story along with Lord Rama to be appeared as an incarnation of God Vishnu. In Mahabharata Lord Krishna who was also not an ordinary human being and who was expected to be an incarnation of Vishnu was pictured as human person with normal sufferings and grief, no separate parva was used by Vyasdev to highlight His incarnation feature. In fact this procedure should have to be maintained in painting such golden art. So it could be expected with confidence that Balkanda and Uttarakanda were not orally composed by Valmiki, they were extrapolated latter.
2. The Bala kanda describes the story of Rishyasringa, Vishwamitra etc which are not at all directly related with the story of Rama. Though Rishyasringa was portrayed in Balakanda as the husband of Shanta, the daughter of king Dasharatha, yet it needs further classification to state the fact. In Uttarakanda it is written that Lord Rama had rejected his pregnant wife and had sent her to the forest. This does not go with the heroic person like Rama. It is also mentioned there that Lord Rama had ruled about 11000 years and had finally emerged in the river Saraju. Human life span of 11000 years is simply absurd. It might be so that the calculation was not done properly. The programmer was confused between day and year. Lord Rama might rule Ayodhya kingdom for 11000 days equivalent to roughly 31 years. We have calculated that he was throned at the age of nearly 40 years. So his total life span was tentatively 70 years. This kanda unnecessarily narrated lot of characters those were not related with Rama or with his family. So they are expected to be extrapolated.
3. In Balkanda Lakshmana was sketched as a married person but in Aranyakanda when Shurpanakha wanted to marry Rama then Rama rejected her proposal and said that she might marry Lakshman who was still a bachelor. These two statements are contradictory. If Lakshmana was married then why he left his wife at Ayodhya when he had accompanied Rama during forest exile. Was it a simple devotion to Rama? It becomes very difficult to be accepted. Another option is there that Lord Rama lied before Shurpanakha to protect himself from ogres Shurpanakha. Is it acceptable ? Does it go with a character

like Rama who was the incarnation of Sri Vishnu? Answer is simple. It does not go with Rama and Rama did not lie before Shurpanakha. Once again we believe that Balkanda was extrapolated in course of time to concrete the essence of the story.

4. In Balkanda we find that sage Narada has narrated the story of Lord Rama in conversation with Valmiki when Valmiki was in query of having the existence of a human being in the universe bearing some extraordinary qualities. This is stated in the 1<sup>st</sup> Sarga of Balkanda. In Sarga 4 it is stated that after coronation of Lord Rama, Valmiki had composed the epic Ramayana containing 24000 Slokas along with near about 500 Sargas. Lava and Kusha, the twin child of Lord Rama and mother Sita would carry the story of the Ramayana for publicity throughout the entire domain and would be finally recognized and would be accepted by Lord Rama as His own souls. Now question arises that who said this? Sage Narada or some other? We do not know. Even in Uttarakand we find that after being rejected by Lord Rama Sita took shelter in the ashrama of Valmiki where she gave birth of Lava and Kusha. So Valmiki is a character of the plot. It would not be any fault to write any story by anyone being involved in the scenario. But he or she should write in first person. In medieval drama or poetry the composer uses his or her name at the end of poem to disclose the identity. That is not done here. So we can opine that Balkanda and Uttarakanda has come in the scene as an extrapolation.

### **3. CORE STORY OF THE RAMAYANA:**

It is a great controversy whether Lord Rama did exist as human being or not in ancient India. Before arriving to a fruitful solution the core scenario of Rama's activities throughout the lifetime need to be explained. The male protagonist of the epic Ramayana was Lord Rama, the eldest son of king Dasharatha who was the 77<sup>th</sup> pedigree from Manu, the founder of human race. Dasharatha was the king of Koshala with capital Ayodhya. He had three princes Kaushalya, Kaikeyee and Sumitra along with four sons Rama (from Kaushalya) followed by Bharata (from Kaikeyee) and Lakshmana & Shatrughna (twin from Sumitra). From childhood Rama was brave and courageous. King Dasaratha had arranged the best training to be ensured to all his sons to acquire all qualities of a prince as well as to be a good human. Before reaching youth time Rama and Lakshmana accompanied the great sage Vishwamitra to protect him from the evil activities of demons like Maricha and Subahu. The said demons had disrupted the sacrificial sacred homage arranged by sage Vishwamitra by throwing flesh and blood. During his travel with Vishwamitra Rama had killed the ogres Tadaka. Vishwamitra was highly gratified with the death of Tadaka and had offered many weapons to Rama including divine missiles and weapon of Brahma known as Brahmastra for his future protection and for attacking enemies as and when required. After that Rama had killed demons Maricha and Subahu on spot giving a great relief to sage Vishwamitra. In course of time Vishwamitra informed Rama that he was invited by Videha king Janka with capital Mithila to join the sacred performance of Dhanus Jajna that was arranged for Swayamvara of his daughter Sita, the female protagonist of the epic. Vishwamitra had desired Rama to be present there. As a consequence Rama along with Lakshmana went Mithila and after breaking the bow of great Rudra called Haradhanu, Lord Rama had married princess Sita. It is stated in Balkanda of Valmiki Ramayana that in the same occasion Lakshmana, Bharata and Shatrughna also got married. Lakshmana married Urmila another daughter of king Janaka, Bharata married Mandavi and Shatrughna married Shrutakirti. Both Mandavi and Shrutakirti was told to be the daughters of Kushadhwaj who was the brother of Janaka. But these incidents need to be further clarified for confirmation of marriage ceremonies of Bharata and other twins Lakshmana and Shatrughna.

After completion of ritual rights Lord Rama returned to Ayodhya with his newly wedded wife Sita and lived in peace. In due course of time Rama had reached to his youth. When he was round about 25 or 26 years king Dasharatha desired of arranging a coronation ceremony to declare Rama to be the next king of Ayodhya. He discussed the matter with his courtier and got the approval unanimously. Finally

the date of coronation was fixed and Rama was informed. On the penultimate day of coronation an unwanted incident was happened. Kaikeyee, the mother of Bharata was provoked by her maid Manthara and forced king Dasharatha to cancel the coronation of Rama. Once Dasharatha was heavily injured during an encounter with demon in Dandak forest and then Kaikeyee saved his life by nursing with immense care. As a result king Dasharatha had offered two boons in favor of queen Kaikeyee and opted to be redeemed as and when she desired. At the stroke of this auspicious moment Kaikeyee played a foul game by opting the boons to be redeemed. She opted Bharata to be the next king of Ayodhya in one boon and Rama to be exiled to forest for fourteen years in another boon. Dasharatha was deeply shocked by hearing this desire of Kaikeyee and requested Kaikeyee several times to rethink the matter. As an irony of fate Kaikeyee was arrogant and stuck with her foul play. Knowing everything Rama had accepted the desire of his step mother and wanted his father to be truthful to his wife. This was Rama and this was his honesty. Rama prepared to leave Ayodhya and his beloved Sita and Lakshmana intended to accompany him throughout his forest journey. Rama requested them not to leave Ayodhya but he could not convince them to be restrained from exile. Finally in the evening Lord Rama left Ayodhya for exile in forest along with wife Sita and younger brother Lakshmana. All people in Ayodhya were spell bounded and were crying in unbearable grief and pain. At this sight king Dasharatha fell unconscious and took bed for ever.

Large crowd from Ayodhya were following the chariot of Lord Rama and were repetitively requesting Rama to go back to Ayodhya to take over the crown. Rama humbly advised the crowd to return to Ayodhya and to live in peace under the leadership of king Bharata. Rama was fully confident that Bharata would be definitely a noble and benevolent king to protect the people of Ayodhya. But the followers did not want to hear anything, they just wanted to follow their Lord. They followed him, right up to the bank of river Tamasa where the royal family spent their first night of exile along with Sumantra the charioteer minister of king Dasharatha. Rama tried to take some rest but he was restless with thought of the way of sending his followers to Ayodhya to live a normal life. He was sure that the accompanied large crowd would sacrifice their lives but would not leave Rama alone in exile. At the stroke of next dawn Rama realized that the crowd got asleep being tired and advised Sumantra to leave the place at once. Immediately they crossed the river Tamasa and reached the opposite bank when the followers were still asleep. Ultimately the followers also crossed Tamasa but without finding the trace of Rama and his family they had to return Ayodhya with tears.

On the other hand after crossing river Tamasa Rama with his family and Sumantra had traveled far in the forest. Crossing several streams they reached the bank of the river Ganges where Guha Nishad, the king of Nishad tribals lived. The territory was Shringverpur which still does exist in reality. Guha Nishad had cordially welcome the royal family and requested Rama to stay there for the entire period of exile along with family as a ruler of Shringverpur territory. But Rama humbly refused the proposal as he left Ayodhya to fulfil the vow of living in forest as a forest dweller. At the hospitality of Guha Nishad Rama stayed there for one night. Next day Rama ordered Sumantra to live them alone in forest. Without getting no other way Sumantra also had started for Ayodhya with broken heart and had looked Rama to cross the river Ganges with Sita and Lakshmana.

In the meanwhile king Dasharatha being deeply shocked at the exile of his beloved ones passed away with pain. At the time of his passing away none of his sons was present there. Rama and Lakshmana were in exile and Bharata the would be king was at Kekaya along with his brother Shatrughna. Sage Vaishista advised the remaining family members and relatives to make arrangement for immediate return of Bharata and Shatrughna to Ayodhya. Within a hurry the messenger left Ayodhya and reached Kekaya where Bharata and Shatrughna stayed. Getting sudden news from the messenger they started for Ayodhya and moved as fast as possible but could not reach Ayodhya before continuous day night journey for seven consecutive days. Reaching Ayodhya Bharat heard everything including the foul game played by his mother Kaikeyee. He denied to accept the kingship of Ayodhya and blamed his



mother for such mess. Then he completed the ritual rules for his departed father in absence of his elder brother Rama. After the over of mourn period for fifteen days Bharata wanted to meet Rama with the intention of his returning to Ayodhya. He consulted with the courtier and advised them to make proper arrangement so that he could meet Rama as early as possible. Finally he requested Sumantra who was expected to be the last witness of Rama's whereabouts to go with him.

During this course of time Rama reached Chitrakoot and wanted to settle there. On the way to Chitrakoot hill they halted for one night at the ashram of sage Bharadwaj near Trijbeni sangam at Prayag. After one night halt the trio started for Chitrakoot following the root as advised by sage Bharadwaj. They crossed Yamuna and proceeded western ward where they found the ever nonperishable Akshayabata as told by sage Bharadwaj. Sita prayed to the banyan tree for their safe return to Ayodhya after completion of 14 years exile in forest. They took some rest there and further proceeded in the forest and finally reached Chitrakoot. Reaching Chitrakoot they entered in the hermitage of sage Valmiki where they were cordially welcome. Seeing the scenic beauty of Chitrakoot lord Rama requested Lakshmana to built a cottage for their shelter in the desolate forest. Near the holy hermitage of sage Valmiki Lakshmana built a charming cottage with woods and leaves in which the trio started their isolated exile journey.

As stated above Bharata prepared to meet Rama as early as possible. He and Shatrughna started from Ayodhya along with their mothers. A large troop of the people of Ayodhya had followed them. After traveling a large distance they reached the bank of the holy Ganges at Shringverpur which was ruled by Nishadraj Guh as mentioned earlier. Watching a large gathering Guh suspected that Bharata might be harmful for Rama and his company in exile. As he was very loyal to Rama Nishadraj did not allow Bharata to cross the river with his troop. But as a matter of fact that Guh was ultimately confirmed about the actual intention of Bharata after meeting with him. He then greeted Bharata and advised him to go to the ashram of sage Bharadwaj with his troop where he could find the way out to meet Rama. Immediately they proceeded towards Prayag and met hermit Bharadwaj who informed that Rama with Lakshmana and Sita had gone to Chitrakoot. Without wasting any time further Bharata with his military and family members along with other associates of the royal family almost rushed to Chitrakoot. On reaching Chitrakoot Bharat left his troop beyond the forest locality and moved alone in the forest in search of Rama and his company. Wives of King Dasharatha followed him along with close persons related to the royal family. After spending some anxious period Bharata finally found Rama and some emotional moments were exchanged between the two. Rama came to know that king Daharatha was no more and he became perplexed. Bharata desired of bringing his elder back to Ayodhya. He requested lord Rama to take over the charge of Ayodhya as he was the fittest of all four sons of king Dasharatha and Ayodhya would be safe at his hand. Rama humbly refused the request of his dear brother Bharata by saying that it would break the promise of their deceased father and he couldn't do that. Whatever might be the reason behind his exile he could be always loyal to his father. He ordered Bharata to return to Ayodhya with their mothers and to rule Ayodhya as a dignified ruler. So, Bharata was compelled to return with broken heart but had decided not to stay inside the locality of the royal family. He decided to live as a forest dweller outside the town area for fourteen years till the return of lord Rama. He built a hut at Nandigram well outside proper Ayodhya and began to rule Ayodhya by the name of lord Rama keeping a pair of sandal which he brought from Rama on his head during their last emotional meeting on his legitimate throne.

After a few days stay at Chitrakoot Rama did not find any more charm to stay there. Two reasons were there behind his such mental change. One he suspected that Bharat might go there to bring him back to Ayodhya. If he could go out of sight to a far away then Bharata could not find his trace. Secondly the hermits residing there wanted to leave Chitrakoot as they were afraid of the demons leaded by demon Khar, the brother of demon king Ravana. Ravana employed Khar with the intension of disturbing the sages residing at Chitrakoot. If necessary the demon groups could kill the innocent hermits of Chitrakoot. As a consequence Rama moved in the dense forest through the territory of Dandak. At

Dandak forest Rama with his family had covered a large distance passing through Madhya Pradesh, Chhatisgarh, Orissa and Maharastra over a period of more than 10 years. During that long journey he had to struggle a lot to protect himself and his family. Often he was disturbed and threatened by the demons but fortunately the almighty Rama had uprooted all evil sources facing conflict in one to one encounter. In the process he got enormous support from many pious persons residing in the forest for long long period like Atrimuni, Anusua, sage Sharabhanga, sage Sutikhna, sage Agastya and so on. He got divine weapon from Agastya as a gift for promising to protect sages from the mighty demons. To do this he had killed several demons to bring peace in the forest.

After a long struggled journey Rama had appeared at a beautiful place known as Panchavati situated at Nasik on the bank of the river Godavari in Maharastra. There he intended to settle for the rest of his exile period. Lakshmana built a nice cottage where they were spending their lives with peace and happiness. But once again as a irony of fate the root of most vital and most tragic incident of the history of India was seeded there. One day in the beginning of the season Hemanta Rama was provoked by an ogre Shurpanakha, the sister of demon king Ravana to marry her. Rama refused her provocation. Being refused by Rama Shurpanakha became furious and tried to attack Sita. Seeing that Lakshmana wanted to kill her but Rama restrained him from doing such as he believed that killing a woman is a sin in any situation. So Lakshmana had to be kept silent but cut the nose letting her leave the place at once. Hearing this humiliation Khara, the brother of Ravana had sent fourteen well prepared demons to kill Rama for taking revenge. But Rama killed those fourteen demons with ease. Seeing that result Shurpanakha got afraid but still requested brother Khar to do something for her humiliation. Then Khar had rushed to the Panchavati forest leaving his locality along with another brother Dushan and with fourteen thousand mighty demons. Rama and Lakshmana fought neck to neck with such strong and hostile enemies and had won the battle killing the entire enemy front including Khar and Dushana. At the sight of such massive loss Akampan, another brother of Ravana fled to Lanka and on the way to Lanka he was survived luckily from the attack of lord Rama. He informed the incident and advised Ravana to kidnap Sita to cut the wings of lord Rama.

Ravana then went to Marich, the son of Ogre Tadaka who was killed by Rama in an encounter when Rama was only 12 or 13 years old. Ravana initially requested Marich to go to the Panchavati forest decorating himself as a beautiful golden deer in disguise. Looking at the beauty of golden deer Sita would definitely request her husband to bring the deer for her. To fulfill the desire of his beloved Rama would move away in the forest perusing the golden deer. Lakshmana might also follow. Any way Sita would be alone in the cottage and Ravana would be able to kidnap her easily. But Marich was confirmed about the strength of Rama and his brother. Once he was just surprisingly saved from an attack of Rama in an encounter. From then Marich was afraid of Rama and used to think that he might be killed by Rama at any moment in his life. So he tried to warn Ravana not to play such risky game, this would definitely perish his golden Lanka. But Ravana was not prepared to hear the good advise, he realized that he was the boss of the universe and none could destroy him. He forced Marich to follow his plan to kidnap Sita. Finding no other alternate Marich did agree and appeared at Panchavati in disguise of a golden deer as Ravana desired. As it was expected Sita requested Rama to bring the deer for her and as usual Rama had rushed to pursue the golden deer in dense forest. In the process Rama ordered Lakshmana to stay with Sita to protect her and under any circumstances Lakshmana would not leave her alone. Incidentally when Rama killed Marich in disguise, Marich cried utterly by the name of Lakshmana at dying moment. Hearing that Sita thought that Rama was no more, he ordered Lakshmana to move in the forest in hurry. Lakshmana told several times that Rama could never be in any danger, so, there was no need of leaving that place. Being tensed in fear Sita forced Lakshmana to leave the place at once to search Rama. Sita even humiliated Lakshmana by blaming his character. Lakshmana ultimately left the place keeping Sita alone. Finding Sita alone in the cottage Ravana appeared there in disguise of a monk and tried to convince her his show. He pretended to be thirsty and hungry. Ravana asked Sita about her identity and Sita briefly narrated the consequence that forced her to live in such

forest with full of demons and beasts. Sita thought Ravana to be a pious hermit and expressed her desire of showing hospitality. She told Ravana that she could not come out of the cottage until her husband's return. But Ravana pretended that he could not wait more and would leave her cottage. Then Sita had to come out unwillingly to show honor to a monk and had scooped the trump card to Ravana. Immediately Ravana revealed himself as the most strong and mighty king of the universe and started praising Sita about her beauty. He requested Sita to accompany him to Lanka and he would give her the place of his chief queen among many unaccounted queens. Sita strongly disagreed and told him not to even think like this in dream, this would destroy him and his family. Being opposed by Sita Ravana forcefully abducted her and proceeded towards Lanka through aerial root.

In the meanwhile Rama was returning to their cottage after killing the demon Marich. On his way to home Rama found Lakshmana rushing in the forest. Rama asked him the reason of leaving Sita alone as he repetitively advised Lakshmana not to leave her alone in any circumstances. Rama got afraid of happening any casualty. They reached their home but did not find any trace of Sita. Rama was mourned in grief and could not decide what to do next. Searching every possible place to trace Sita in vain they had to leave Panchabati and moved towards south west. When Ravana was carrying Sita to Lanka he was obstructed by Jatayu the king of bird on the way. An immediate encounter was occurred between them. Jatayu fought desperately to protect Sita but finally his wings were uprooted by mighty Ravana. He fell on the ground in almost dying condition and Ravana fled away with Sita.

Rama and Lakshmana on their way in search discovered Jatayu falling unconsciously on the ground. Before breathing last Jatayu informed that Ravana had kidnapped Sita and took her in air towards south. He could not save Sita in spite of trying everything. Informing this to Rama Jatayu died in a moment and Rama performed the funeral rituals of the bird king Jatayu with a grief feeling of losing his keen relative. During this time Ravana took away Sita to Lanka and kept her captivated at Ashok Vatika. In aerial journey Sita was absolutely hopeless and blamed herself for forcing Lakshmana to leave their cottage. Accidentally Sita discovered five apes sitting over a hill near Pampa Sarovar. Sita at once opened her ornaments and threw on the ground one by one. She realized that Rama might find a clue in near future to trace her with those ornaments.

After bathing in Godavari Rama and Lakshmana offered last homage to Jatayu, they started towards west in search of Sita. Entering in a dense forest they faced a gigantic demon bearing an abnormal structure. He was Kabandha without head and shoulder. Kabandha tried to kill them but failed to do so. Ram and Lakshmana uprooted his hands and Kabandha fell on ground. At that moment Kabandha recognized Rama and got pleased. Kabandha was cursed by God Indra who turned him to such ugly get up as a punishment but had consoled that one day Rama would appear before him and would let him free. That day was appeared and Rama made him free to live in peace at heaven. Before leaving forever Kabandha advised Rama to proceed to Pampa Sarovar where he would meet Sugriva, the king of Banaras and Sugriva would guide Rama to find his captivated beloved.

Hearing this advice Rama moved fast towards south to meet Sugriva. They reached Pampa Sarovar where they met with an aged woman named Shabari who was a disciple of sage Matanga. Shabari lived in Matanga hermitage and waited for Rama for her spiritual ascending to heaven as told by sage Matanga. Rama and Lakshmana took her hospitality with pleasure and Shabari finally ascended to the heaven after meeting Lord Rama. Then the brothers moved further towards Rishyamukh hill. On the way they looked at the amazing Pampa Sarovar flourished with beautiful lotus surrounded by an enchanting unearthly atmosphere. Spring was near and Rama lamented for his lost beloved. He was afraid of losing his lotus eyed darling for ever as she could not survive without him for a long period or she might be killed by the demons. When Rama and Lakshmana were loitering besides the Sarovar, a group of Banaras watched them sitting on Rishyamukh hill. In the then period Rishyamukh hill was the residence of a troop of Banaras led by Sugriva.

Sugriva was the brother of Vali, the king of Kiskinda. During an encounter between Vali and Sugriva, Vali forced Sugriva to leave Kiskinda for ever. Sugriva had to escape for survival leaving everything at

Kiskinda including his wife Ruma and took shelter at Rishyamukh hill along with his few associates. Among his associates the Hanumana was his chief who played the most vital role in rescuing Sita from Lanka. Thus seeing two powerful persons moving through his autonomous territory Sugriva was worried by thinking that they might be sent by Vali to kill him. He discussed with his army and sent Hanumana to find the intension of two valiant looking strangers. Then Hanumana met with the strangers in disguise of a Brahmachari. Bowing before them he queried who were they and why did they come there. After satisfied with query Hanumana introduced himself as the minister of Sugriva and told the story of their exile at such desolate place. Hanumana talked with Rama and Lakshmana like a learned Vedic scholar. Hanumana then disclosed the reason of his disguise. Rama was highly appreciated talking with Hanumana and told Lakshmana to narrate their mission to meet Sugriva. Lakshmana told the entire incidence to Hanumana starting from the coronation of Lord Rama, the strongest pedigree of Ikshvaku dynasty. Then Hanumana along with Rama and Lakshmana ascended the Rihyamukh hill to meet Sugriva. Rama and Sugriva exchanged their views and they became good friends. Both Rama and Sugriva were in the same mental state, both were failed to be coronated, both were made in exile, both had lost their beloveds Sita and Ruma respectively.

After knowing the story of their individual problems Rama promised that he would give Sugriva back the kingdom of Kiskinda along with his wife Ruma. On the other hand Sugriva had shown some ornaments to Rama which he picked up and kept in his custody when Sita had thrown during abduction by Ravana. Sugriva was not aware about the identity of Ravana or Sita. But he was sure that a strongly built person was forcefully carrying an unwilling woman in his space craft. Rama immediately recognized the belongings of her beloved and was in deep grief. Sugriva promised that he and his large Banara troop would leave no stone unturned to rescue Sita if she was alive and stayed at anywhere in the vast universe.

At that juncture Rama wanted to kill Vali at first in order to get the full support of the Banara army which was under the control of the then king Vali of Kiskinda. A strong encounter was happened between Rama and the great king Vali. But the result went in favor of Rama who killed Vali in an afternoon when the sun had gone to eclipse. After the death of Vali, Sugriva had achieved the throne of mighty Kiskinda and got back his wife Ruma. Tara the wife of deceased Vali had to surrender and had to accept the lordship of Sugriva.

The time was almost on the eve of rainy season. So, Rama opted to wait for the next four months and after the completion of rainy season he would start to rescue Sita. During this period Sugriva could enjoy with his family and friends. Rama and Lakshmana took shelter at Prasravan cave near Kiskinda as they denied to stay at locality before completion of the entire exile period scheduled for fourteen years. Four months were over but Rama and Lakshmana could not find the trace of Sugriva or his associates. They became worried and Lakshmana rushed to Kiskinda with anger and found Sugriva intimating with wives. He was very furious to teach a lesson to Sugriva but Tara somehow handled the situation. She told that it was the fact that Sugriva was killing time with family but he had already sent his army to collect a large Banara troop to help Rama to rescue Sita. Within a very short period Kiskinda was filled with a huge Banara soldiers and their alliance. Sugriva divided the large troop in four groups and ordered them to search Sita from north, east, south and west. Among the Banara army Hanumana was the strongest, so he was ordered to march towards south along with Angada, the son of Vali and Jambaban belonging genetically to beer like human. Each group was directed to report the whereabouts within a month, otherwise they would be penalized. No positive report was submitted from any troop send towards north, east and west. Hence it was very likely that the group headed by Angada might give some positive report. But unfortunately the relevant group did not turn up within a month. Actually on the way to south they were fell in danger. They explored the entire southern front but could not trace Sita. On the way they found a cave and after entering in the cave they met with an ascetic woman named Sayamprava. She extended her hospitality to the troop but they could not find the way to come out from the strange cave. Finally Sayamprava helped them to show the exit but more than a

month was lapsed in the strange cave. After survived from the cave Angada, Jambaban and others excluding Hanumana were very much worried as they could not trace Sita and stipulated time of one month was over. They decided to die there without returning to Kiskinda for further action as inevitable death was waiting at Kiskinda for their trying in vain with exceeding time bound. Hanumana was only still confident of fulfilling their mission. Emitting from the cave of Sayamprava the troops appeared at a place where mountain range was seen on one side and endless ocean on other side. They were really frightened to see such uncanny scenario.

Accidentally rather fortunately Sampati, king of vulture and the elder brother of Jatayu appeared on the scene. Once Sampati was strong enough but at that time he was so weak to fly even. Initially seeing such large Banara troop he was joyous to get ready for food after a long period. But hearing the story of Lord Rama and abduction of Sita by Ravana along with the death fight of his younger brother Jatayu with Ravana, Sampati was molded and became keen to help them to find Sita. He was physically unable to help them but desired of providing mental support. He informed Angada and Hanumana about the route to Lanka where the demon king Ravana resided. Hearing this information the relevant troop started consultation to achieve the goal. They needed to cross the sea. Refused by everybody ultimately Hanumana had accepted the challenge to cross the sea. Hanumana jumped from mount Mahendra to reach Lanka on the other bank. On the way to Lanka Hanumana faced a lot of obstructions but winning all hurdles he reached the sea shore of Lanka in one evening.

Reaching Lanka Hanumana saw the wealth of the kingdom of Ravana and became astonished to see the glory. Hanumana intelligently inspected the entire city from the top of Trikuta hill and found that the entire palace and its surroundings were highly protected. He at night tried to enter in the palace of Ravana in disguise of a little monkey. At entry gate Hanumana met with ogre Lankini, the sentry of the palace. It was a myth that no one could beat Lankini to ensure trespassing in the palace. But if anyone could be able to kill Lankini, then the fall of the empire was inevitable. Being obstructed by Lankini Hanumana exposed his full form and almost killed Lankini in a dual encounter. At the dying moment Lankini had confessed to Hanumana that no one could save the kingdom of Ravana and a matter of few days were left for destruction of the kingdom. Hanumana then entered in the palace without any further obstacle. He searched everywhere in the palace and even in the bedroom of Ravana but could not find Sita. At the end of night Hanumana finally discovered Videhi under a Simsapa tree in Ashoke Vatika surrounded by ogres. When the dawn was on Hanumana watched Ravana to be appeared before Sita. Ravana provoked Sita to marry him but Sita did never accept his filthy proposal. She would even be ready to sacrifice her life but would never surrender herself to a demon.

To draw the attention Hanumana loudly started praising about Rama. Hearing this Sita watched Hanumana and was thinking that who was he and why did he come there. Talking with Hanumana and seeing the ring engraved with the name Rama, Sita was confirmed that Hanumana was sent by her lord Rama. They shared some emotional moments. During their conversation Hanumana was attacked by demons and Ravana ordered them to bring Hanumana before him. Hanumana accepted the proposal and quietly followed them. Ravana ordered his associates to burn the tail of Hanumana as punishment for trespassing through his palace. The tail of Hanumana was burnt but he did not feel any pain. He realized that his painless feeling was surely a blessing of mother Sita. Hanumana jumped hither and thither vigorously and as a result Lanka was almost burnt to ashes. Suddenly Hanumana got afraid of thinking that Sita might be injured due to that damage of Lanka. He rushed to the Ashoke Vatika and found Sita being untouched by fire. He was happy to see her. They once again talked together a little and bidding fare well from Sita he hid himself in a bush. At late night he started his aerial fly to cross the sea again. He reached safely on Mahendragiri from where he started his fly to Lanka. Hanumana met with his associates those were waiting on the sea shore with eager. They immediately started for Kiskinda to convey the message of living Sita to lord Rama. Within a few days they reached Kiskinda and informed the whereabouts of Sita. Rama was lamented to hear the condition of his beloved and

consulted with Sugriva and his associates to make a lay out to reach Lanka to rescue Sita as early as possible.

Rama started for Lanka from the mount Prasravan on a morning when the moon was in Uttara Phalguni nakshatra followed by a large Banara army with Sugriva being the chief. On the next day when the moon was in conjunction with Hasta nakshatra Lakshmana explained the planetary position of the sky indicating a favorable outcome of the forthcoming war. The troop took nearly a month to reach Rameswaram, the sea gateway to Lanka. Seeing vast span of the sea Rama became worried and was thinking of finding the way to cross the sea. In the meantime Bibhishan, brother of Ravana humbly requested Ravana to set free Sita otherwise an inevitable destruction of all demons would happen in near future. But unfortunately Ravana paid no attention. He was pride with his immense strength and vigor. The followers of Ravana including Kumbhakarna, brother of Ravana and Indrajit, brave son of Ravana supported him. They were sure of killing Rama and his associates without much effort if they were to face any encounter. Being provoked by the followers Ravana humiliated Bibhishan and uttered that the attitude of Bibhishan did not go with the demon class.

Being humiliated by Ravana Bibhishan left the place and decided to join Rama to retain the morality. Immediately Bibhishan crossed the sea and met with Rama. Initially the army of Rama was hesitated to accept Bibhishan as friend but talking with Bibhishan the momentary hesitation of Rama and his troop was over. Bibhishan became their friend and well wisher. He helped Rama to find the shortest sea route to reach Lanka. The troop then arrived at Dhanuskoti where the water level was not so high. A man made bridge of length around 100 Km was constructed over sea under the supervision of Nala, the chief architect of the army force. It took almost five days to complete the bridge made with rocky stones and trees uprooted from near by hills. The army of Rama then walked over the bridge and reached Lanka safely. After reaching Lanka the army headed by Sugriva took rest on the top of Subela mountain at a full moon night just on the eve of war. The great Ramayana war continued for almost 20 to 25 days. The outcome of the war was total destruction of Ravana along with his all men family members. Only females including wives and daughter in laws of Ravana were survived. Bibhishan was well protected by Rama and he was declared as the new king of Lanka.

Rama was eagerly waiting for her abducted wife Sita. But when Sita appeared before Rama, Rama did not want to accept her. Sita was forced to be examined about her chastity. She was looking pale but was relieved from ten months agony. She was ordered to walk over burning fire and she did that with full confidence. She proved herself that she was pure and was untouched by any blame. Rama then accepted her without any hesitation and they spent some intimate moments in Asoke Vatika. Finally within a few days Rama started for Ayodhya by Puspak Viman with Sita, Lkshmana, Hanumana and close associates and reached Ayodhya after completion of 14 years forest exile.

#### **4. HISTORICITY AND ARCHAEOLOGICAL REFERENCE OF RAMAYANA.**

After leaving Ayodhya the entire route of fourteen years exile journey related with the core history of the Ramayana followed by lord Rama may be summarized as follows:

AYODHYA → SHRINGAVERPUR [In District Allahabad] → PRAYAG → CHITRAKOOT

HILL [Near Satna] → PANCHAVATI [Near Nasik] → KISHKINDA [Near Humpy at Karnataka]

→ MOUNT PRASRAVAN → MYSORE → TRIRUCHURAPALLI → MADURAI →

MAHENDRAGIRI → RAMESWARAM → DHANUSKOTI → SRI LANKA →

AYODHYA

Among all the places mentioned above one of the most important place is Ayodhya as the journey was started from there and was ended there. Unfortunately this place relates with the most burning topic in Indian political domain. Though the debate between Ram Janmabhumi and Babri Masjid is apparently over due to the verdict issued by the honorable Supreme Court of India in favor of Ram Janmabhumi yet everything is not over. Anyway without going in dispute one point can be mentioned without any doubt that Lord Rama was a human person and was born at Ayodhya. Whereever might be the exact location of his birth that does matter nothing and that does not rule out the historic existence of Rama as a human being.

Next comes Shringverpur which is located at 45 KM from Allahabad towards Lucknow. Shringverpur is mentioned in Ramayana as the capital of Nishadraj (king of fishermen) where Rama stayed one night with his brother Lakshmana and consort Sita before crossing the river Ganges to enter in the forest on exile. Nishadraj belonged to Kol tribal community. Genetic study with tribes communities Kol, Bhil, Gonda had searched that all these tribes are of Indian origin and none were migrated from outside. They were in existence from before neolithic period approximately around 5000 BCE when it is expected that ancestors of Suryabanshi king Rama were present. It is believed that before starting of the boat journey Nishadraj washed the feet of Rama with Ganges water to dedicate his reverence towards lord Rama. A small temple is built there enclosing the spot where the dedication was offered. The temple is still there today known as Ramachura. The Govt of India has shown interest to build a pucca ghat from Shringverpur main ghat to Ramachura (Hindi News Uttar Pradesh 16<sup>th</sup> Nov 2019)

On the way to Chitrakoot hill the royal family stayed at Bharadwaj ashram near Prayag in Allahabad. Sage Bharadwaj advised Rama to follow a specific route to reach Chitrakoot hill. On the way they would find a large banyan tree full of green after crossing the river Yamuna towards west. This banyan tree is known as Akshayabata means that the tree would never perish. On the way to Chitrakoot the trio met the tree and took some rest there. The Akshayabata does still exist today spreading its branches. During Akbar period the emperor captivated the tree inside the fort along with an underground temple which is the oldest temple in India. General people could not visit the Akshayabata from the time of Akbar when the Allahabad fort was established by Akbar for his Hindu wife Jodhabai in 1583 CE. Up to 2019 only military personnel and persons with valid permission from army regiment could visit the temple. But today it is a great relief that during Kumbhamela 2016 at Prayag the honorable prime minister of India decided to make it open for common mass after visiting the Akshayabata. Now it is open for 11 months in a year for visiting the underground temple along with the Akshayabata. One month is kept closed for yearly maintenance.

Next we can talk about Chitrakoot hill. It is situated at Satna in Madhya Pradesh. Valmiki narrated Chitrakoot as an eminent holy place where Rama stayed some period of his exile with family. Many historic temples and several relics are there by the name of lord Rama and his consort. Among them Ramghat on Mandakini river where it is believed that the trio bathed during their stay, Bharat Milap where Rama and Bharata met together, Janaki Kund are most important places to visit. After Chitrakoot trip the royal trio moved inside the Dandakaranya forest. They trekked more than 12 years throughout the forest during their exile period. Today Dandakaranya includes the part of Orissa, Chhatisgarh, Andhra Pradesh and Telengana covering about 92000 Sq Km. The core of Dandakaranya lies in Bastar region of Chhatisgarh forest and it is believed that Rama and his family crossed Bastar during their exile journey.

Before kidnapping scenario the final destination of the royal family was at Panchavati forest in Maharashtra. Panchavati is modern day Nashik. Nashik is a city at the foothills of the Western Ghats in the north west region of Maharashtra on the bank of river Godavari. Here Godavari comes down from mountain. It is a city which is deeply rooted in legends. It is the most crucial among the places visited by Lord Rama during exile as it is where the consort of lord Rama was abducted by demon king Ravana. There are five banyan trees, so it is Panchavati located at the fag end of Dandakaranya forest.

A cave is there near these banyan trees known as the cave of Sita. It is believed that mother Sita used to pray to lord Shiva in that cave as she was a Shiva devotee.

After abducting of Sita lord Rama and his brother Lakshmana rushed in search and met Jatayu falling on ground being wounded by an encounter with Ravana. The place where Jatayu was found is now known as Lepakshi, a place in Andhra Pradesh 150 Km north from Bengaluru. Rama is said to have commanded the bird to rise, hence the name Lepakshi comes. A temple is built there by the name of brave Jatayu. In the region of the temple some footprints are there. It is believed that during encounter between Jatayu and Ravana Sita stayed there a while and footprint still in existence are of mother Sita.

Next comes Humpy the Kiskinda, the kingdom of Banaras. In Ramayana Kiskinda was near Pampa Sarovar. The spot is now recognized as Humpy in Karnataka besides river Tungabhadra formerly known as Pampa Sarovar. Humpy is now a place of visiting interest. A temple known as HAZARA RAMA TEMPLE where many sculptures relate the historicity of Ramayana. A sculptured wall panel of the temple narrates the history of Ramayana. So, it can be believed with a strong support that Kiskinda is not imaginary, it does exist in reality and Rama stayed there with Lakshmana for several months on the way to Lanka to rescue Sita from disaster. In fact blue print of the Ramayana war was prepared at Kiskinda.

The final scenario of the Ramayana was occurred at Sri Lanka. In those period it was known as Lanka. Before going in details about the history and geography of Lanka, let us focus on Ramsetu and its originality. Ramsetu alias Adam's bridge was constructed to create a sea route between the gulf of Mannar (Sri Lanka) and Dhanushkoti (India). Now the big question? Is it true? Did Rama construct the bridge in ancient period of 5 to 6 thousands years from now? Actually no answer is there. No confirmation is there. But to give some positive idea some discussion in connection with Palk strait is needed. It connects the Bay of Bengal in the Northeast with Palk Bay. In Southwest water of the Palk Strait separates Sri Lanka from the tip of India. A chain of islands and coral reef stretches across the southern end of the strait. The depth of Palk strait is very important here. Though it has been reported that on July 23, 2018, NASA's Aqua satellite passed over the Palk Strait and took several photographs indicating the existence of a sunken bridge which might be man made as stated in Ramayana. It was also stated that the stones found under water was of 7000 years old which stayed on sand of 4000 years old. But NASA never uttered a single word for its confirmation.

So, a lot of if clause is under radar. One option is that about a few thousand years ago, Alaska got populated by people from Siberia as the landmass was contiguous. Later it became disjoint. We think that similar situation might be happened here, i.e. the bridge is of geological origin, not man made. The another option is that the wide of Palk strait is now increased from 64 to 137 Km. It is expected that the wide of the said strait might not be more than 50 Km before 5000 years. Water level in the then period was much below than today. Minimum depth of the strait is less than 10 meters with maximum being less than 100 meters. It is known that average rise of sea level is about 30 cm per century. So before 5500 years the sea level was 16 to 17 meters below from now. Thus before 5500 years the water level of debated Palk strait was very shallow, somewhere it might be walkable or swimmable. In fact it can be said that Hanumana had crossed the sea easily without using continuous flying route which does not go with the action of even any superman. Hanumana did not belong to the monkey class, the dwellers of Kiskinda belonged to a specific tribal class residing in forest (Banara= Ban (forest)+ Nar (human)). So it was not impossible and not an uphill task for Rama to construct the bridge over Palk strait. Where the level was very low, normal rocks and uprooted trees might be used and where the depth was little high they might use floating stones. Floating stones are not myth, floating stones are available and existence of floating stones are still there around Rameswaram.

If we accept the stones used by Rama was 7000 years old then that does not confirm the construction of bridge was carried before 7000 years. 7000 years old stone can be easily used after 1500 years. Thus our prediction of the time line of Ramayana around 3500 BCE might be justified.



Finally we come to Sri Lanka. The kingdom of Ravana existed in the north western part of now a days Sri Lanka formerly known as Lanka. The then capital of Lanka was Sigiriya known as Trikuta hill. Valmiki mentioned that the kingdom of Ravana was on a hill well protected from everywhere. Sigiriya rocks are still available at Sri Lanka. Hanumana first observed the city from the top of Trikuta hill. It has been already mentioned that the Ramsetu was constructed between Dhanuskoti and Mannar which was the gateway to Lanka. Mannar is still there and is one of the 25 districts of Sri Lanka located at Mannar island. It is around 270 Km from Colombo the capital of Sri Lanka. Nuwara Eliya is one of the most important location in central province of Sri Lanka which was closely related with the epic. It is believed that the Ashok Vatika where Sita was kept after abduction was in Nuwara Eliya. Ashok Vatika was a garden at Lanka that was located at the kingdom of the demon king Ravana as stated in the epic and also in Vishnu Purana. Some places around where Hanumana burnt Lanka soils are still blackened than other neighboring places.

## **5.CRITICAL ESTIMATE AND MYTHS :**

As the great Indian epic the Ramayana is published in many versions all over the world so different opinions have been inserted from different angles depending on the approach of relevant writer. In this work we exclusively tried to establish few facts and related works compiled by the sage Valmiki. We also tried to estimate critically some informations and some myths conveyed by Awadhi poet Tulsidas Goswami and Bengali poet Krittibas. Valmiki portrayed Rama as a human being who was an ideal son, an ideal husband, an ideal king and an ideal disciple. Like another human he had grief and pleasure in his heart. Apart from the part Uttarakanda which is believed to be extrapolated as time goes on , Valmiki did not try to emphasis that Shri Rama was the incarnation of Lord Vishnu. On the other hand Tulsidas established Rama as an incarnation throughout his composition. He pleaded that Rama could not make any error. This goes against human characteristic feature. We trust in divine power of Rama, he was Purushottam but above all he was a man with lot of vigor and guts.

Next we talk about the Lakshmana Rekha. In Krittibasi Ramayana we find the information about Lakshmana Rekha. At the time of abduction of Sita from Panchavati forest Lakshmana was forced by Sita to leave the cottage in search of lord Rama. Before leaving Sita alone Lakshmana drew a divine line outside the cottage and told that no outsider would be able to cross the line. Sita was requested not to come out of the cottage. But Sita did not keep his request. She was tempted by Ravana to cross the borderline. She did and was perished. Ravana was able to abduct her with ease. But neither Valmiki nor Tulsidas uttered a single word regarding the existence of such Lakshmana Rekha. There was a verbal encounter between Sita and the demon king Ravana before the abduction did happen. So information about Lakshmana Rekha is just a myth, it has no relation with real scenario.

Now we discuss about the cure of Lakshmana when he was severely injured by Indrajit in the battlefield. To clarify the situation, the description of brief history may be fruitful. At mid stage of the war Indrajit the brave son of Ravana was able to measure the strength of lord Rama. He then tried to demotivate Rama. Indrajit had spreaded a rumor that Sita was killed in the war. Rama and his army were somehow illuded and wanted to belief that Sitaji was no more. The whole front were totally disrupted. Indrajit wanted that and he got some time to shower offering to Nikumbhila. He got boon from Brahma that if he could be able to complete the offering then he would become invisible during war and would not be killed by any enemy. This secret was known by Bibhishan. So when Indrajit entered in the temple of Nikumbhila and started his offerings, Bibhishan became very worried. Fortunately in the meantime Rama came to know that Sita was still alive. Bibhishan then disclosed the desire of Indrajit and advised Lakshmana to make sudden attack. Hearing this advise Hanumana appeared in the field and tried to provoke Indrajit to come out of the Nikumbhila house. He succeeded to do so. Indrajit had come out of the house. A strong encounter did happen between Indrajit and

Lakshmana assisted by Bibhishan and Hanumana. During the second day of the encounter Lakshmana was bombarded by Brahmastra thrown by Indrajit. Poet Tulsidas told that a Lankan doctor named Sushen was called for treatment who advised Hanumana to bring Sanjeevani herb from the mount Himalaya which might save his life. But Valmiki told different story. According to him no doctor from Lanka was employed for treatment. Sushen, a character was there. He belonged to Banara army and was the grandfather of Angada. Actually Jambavana initially examined Lakshmana and advised Hanumana to bring four herbs from the Himalaya before sunrise. Each herb possessed a special feature. Mritasanjeevani is used to get rid of unconsciousness, Visalyakarani for healing wounds, Suvarnakarani for getting the original color of skin and Sandhani to rejoin fractured bones. Hanumana brought everything, in fact he carried the entire Gandhamadan mountain failing in finding the specific herb. Fortunately Lakshmana got cured and joined the war. After non stop 3 days war ultimately the great hero Indrajit who had beaten Indra the king of Gods with fame was killed by Lakshmana.

Next we go with the another myth of Maya Sita introduced by Tulsidas. He wrote that as Rama was the incarnation of God he was aware of everything to be happened in future. He smelt the danger of Sita at the time when he was engaged in encounter with Khar. He advised Sita to sink in fire and kept a shadow image called Maya Sita at real platform who looked as beautiful as real Sita. After the completion of the great war of Rama and Ravana shadowed Sita once again emerged in fire and the original Sita was come out of fire. That is commonly described as Agni Pariksha. Valmiki did not talk about such illusion. He conveyed the message to us that lord Rama examined the chastity of Sita as she was captivated under Ravana for about a year. We think that Rama did that to satisfy his company but it was definitely an error which he committed. Rama did it as he was a human. Error is committed by a human. Now the question why Tulsidas introduced Maya Sita in picture? He was highly devoted to lord Rama and Sita was a mother like configuration in his heart. He did not even allow Ravana to touch his Sitamata. So he introduced shadowed Sita who was abducted by Ravana. So this introduction may be justified as a myth which is believed by Indian people from long long years ago. No Maya Sita was there and the one and only original Sita was unfortunately abducted.

Then we shall discuss about another information as found in Kritibas. He has written that before killing Ravana lord Rama inaugurated untimely Durgapuja known as 'AKALBODHON'. He did all rituals. The ritual was started on S6 tithi and as usual was completed on S10 tithi which referred Vijaya Dashami when the Goddess Durga returned to Kailash. This is the normal ritual that is celebrated at Sharadia Durgapuja every year in the month of September-October among the Hindu devotee in India and abroad. Celebration of Saradia Durgapuja does occur every year but it is very unlikely that Durgapuja was celebrated by Rama. The relevant time frame of the war was lunar Phalgun month, so there is no question of Sharadia Durgapuja to be celebrated during the war period. Valmiki referred that before killing Ravana lord Rama offered prayer to the Sun by listening 'Aditya hriday stotra' from the sage Agastya. Listening that Ram was energized and were able to uproot the demon king Ravana.

Finally we shall analyze the comparison of the characterization of Sita in Ramayana version of Valmiki and Tulsidas. Valmiki drew Sita as a pious woman who was loyal to her husband. At the same time she was a woman of strong personality, she was outspoken also. She fought verbally with ferocious demon king Ravana without any fear in her mind. As she was physically weak than Ravana so Ravana was able to abduct her forcefully. If she was not mentally strong then how she could emerge in fire and came out successfully. But Tulsidas portrayed Sita as a soft hearted and submissive woman. Rama was portrayed as the God, incarnation of Lord Vishnu and his consort Sita was the incarnation of the Goddess Lakshmi. She would never fall in danger. It was his Maya Sita who had been abducted and faced the consequence. She need not to be courageous to dive in fire as it was Maya Sita who dived in fire. Comparing these two characterization of Sita it can be concluded without doubt that Valmiki's Sita was real and human being able to face challenge and to keep chastity with full marks. On the other hand the sketch of Sita drawn by poet Tulsidas was some what artificial which does not go with courageous Sita drawn by Valmiki.

## 6. YUGAS DIVISION:

From the ancient period Indian mythology believes the concept of four Yugas to relate time period. The four Yugas are Satya (Golden), Treta (Silver), Dwapara (Bronze) and Kali (Iron) with a time weight age of 4: 3 :2 : 1 respectively. It is referred in religious books that the span of Kaliyuga is 432000 yrs and now in vogue from 3102 BCE. As refereed Satyayuga has a time frame of 1728000 yrs followed by Treta as 1296000 yrs and Dwapara as 864000 years. The four Yugas thus combines to a span of 4320000 year completing one cycle. In this work we are interested to modify the time frame of four Yugas. We think to consider 26000 years as one complete cycle of four Yugas. This time is approximately the period of precision of earth to complete one cycle. This can be simply achieved by some numerical calculation. It is often referred in epics and Puranas that the life span of a human person or his tenure of kingship posses some fabulous and absurd values. This is never biologically acceptable data. We have simplified by taking 1 year equals to 1 day. So, span of Kaliyuga comes out to be 432000 divided by 365.25 making 1183 years. With this introduction the total period of four Yuga becomes 11830 years. Adding 1170 years for transition, the result is 13000 years which is exactly equal to one half of the precision period of earth. Multiplying by 2 we get 26000 years the exact period of precision. So, it can be said that all the four Yugas follow two phases of time span with a transition period of 1170 years in each phase. One of such transitional period is taken to be after the completion of Dwapara 1 phase and before Kaliyuga 1. The ending of Dwapara 1 phase starts with the death of Lord Krishna which we have calculated as 885 BCE published in our separate paper. At that time there was a total disaster throughout the Indian peninsula. So some time was needed to rebuild the nation. Due to that reason we have introduced a transition period of 1170 years before commencement of Kaliyuga. Another transition period is introduced in two parts one before commencement of Satyayuga 1 and after ending of Satyayuga 2 each being of a period of 585 years. In our calculation the precision cycle begins from 12117 BCE and ends on 13883 CE with a total period of 26000 years as expected before. The different Yugas with relevant dating is tabulated as follows:

TABLE 1

YUGA	BEGINIG	ENDING	DURATION (YRS)
TRANSITION PERIOD	12117 BCE	11532 BCE	585
SATYA(GOLDEN) 1	11532 BCE	6800 BCE	4732
TRETA(SILVER) 1	6800 BCE	3251 BCE	3549
DWAPARA(BRONZE) 1	3251 BCE	885 BCE	2366
TRANSITION PERIOD	885 BCE	285 CE	1170
KALI(IRON)1	285 CE	1468 CE	1183
KALI(IRON) 2	1468 CE	2651 CE	1183
DWAPARA(BRONZE) 2	2651 CE	5017 CE	2366
TRETA(SILVER) 2	5017 CE	8568 CE	3549
SATYA(GOLDEN) 2	8568 CE	13298 CE	4732
TRANSITION PERIOD	13298 CE	13883 CE	585

Henceforth next cycle will start from 13883 CE with a transition of 585 years. Next Satyayuga 1 will commence from 14468 CE and will follow the same chain rule as implemented by us. We are now in the Kaliyuga 2 which will be continued till 2651 CE.

## **7. LINK BETWEEN THE RAMAYANA AND THE MAHABHARATA :**

According to Pauranic references Lord Rama was born in Ikshvaku dynasty. He was the 61<sup>st</sup> king of Ikshvaku dynasty. Lord Rama was contemporary with king Satwat who was the 35<sup>th</sup> king of Yadu dynasty. 92<sup>nd</sup> pedigree of Ikshvaku dynasty was Brihaddal who was killed by Abhimanyu in the Mahabharata war. So there is a gap of 31 generation of Ikshvaku dynasty between the Ramayana and the Mahabharata. In this chronological analysis a few dynasty information might be missing due to time delay between actual information and fabricated information relayed from one person to another. Taking average ruling of 60 years the relevant span should not exceed 2300 years where total generation gap is considered as 38 (31+7). If we consider the ruling span of the kings of Yadu dynasty the generation gap between Satwat (35<sup>th</sup>) and Lord Krishna (46<sup>th</sup>) is 12 which may be at best taken as 24 (12+12). As the actual available dynasty tree of Yadu kingdom suffers lot of dispute because Yadu dynasty had lot of branches and all of them are not reflected in historical references with high precision. Lord Krishna lived 126 years in earth and it is likely that life span of kings of Yadu dynasty was high in comparison with other dynasty. Considering an average of 90 years the gap between Mahabharata and Ramayana must be within 2200 years. Still adding or subtracting some plus or minus it can be concluded with best fitting that time delay between the Ramayana and the Mahabharata must not exceed 2500 years. Our estimate of Mahabharata war is 920 BCE, hence the Ramayana period would lie within 3400 BCE and 3500 BCE. Our calculation had tried to establish the fact that Lord Rama was born in the year 3348 BCE which finds agreement with above discussion.

## **8.TIME LINE OF RAMAYANA**

### **8.1 BIRTH OF LORD RAMA:**

The time line of Ramayana starts with the birth of lord Rama. Rama was born on a Chaitra sukla navami. Moon was then at Pollux and five planets were visible [VR(Valmiki Ramayana) 1-18-8 to 1-18-10]. Valmiki did not mention the name of the visible planets. He just mentioned that Moon and Jupiter were on horizon. We have simulated the birth day of lord Rama as 14<sup>th</sup> February 3348 BCE (Julian day) using stellarium (19.3) astronomical software. Tentative time of birth lies between 1-30 to 2 PM. On sukla navami moon rises around mid day and sets around mid night. At around 1-40 PM on that day our simulation indicates that the altitude of moon and Jupiter were 14 and 13 degrees which means both of them were near the horizon and were at Pollux. Other visible celestial objects in the sky were Mars, Venus and Sun with almost highest illumination. Saturn was not visible at that day time but it was also visible at night with 100% illumination. So visibility of celestial objects in the sky on that day is in agreement with the text compiled by Valmiki.

Now we shall investigate the astronomical position of the above mentioned planets in the year 3348 BCE. Knowledge of vernal equinox and precision of earth is relevant in this context. In 2020 vernal equinox occurred on 20<sup>th</sup> March when RA of the sun was 0 hr and the sun was in Pisces constellation (Purbabhadrapada Nakshatra). In 2021 vernal equinox will occur on 21<sup>st</sup> March and the sun will be again in Pisces with same Nakshatra as 2020). But due to precision of earth vernal equinox was not always occurred in same constellation and will not be always in future. Vernal equinox is shifted backward by one degree in connection with constellation in every 72 years. The sun does not spend

equal time in each of the 13 constellations including Ophiuchus. Following gives the table of time duration of sun in each constellation:

TABLE 2

CONSTELLATION	DURATION ( DAYS)	PERCENTAGE OF DURATION	ANGLE COVERED( DEG)	YEARS OF DURATION (VERNAL EQUINOX)
ARIES	26	7.123	25.64	1846
TAURUS	38	10.411	37.48	2698
GEMINI	30	8.219	29.59	2130
CANCER	21	5.753	20.71	1496
LEO	37	10.134	36.50	2627
VIRGO	44	12.055	43.40	3124
LIBRA	23	6.301	22.68	1633
SCORPIO	7	1.918	6.90	497
OPHIUCHUS	18	4.932	17.75	1278
SAGITTARIUS	33	9.041	32.55	2343
CAPRICORN	27	7.397	26.63	1917
AQUARIUS	24	6.575	23.67	1704
PISCES	37	10.134	36.50	2627

Geographically vernal equinox starting as the first point of Aries means that the sun is at Aries constellation with RA being zero on date. That was happened on 284 BCE. After that RA zero occurred on date when the Sun entered in Pisces. Now it is still in Pisces and it will be there until 2380 AD. After that it will move back to Aquarius. One precision cycle is completed in approximately 26000 years (exactly 25920 years). Shifting of Vernal Equinox is tabulated below:

TABLE 3

CONSTELLATION	START OF YEAR	END OF YEAR
PISCES	284 BCE	2343 AD
ARIES	2130 BCE	284 BCE
TAURUS	4828 BCE	2130
AQUARIUS	2343 AD	4047 AD

So on our concerning year of 3348 BCE the sun was at Taurus at Vernal Equinox. We have computed two dates for study of VE. On 18<sup>th</sup> April (Julian day) 3348 BCE RA on date was 0 and according to J2000 that was 4 hr 50 min roughly which gives a difference of 73.5 days. The sun was at Taurus which

agrees with the Table. Now the difference of period from 3348 BCE and today 2020AD is 5368 years. Dividing this by 72 the result yields 74.5 which is well agreement with the difference of RA from on date and on using J 2000 notation. Another date we computed is 31<sup>st</sup> January 3348 BCE. On that day using J2000 RA was 0 hr and the Sun was at Pisces constellation. But if we think of Zodiac sign then on that day it would be Aries according to Zodiac conception of vernal equinox. Using J2000 the date on which RA is zero gives apparent vernal equinox and zodiac sign will be Aries irrespective of whatever constellation it might be. That particular day is 7<sup>th</sup> Chaitra in Indian calender. It is confirmed that no calender was available at such far ancient period, still we can consider the date as 7<sup>th</sup> Chaitra to continue our calculation. Again we have also computed the date of Phalguni purnima and Chaitra purnima for the year 3348 BCE. Phalguni purnima was occurred on 23<sup>rd</sup> January when the moon was at Denebola. So, the month Chaitra began from 24<sup>th</sup> January and on 31<sup>st</sup> of the month it was 7<sup>th</sup> chaitra as stated above. In the then period every lunar month was counted from just after one full moon day (or one new moon day) to the next full moon day(or next new moon day). Chaitra purnima was occurred on 21<sup>st</sup> February when the moon was at Spica indicating the end of lunar Chaitra month. But this theory may not hold good for every month. Full moon day or new moon day may not be always the start of a new calender month. We have here used the idea of counting as given below:

TABLE 4

RA 0 hr (J2000)	VERNAL EQUINOX	7 <sup>th</sup> CHAITRA
RA 6 hr (J2000)	SUMMER SOLSTICE	7 <sup>th</sup> ASHADA
RA 12hr (J2000)	AUTUMNAL EQUINOX	7 <sup>th</sup> ASHWIN
RA 18hr (J2000)	WINTER SOLSTICE	7 <sup>th</sup> PAUSA

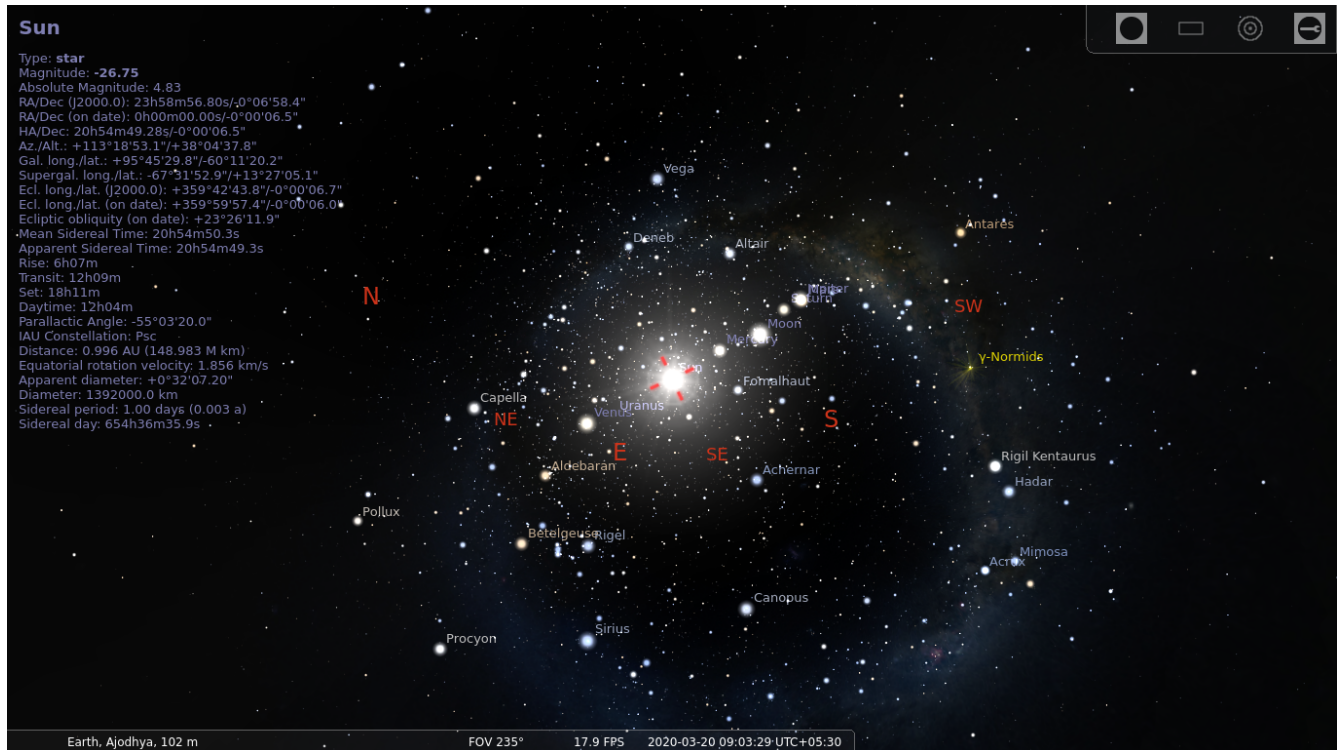
The above table does not reflect the seasonal criterion of any year. We introduced this just to simplify our calculation in connection with Indian lunar month whose actual picture in the then period seems to be misleading. We find often today that purnima of a lunar month does not occur in that particular calender month. As for example Ashada purnima may occur in Sravana calender month. That is natural depending on celestial position. In this paper we are not intended to explain the actual cause of such disparity. Astronomical calculation may solve it.

Now the question, was Valmiki aware of astronomy? Did he simply try to notify astrological consequence? I believe it was the scenario that was predicted by Valmiki. In that period no printed reference was there, no written document was there. Egyptians at that time had already started astronomy. Even the subject astronomy was at child stage, so it would not be justified to use the references compiled by Valmiki were anyhow related with astronomy. Knowing of purnima, amavasya, tithi, nakshatra etc do not only belong to astronomy, knowledge of constellations and their difference with zodiac sign are mandatory to predict such ancient time line. So in Valmiki Ramayan the line [1-18-9] stated as

NAKSHATREHADITIDAIBATYE SWACHHASANGHESU PANCHASU  
GRAHESU KARKATALAGNE BAKPATIBANDANASAH

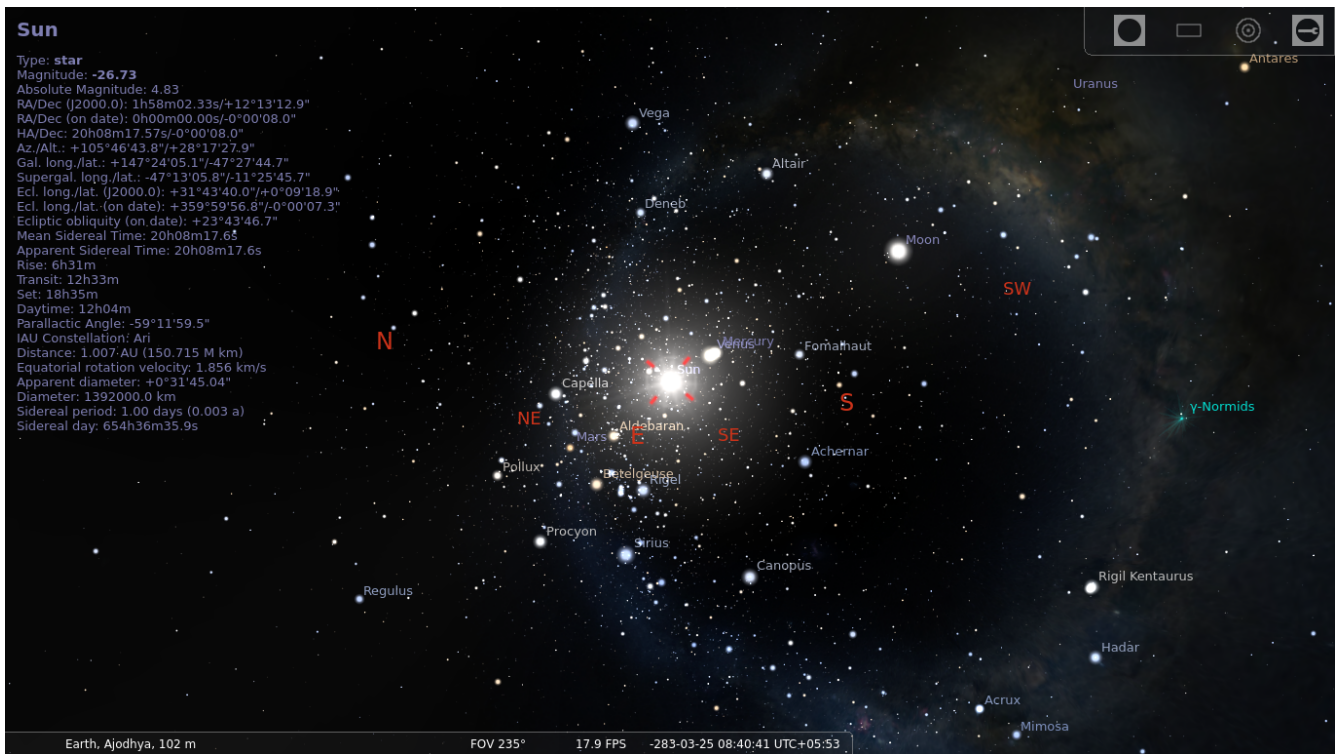
does not confirm the names of exact planets nor their exalted positions. Valmiki might be a vastly learned person but it is difficult to believe that he identified all the specific stars with naked eyes and explained their celestial positions. One point may be noted that he might look five planets including the

sun and the moon illuminated brightly. Another point is the inclusion of lagna as cancer during birth time of Lord Rama. Considering the sun zodiac sign as Aries, the lagna at the time of sunrise (7-25 Am) was clearly Aries on that day. It changes with every two hours. So, after 1-25 PM the relevant lagna was clearly cancer which Valmiki mentioned as Karkata. It can now be concluded that lord Rama was born on 14<sup>th</sup> February 3348 BCE (Julian day) between 1-25 and 3-25 PM.

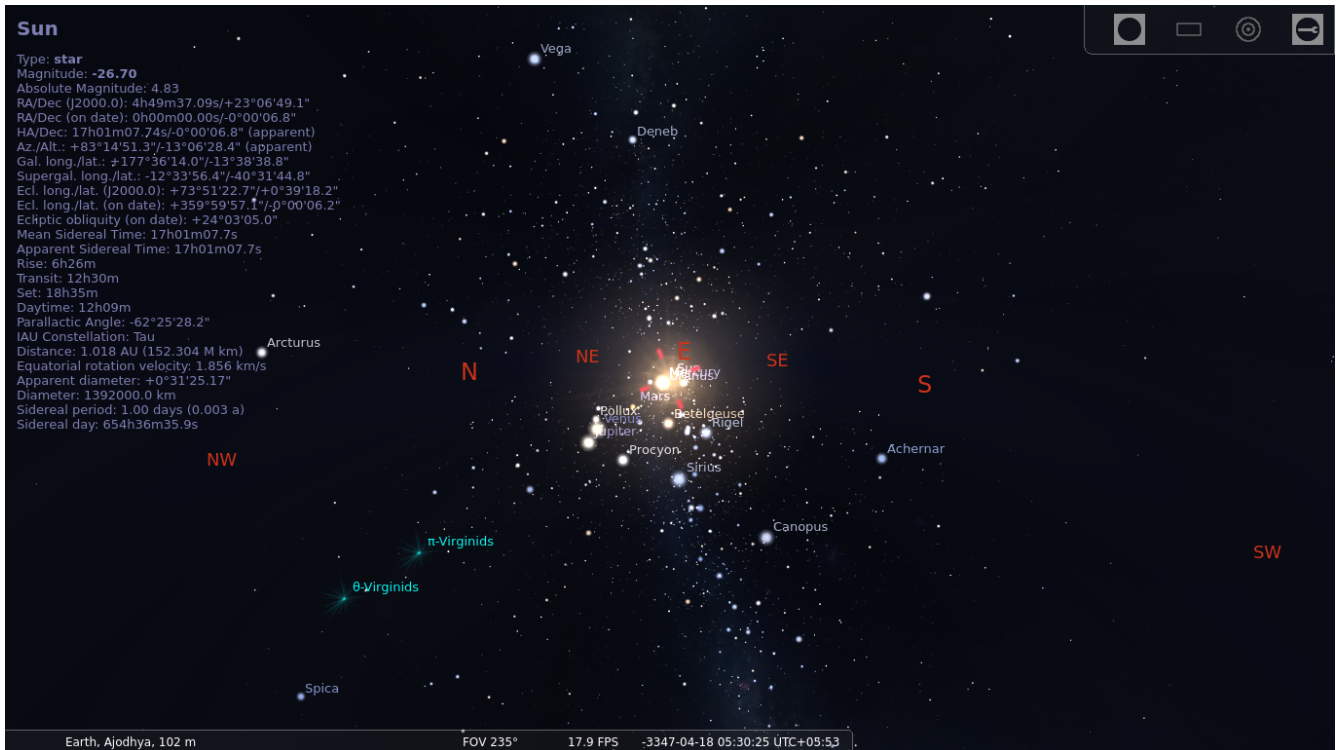


SLIDE 1 :

VERNAL EQUINOX 2020 CE

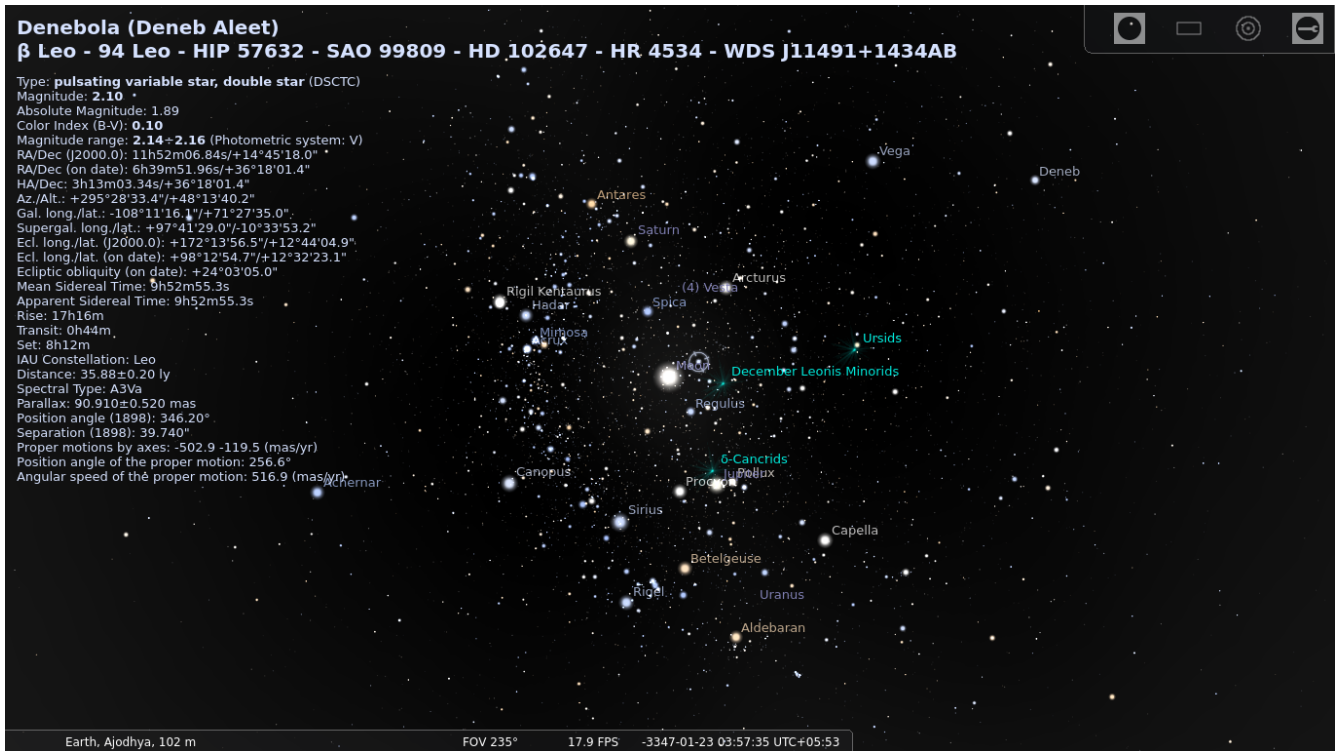


SLIDE 2 : VERNAL EQUINOX 284 BCE

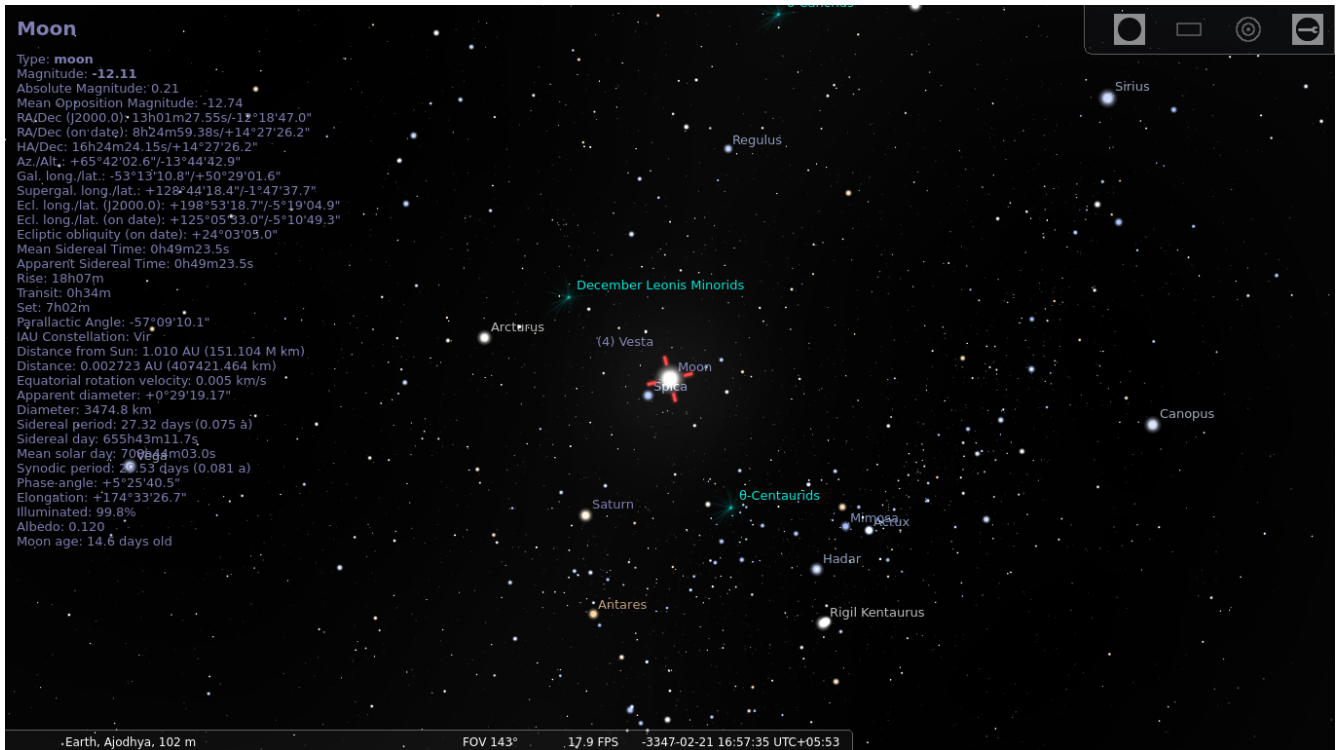


SLIDE 3 : VERNAL EQUINOX 3348 BCE

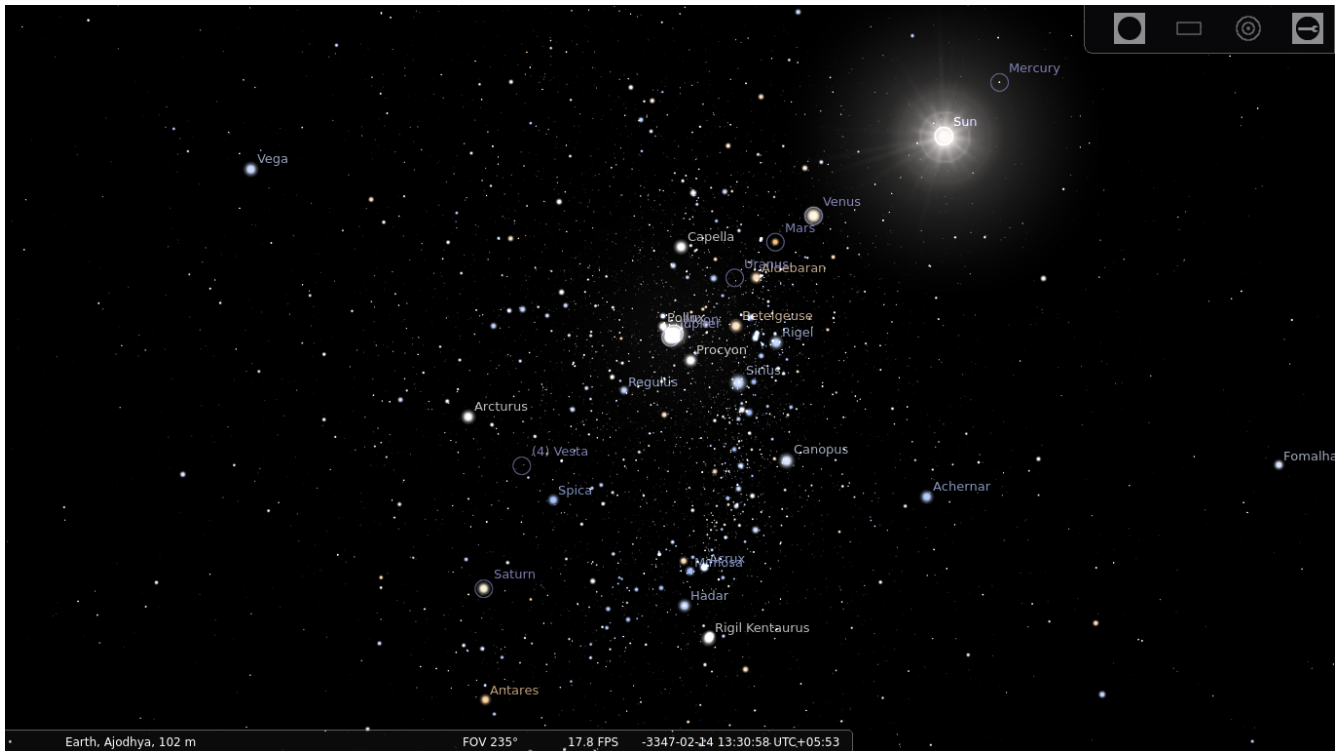




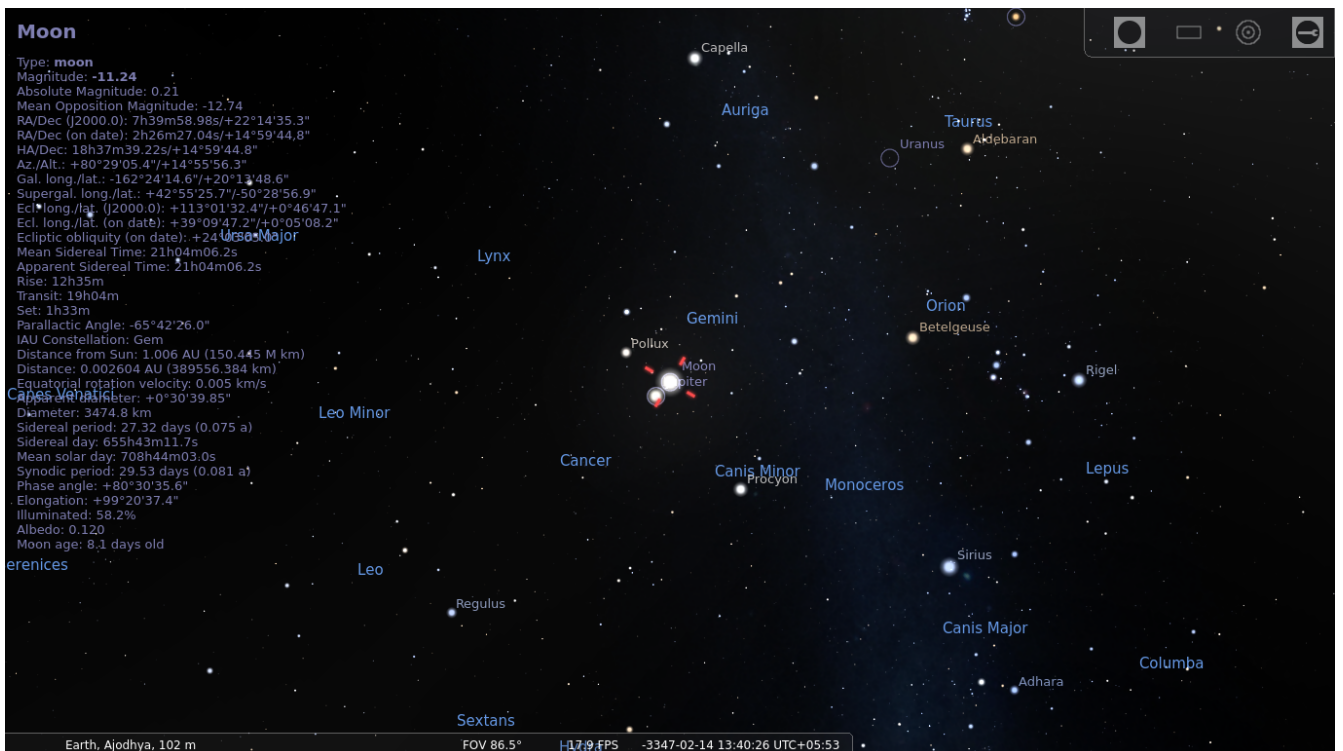
SLIDE 4 :      23RD JANUARY ( PHALGUNI PURNIMA) 3348 BCE



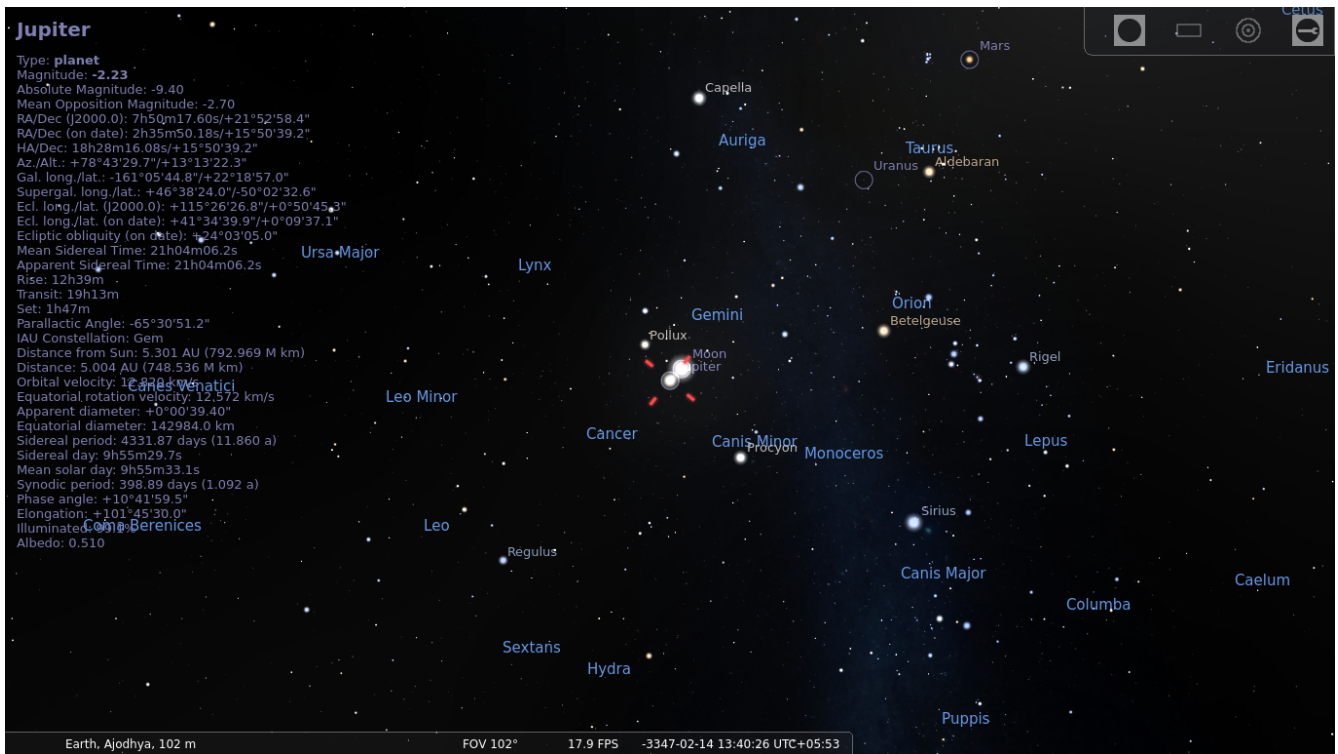
SLIDE 5 :      21ST FEBRUARY (CHAITRA PURNIMA) 3348 BCE



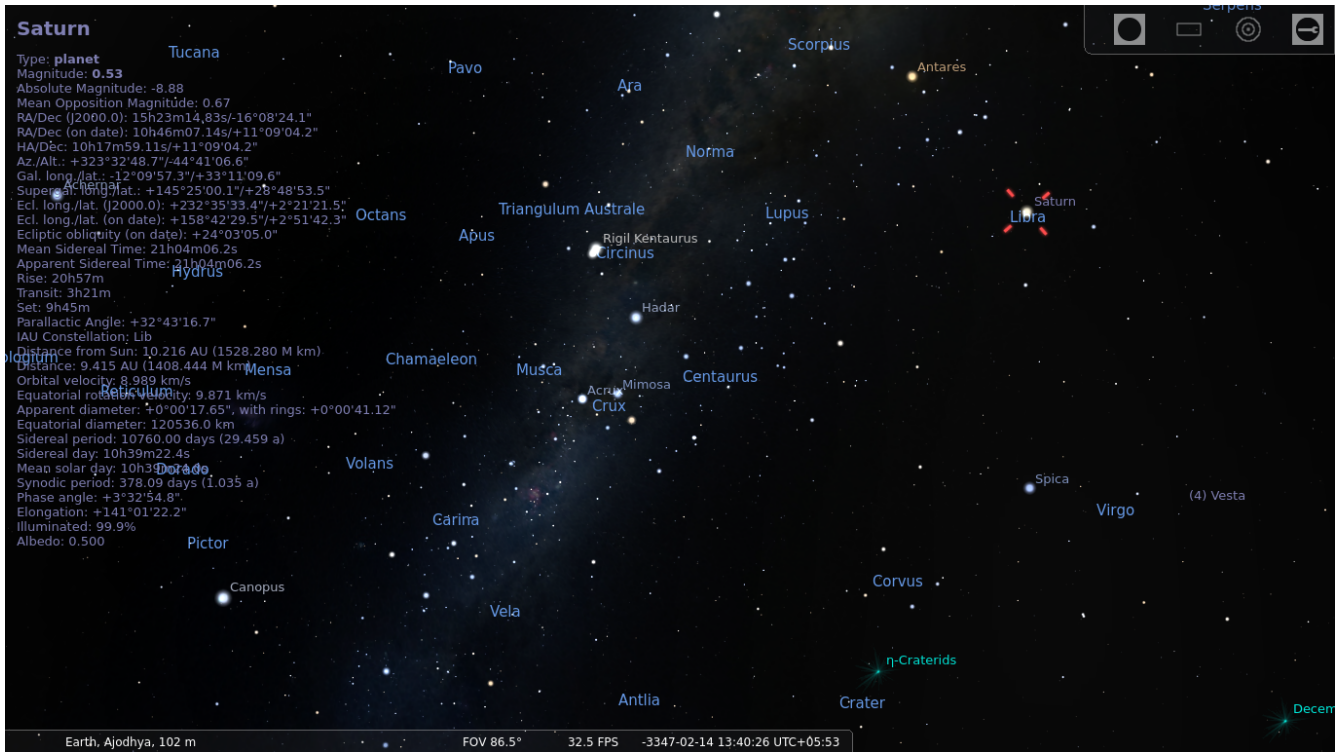
SLIDE 6 : SKY POSITION ON 14TH FEBRUARY 3348 BCE (BIRTH DAY OF LORD RAMA)



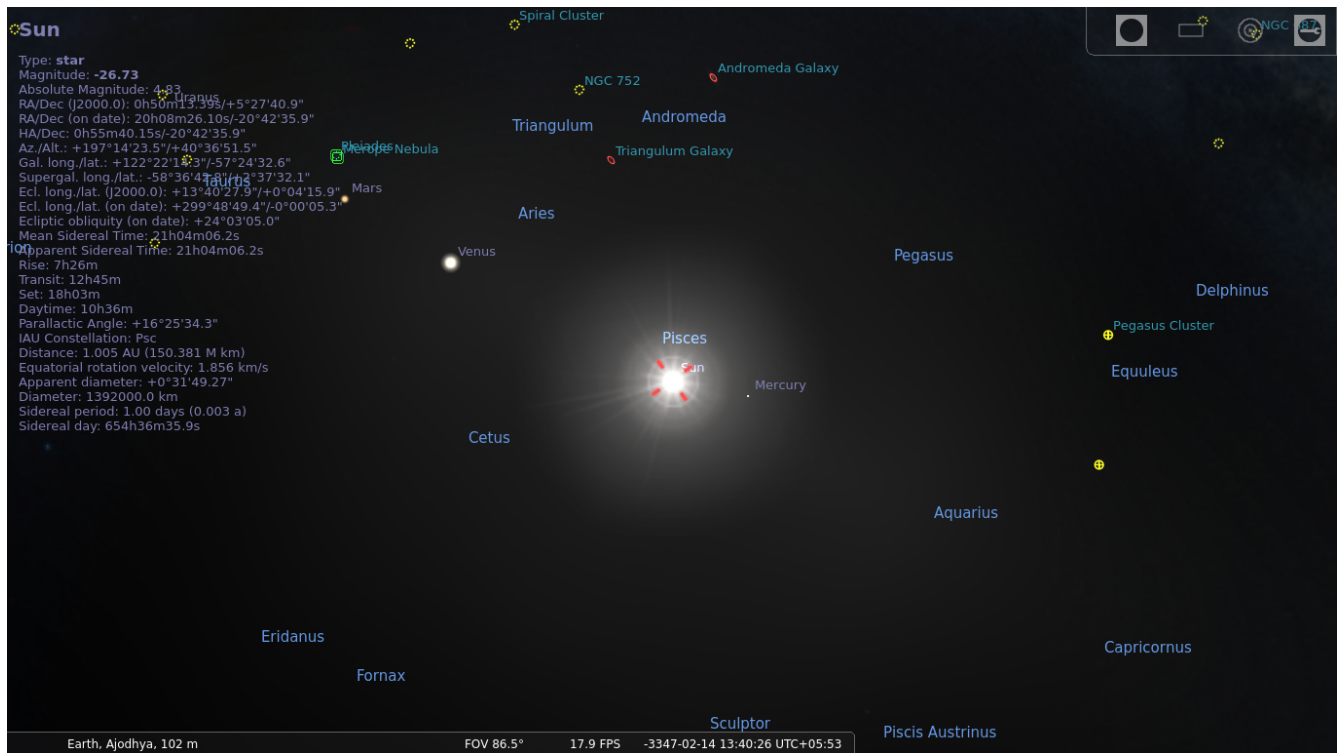
SLIDE 7 : MOON AT POLLUX ON 14TH FEB 3348 BCE



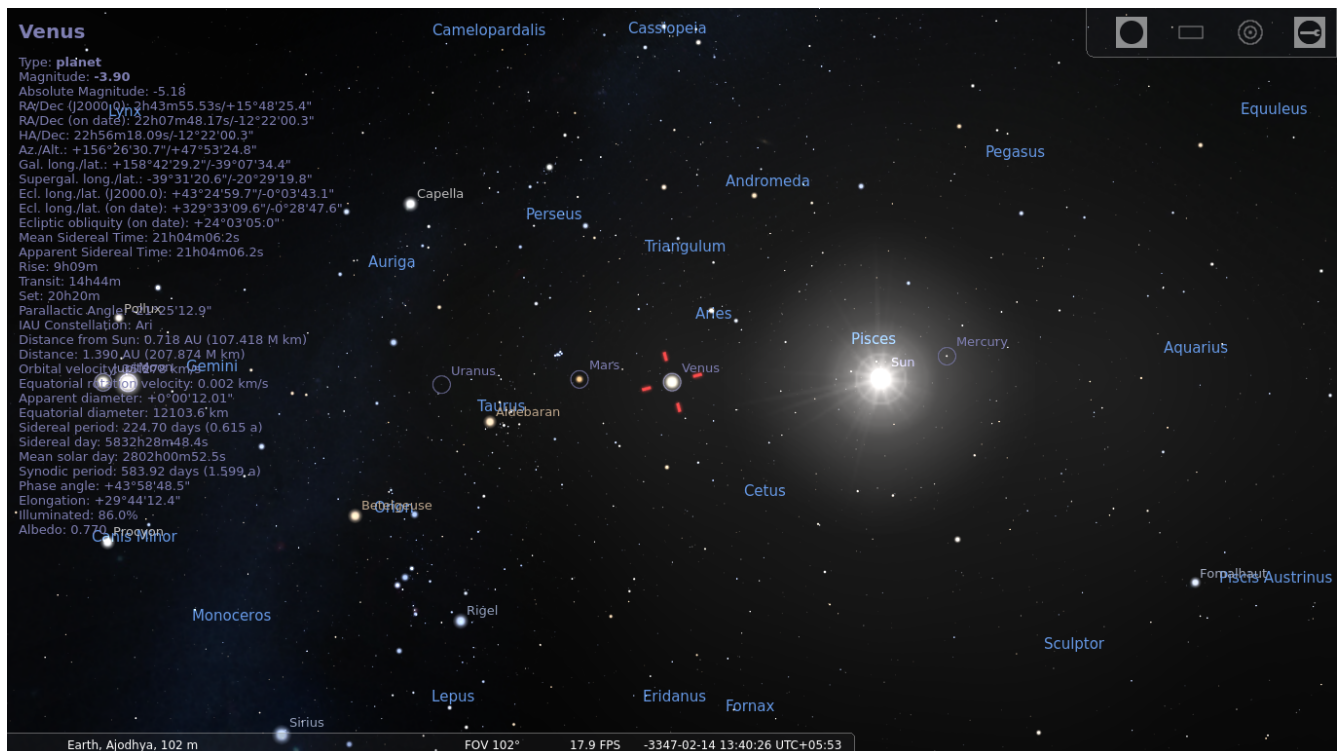
SLIDE 8 : JUPITER NEAR EAST HORIZON ON 14TH FEB 3348 BCE



SLIDE 9 : 99.9% ILLUMINATION OF SATURN (BELOW HORIZON )

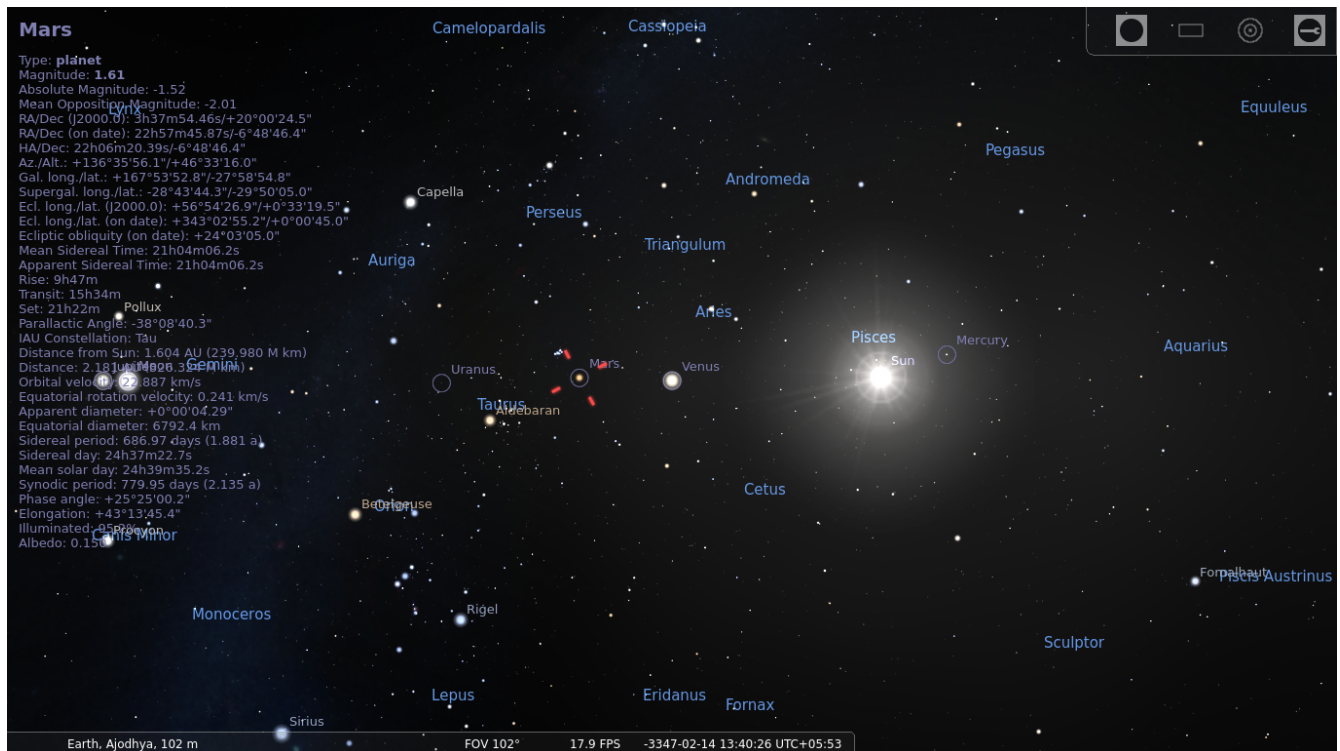


SLIDE 10: POSITION OF SUN ON 14TH FEB 3348 BCE



SLIDE 11: VENUS VISIBLE WITH HIGH ILLUMINATION ON 14TH FEB 3348 BCE

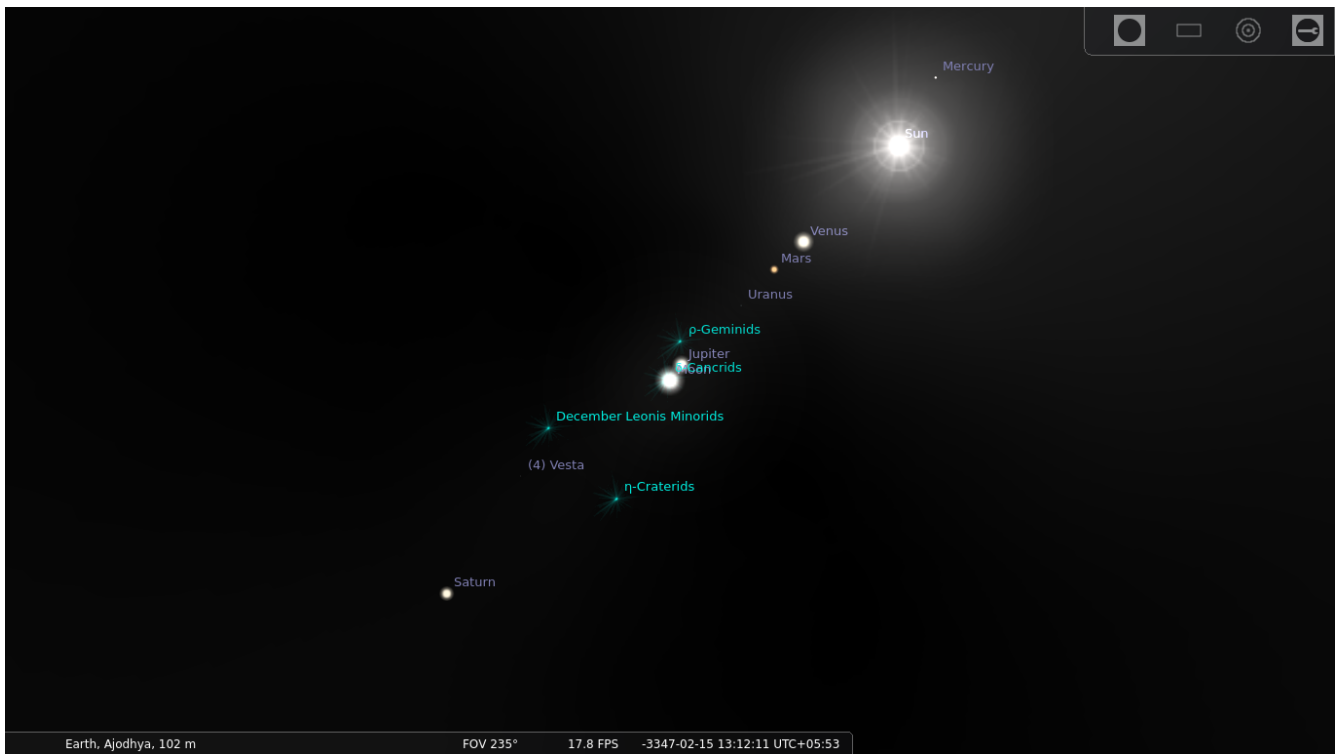




SLIDE 12:                      POSITION OF MARS ON 14TH FEB 3348 BCE

## 8.2 BIRTH OF OTHER PRINCES:

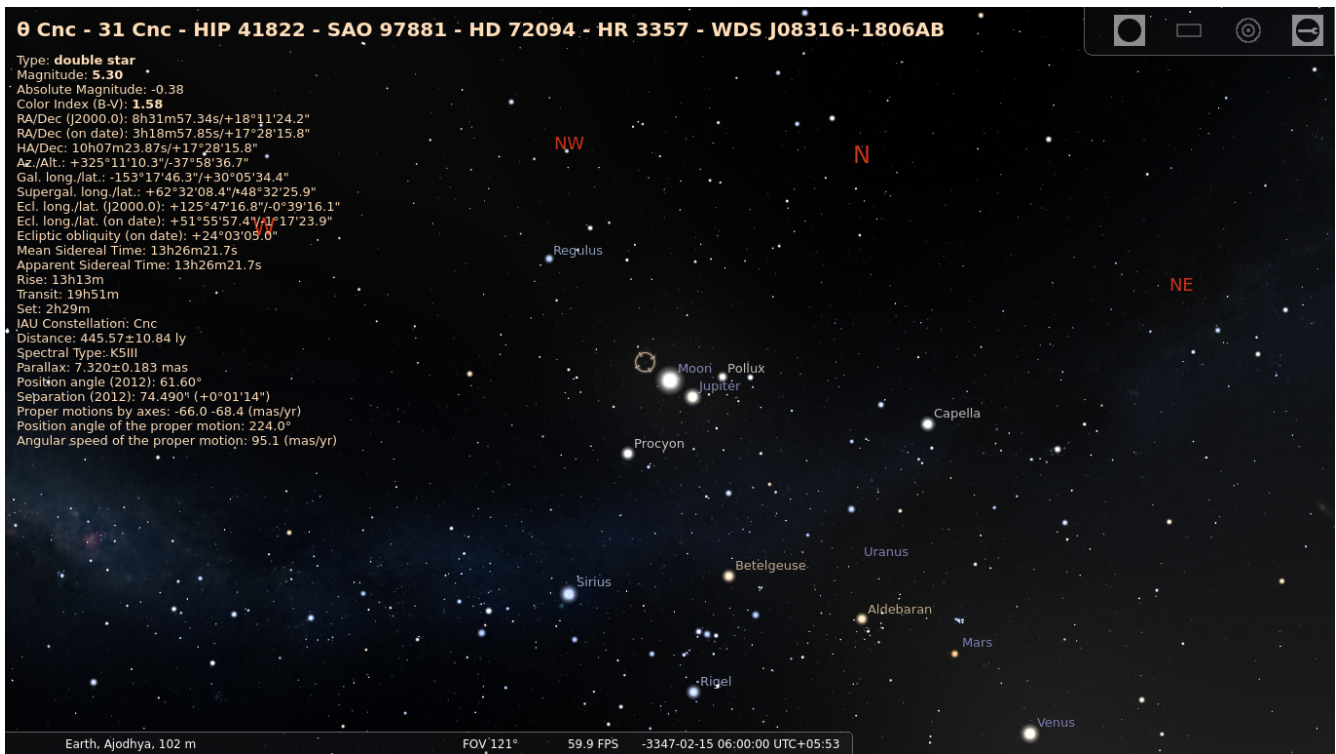
King Dasharatha had three other sons excluding Rama. Chronologically Bharata next to Rama was born on 15<sup>th</sup> February 3348 at early morning at Pusya Nakshatra. His lagna was Pisces so he had to be born before sunrise on that day. Pisces was rising from the east. Lakshmana and Shatrughna the twin brothers were born on the same day at Ashlesa Nakshatra. Their lagna was cancer. Hence their time of birth was between 1-30 and 3-30 PM like birth time of Lord Rama. The following slides 13 to 16 will confirm the text compiled by Valmiki.



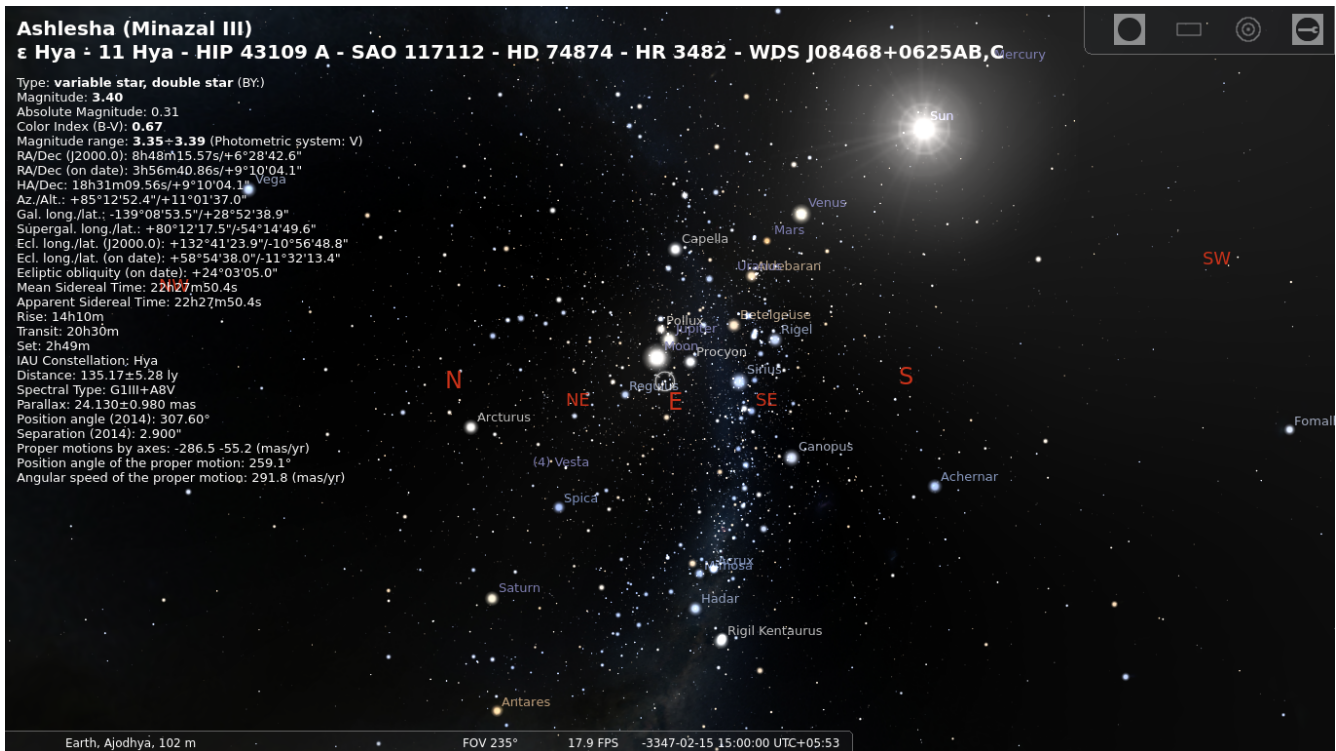
SLIDE 13: SKY ON 15TH FEBRUARY 3348 BCE



SLIDE 14: PISCES RISING FROM EAST ON 15TH FEB 3348 AT 6AM (BIRTH OF BHARATA)



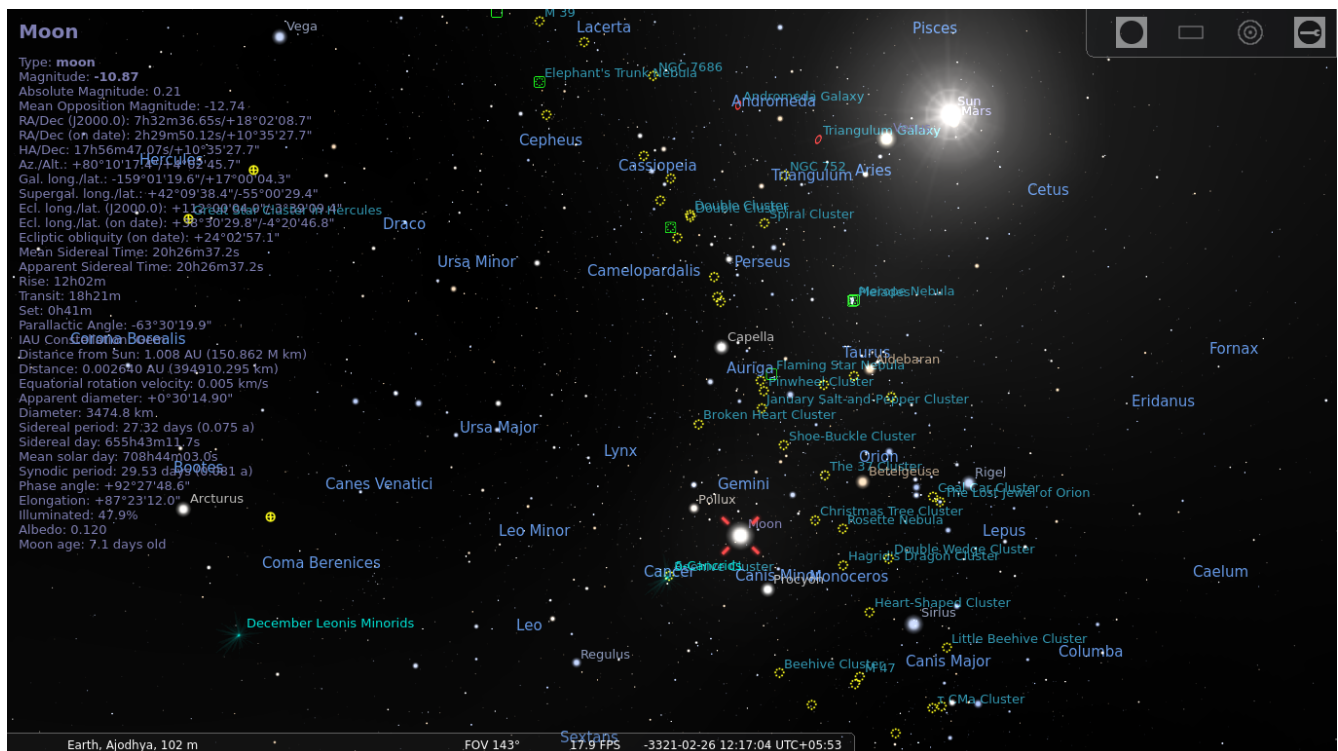
SLIDE 15: MOON AT PUSYA ON 15TH FEB 3348 BCE (BIRTH OF BHARATA)



SLIDE16: MOON AT ASHLESHA 15FEB3348BCE (BIRTH OF LAKSHMANA & SHATRUGHNA)

### 8.3 EXILE OF LORD RAMA:

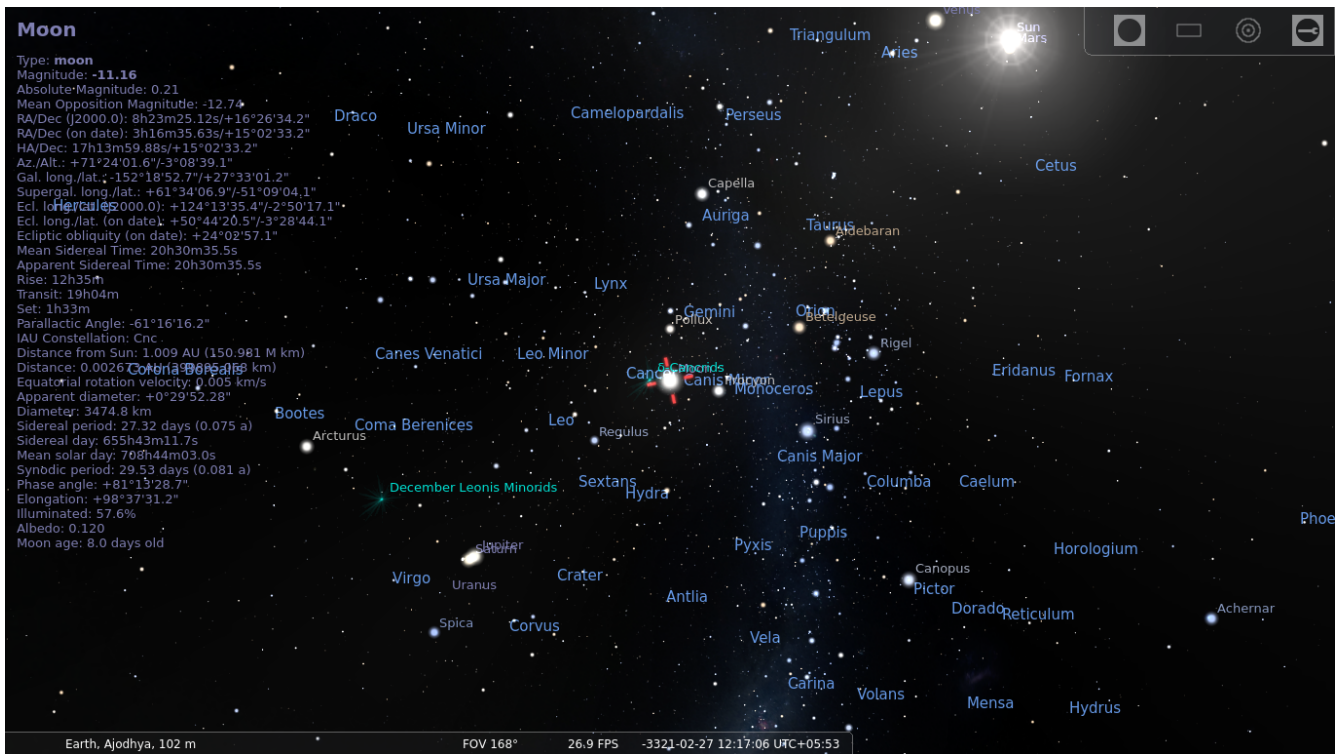
The date of forest exile of lord Rama and his family is simulated as 27<sup>th</sup> February 3322 BCE at late afternoon. Jupiter and Mercury were visible on the horizon. Jupiter rose at 16-50-36 hrs on eastern sky and Mercury set at 16-49-32 hrs on western sky [VR 2-41-11&12]. On the previous day the moon was as Pollux under Gemini constellation and on the day of exile the moon was at Pusya under Cancer constellation. In the year 3322 BCE Phalguni purnima occurred on 5<sup>th</sup> February when the moon was at Denebola (Beta Leo) and Chaitra purnima occurred on 6<sup>th</sup> March when the moon was at Spica. So Rama left Ayodhya before Chaitra purnima and after preceding new moon day. Vernal equinox occurred on 1<sup>st</sup> February according to J 2000. The following slides 17 to 24 indicate the confirmation of the statements described by Valmiki.



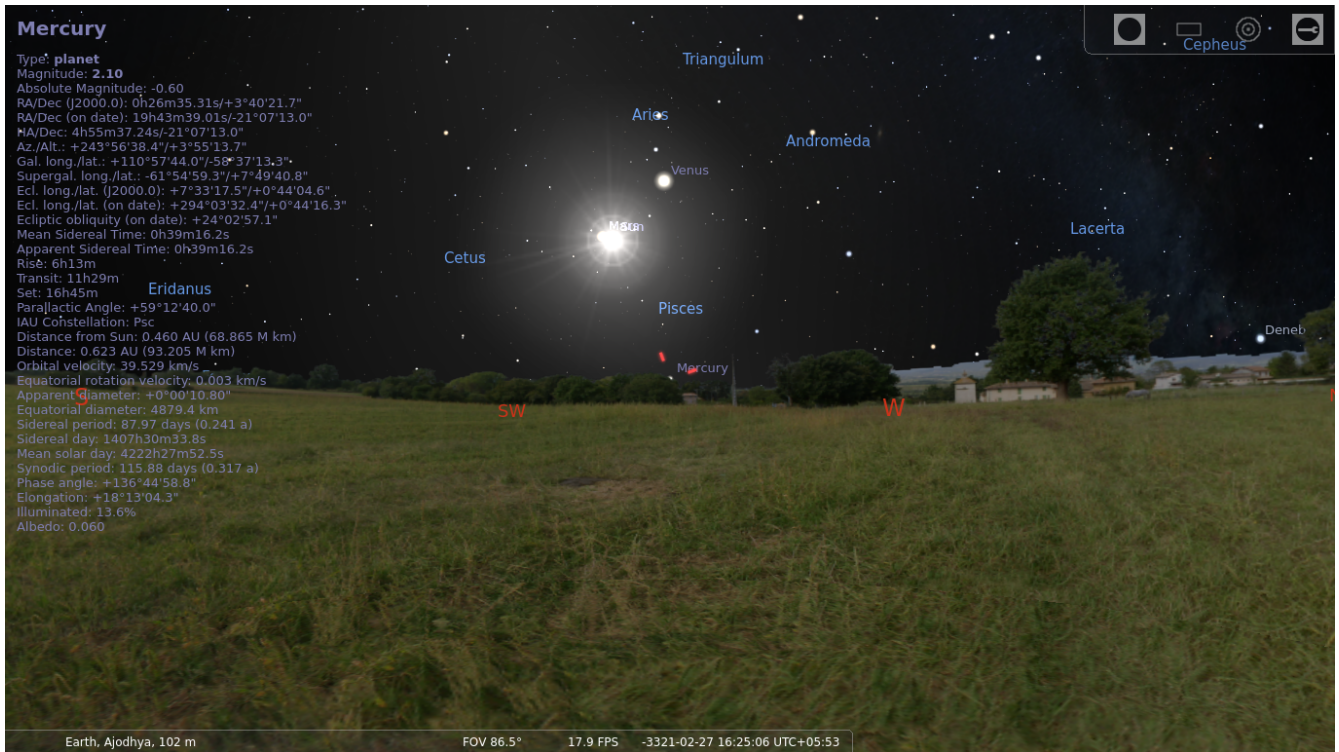
SLIDE 17:

POSITION OF MOON ON 26TH FEB 3322 BCE





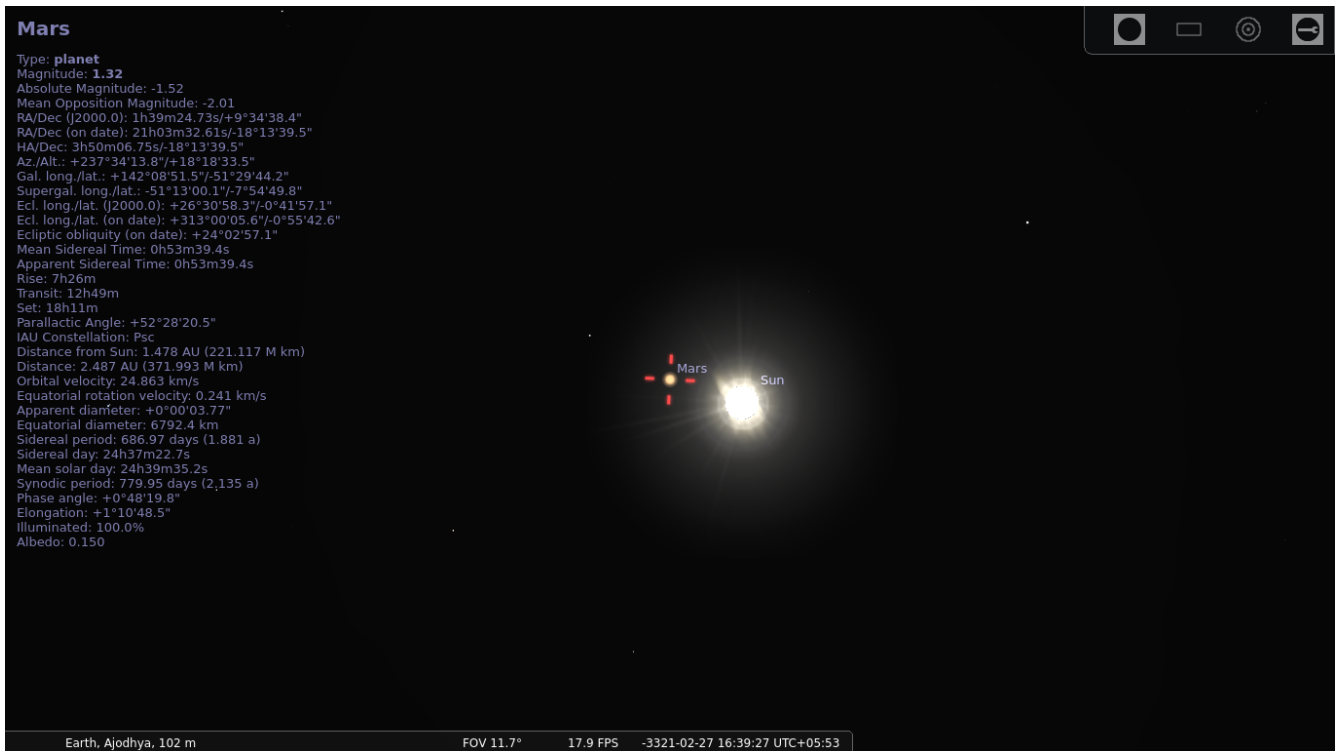
SLIDE18: POSITION OF MOON ON 27TH FEB 3322 BCE (DATE OF EXILE OF RAMA)



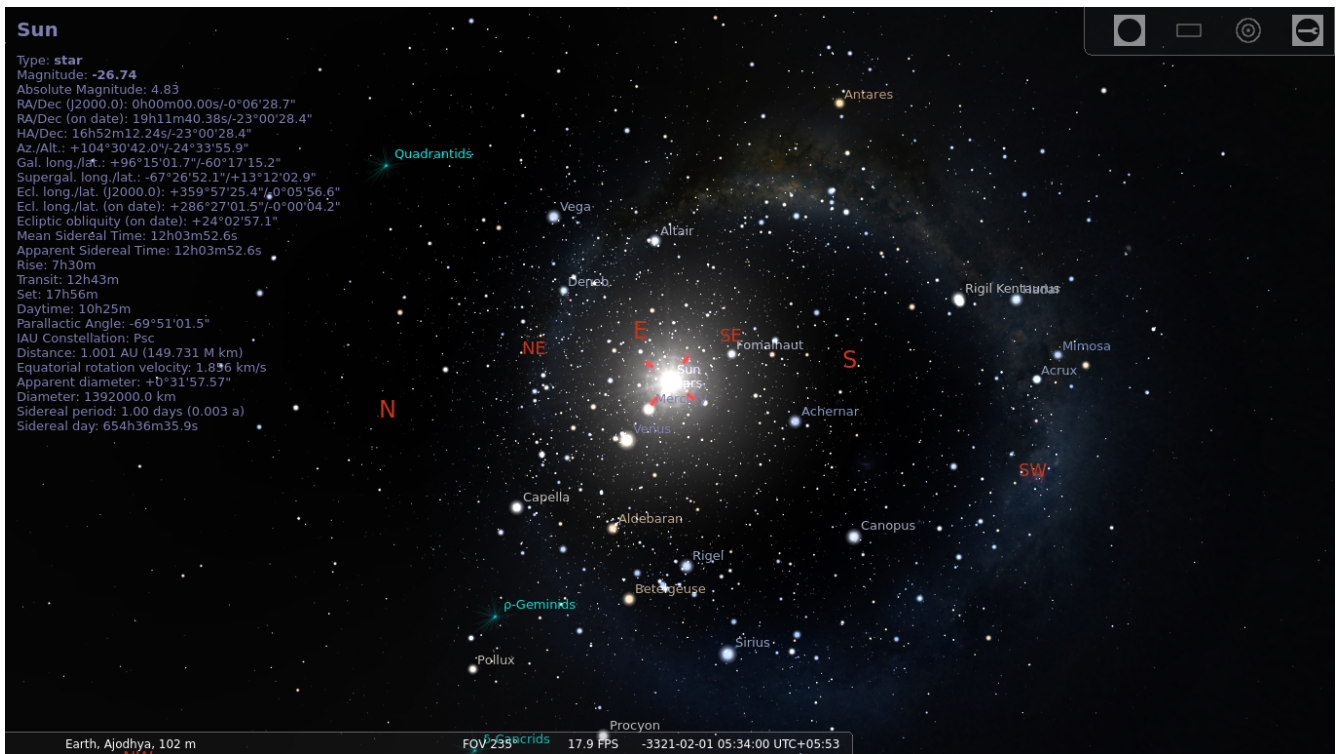
SLIDE 19: POSITION OF MERCURY (SETTING) ON 27TH FEB 3322 BCE AT AFTERNOON



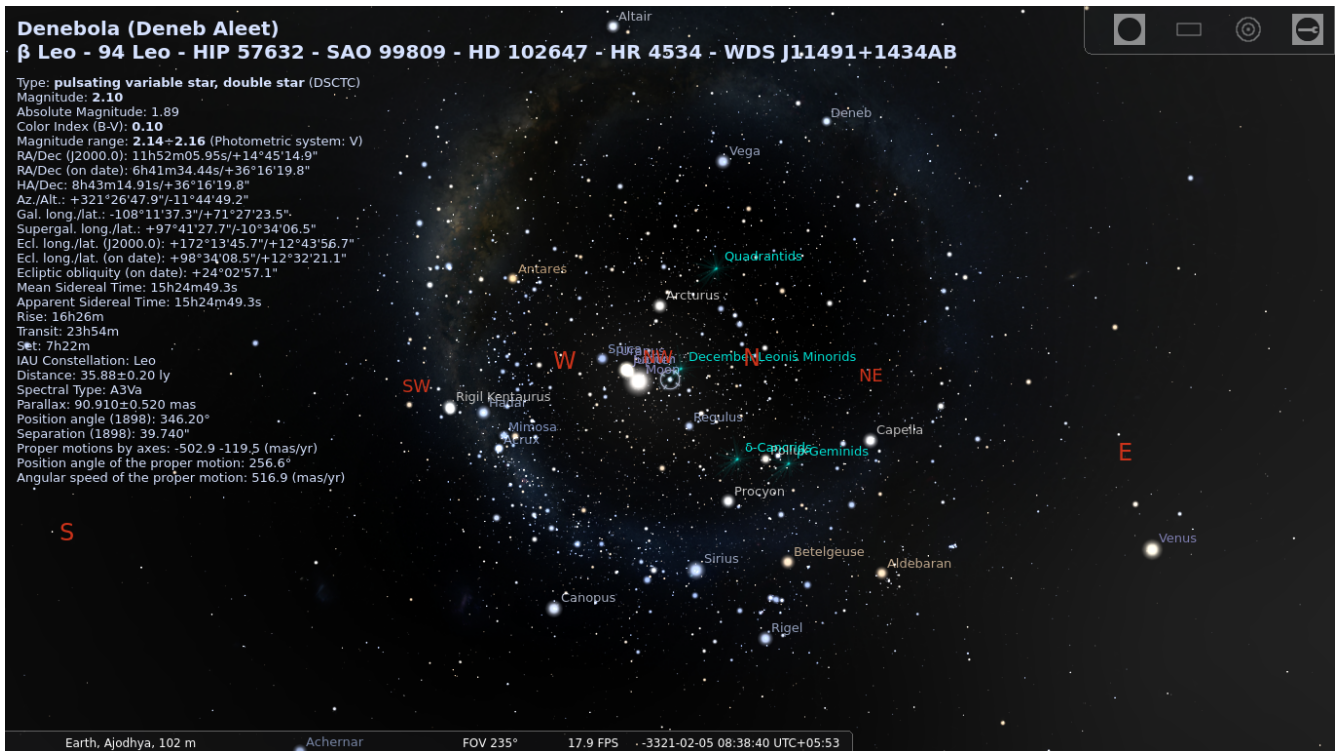
SLIDE 20: POSITION OF JUPITER (RISING) ON 27TH FEB 3322 BCE AT AFTERNOON



SLIDE 21: POSITION OF MARS ON 27TH FEB 3322 BCE



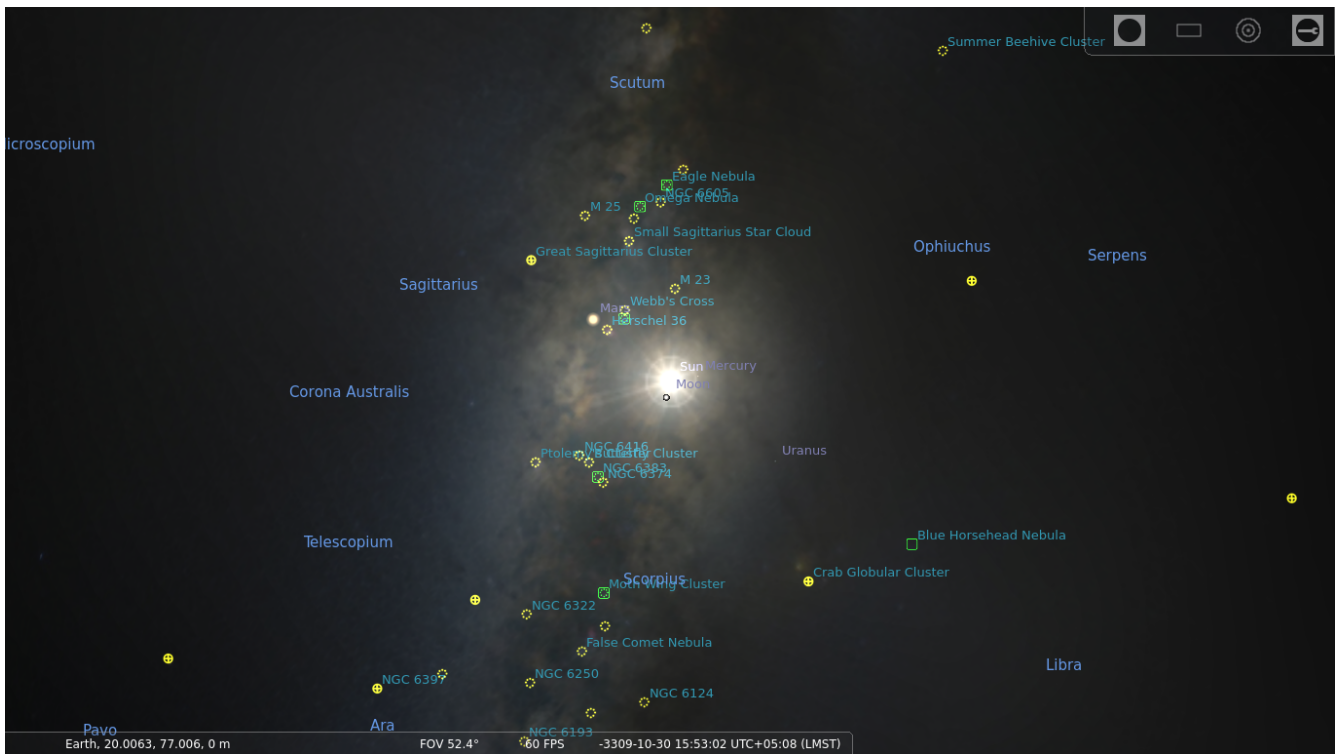
SLIDE22: VERNAL EQUINOX 3322 BCE



SLIDE 23 : PHALGUNI PURNIMA 3322 BCE







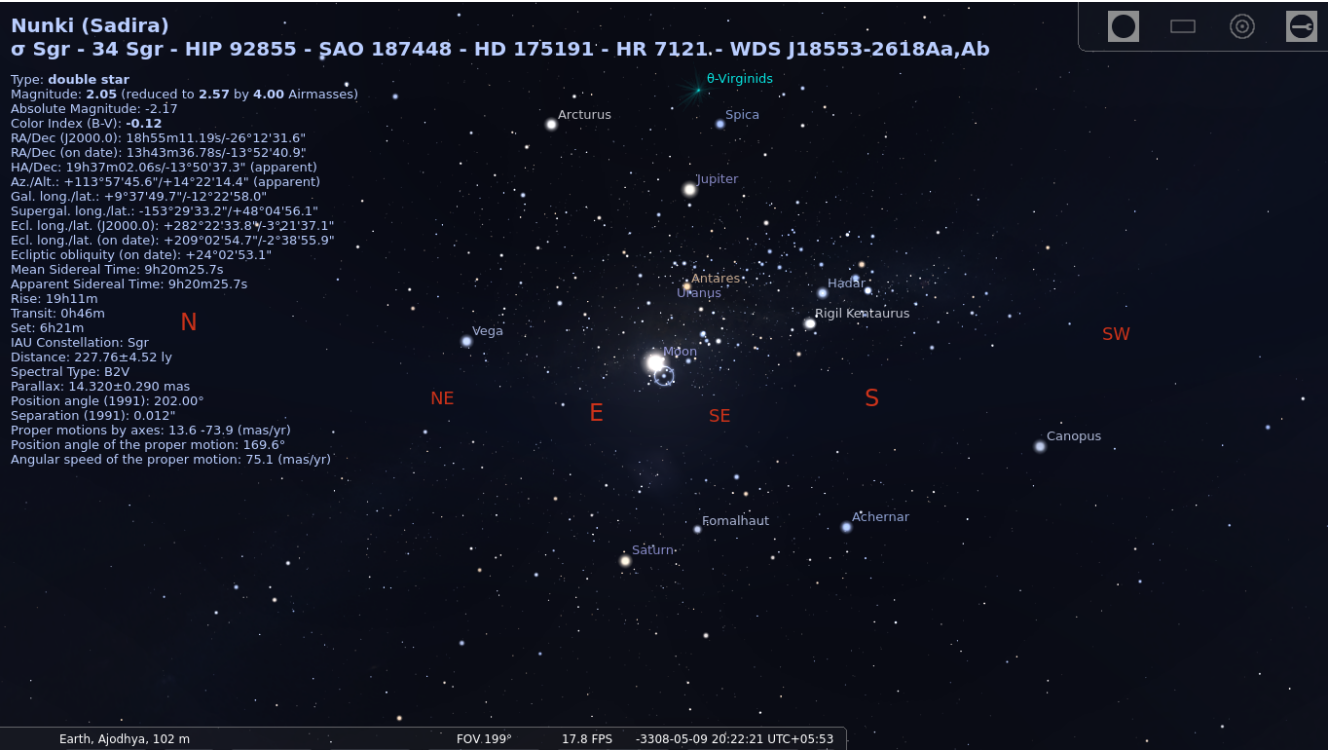
SLIDE 25 SOLAR ECLIPSE VISIBLE FROM NASIK ON 30TH OCT 3310 BCE

## 8.5 DEATH OF VALI:

The day of demise of the Banara king Vali is computed as 25<sup>th</sup> April 3309 BCE. A total solar eclipse with ecliptic factor more than 95% was visible from Kiskinda on that day. The eclipse was at its maximum from 17-22-23 to 17-22 46 PM. It was a new moon day and occurred in the month of Jaistha. So the time was near monsoon to be started. Next purnima occurred on 9<sup>th</sup> May 3309 BCE. Then the moon was at sigma Sagittarius confirming Ashada purnima. Slides 26 and 27 will confirm the scenario stated above. After the death of Vali Sugriva took the chair. Rama and Lakshmana stayed at Prasravan cave for the entire monsoon of four months. Then they met with Sugriva and planned for next step. Preparatory time to operate Sita search project was lapsed by 10 to 15 days. Then Hanumana and Banara soldiers with Angad being chief started to search Sita towards south. One and half month was wasted by them in the cave of Sayamprava as they lost the way to come out from the cave. So more than six months were over from the day of demise of Vali. Finally Hanumana took the challenge of crossing the sea to reach Lanka.



SLIDE 26 SOLAR ECLIPSE AT KISKINDA ON 25TH APR 3309 BCE



SLIDE 27 ASHADA PURNIMA ON 9TH MAY 3309 BCE

## 8.6 VISIT OF HANUMANA TO LANKA :

According to our calculation Hanumana entered Lanka at night on 3<sup>rd</sup> Nov 3309 BCE. The day was a full moon day. The moon was in lambda Orion confirming the full moon of Margasirsa lunar month. But the actual calendar month was Pausa and it was incidentally 7<sup>th</sup> Pausa as on that day RA of sun (J2000) was 18hr. Some research scholars opined that on that night a lunar eclipse was visible from Colombo. We do not agree with this opinion. No such lunar eclipse was visible on that night. Valmiki never told that. Actually captivated Sita was compared with an eclipsed moon. In VR 5-19-11 to 14 Valmiki beautifully explained the deteriorated condition of Sita being captivated for almost 10 months. He stated as follows;

SANNAMIBA MAHAKIRTING SRADHAMIBA BIMANITAM

PRAGNAMIBA PARIKSHINAMASANG PRATIHATAMIBA 11

AYATAMIBA BIDHBSTAMAGNANG PRATIHATAMIBA

DIPTAMIBA DISHANG KALE PUJAMAPAHATAMIBA 12

POURNAMASIMIBA NISHANG TAMOGRASSTENDUMANDALAM

PADMINIMIBA BIDHBSTANG HATASHURANG CHAMUMIBA 13

PRABHAMIBA TAMODHBASTAMUPAKSHINAMIBAPAGAM

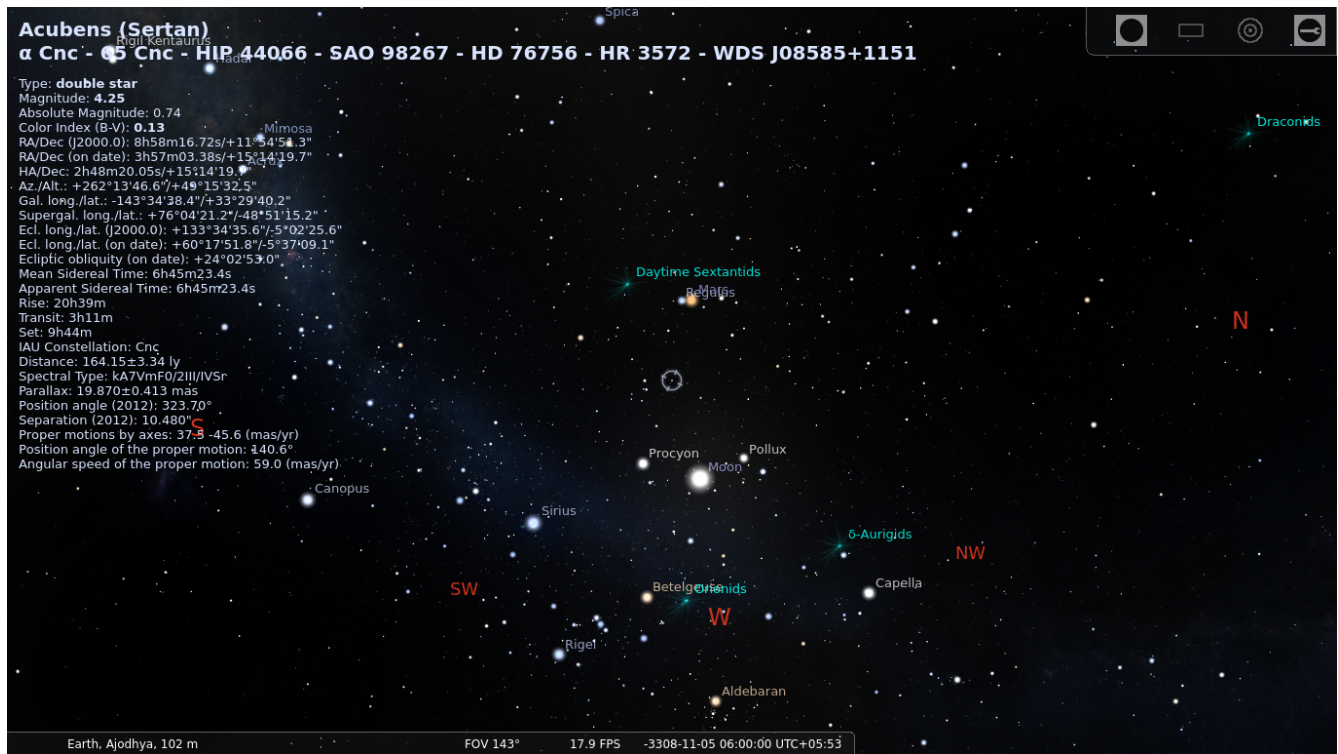
BEDIMIBA PARAMRISTANG SHANTAMAGNISHAIKHAMIBA 14

The above slokas clearly compared the condition of Sita with some earthy and unearthly similes. Being captivated for almost 10 months in demon kingdom Sita obviously was sure to believe that she would not survive long. Ravana gave her ultimatum for one year either to share bed or to die. Out of 12 months only 2 months were left when Hanumana visited Lanka. So she looked very pale covered with dark and mourn which was reflected in her face as eclipsed moon. That was just a simple simile, no real lunar eclipse did occur on that night at Lanka. Hanumana met with Sita and gave her consolation that her bad days would be over in a short period. Raghupati would surely make her free from that humiliation. Then Hanumana burnt Lanka and finally started again to cross the sea at early morning on 5<sup>th</sup> November 3309 BCE to convey the message to lord Rama waited at Kiskinda. Valmiki nicely sketched the sky map during the four hours journey of Hanumana from Lanka to India. In VR 5-57-1 to 4 it is mentioned that on that morning both the sun and the moon was visible in the sky together. Several Nakshtras from Pusya to Sravana were scattered throughout the sky from east to west. Mars was also visible. Now it is quite obvious that on a Krishna pratipda one can always find the sun rising from east and the moon setting at west at a time. That morning was one day after a full moon day, so the observation was absolutely correct. We have computed by Stellarium software and observed the visibility of stars mentioned in the text. Pusya was visible very early in the morning and Sravana was visible at late morning. In between stars were visible throughout the journey. Following slides 28 to 32 confirm the data computed in agreement with Valmiki's observation.





SLIDE 28: MARGASIRSA PURNIMA WAS OCCURRED ON 3 NOV 3309 BCE

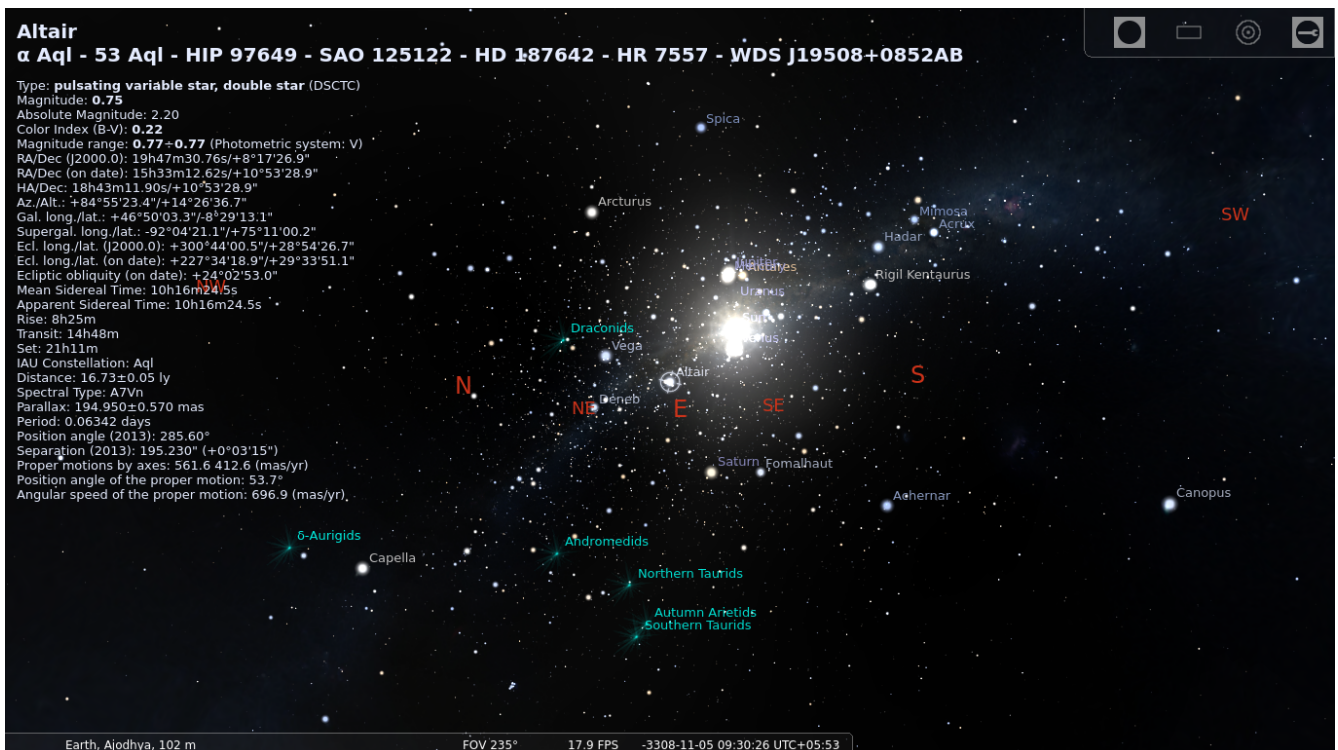


SLIDE 29 : PUSYA NAKSHATRA WAS VISIBLE ON 5 NOV 3309 BCE

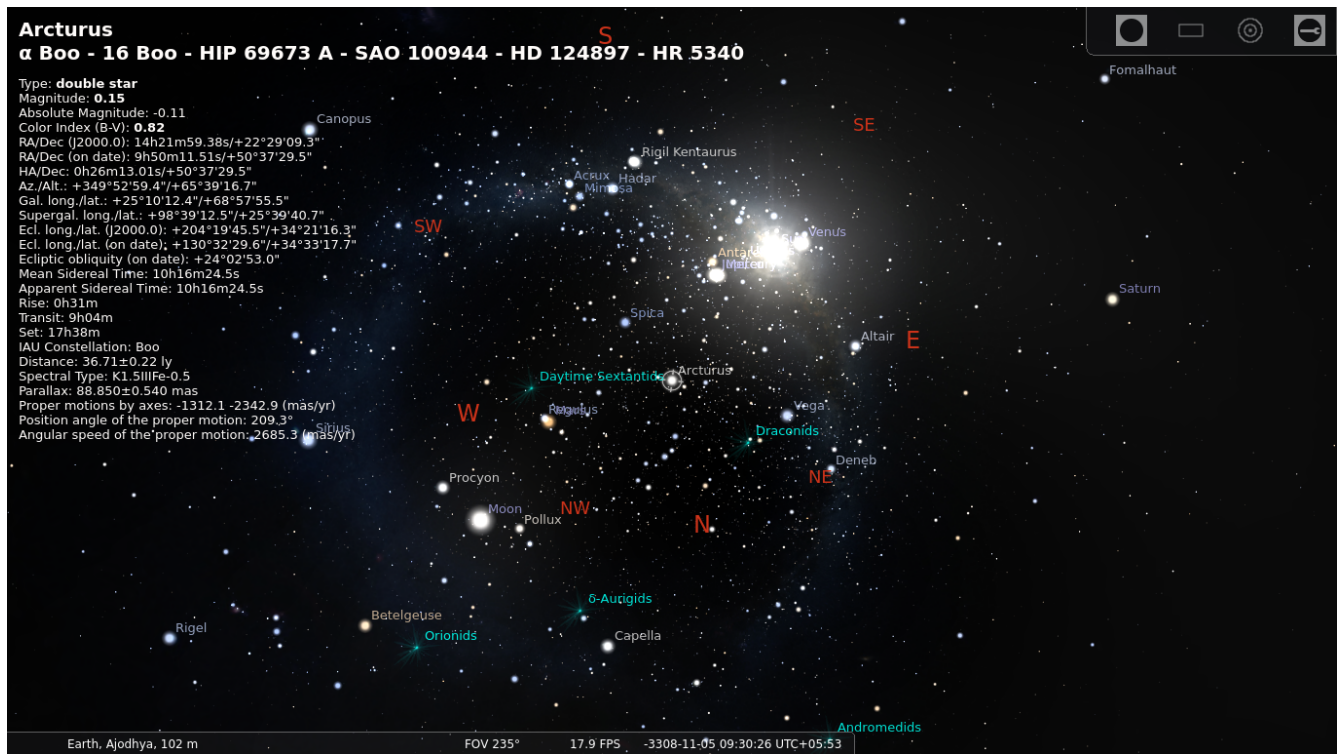




SLIDE 30: SUN MOON MARS WERE VISIBLE TOGETHER ON 5 NOV 3309 BCE



SLIDE 31: SRAVANA NAKSHATRA WAS VISIBLE ON 5 NOV 3309 BCE



SLIDE 32: SWATI NAKSHATRA WAS VISIBLE ON 5TH NOV 3009 BCE

## 8.7 JOURNEY OF RAMA TO LANKA:

The year 3309 BCE was the most important time line of the epic Ramayana. The climax did happen in that year. So many if clauses are there which need minute attention to appear at some feasible solution. We here insert two tables below, one stating the date of equinox and solstice according to J2000 notation and other stating new moon and full moon day of the relevant year.

TABLE 5

Equinox or Solstice	RA	Date	Time	Sun Constellation	Date of Indian calender
Vernal Equinox	0 hr	01/02/3309 BC	13-46-37 hrs	Psc	7 <sup>th</sup> Chaitra
Summer Solstice	6hr	05/05/3309BC	05-25-54 hrs	Tau	7 <sup>th</sup> Ashada
Autumnal Equinox	12hr	06/08/3309 BC	12-11-45 hrs	Vir	7 <sup>th</sup> Ashwin
Winter Solstice	18hr	03/11/3309BC	13-49-41 hrs	Sgr	7 <sup>th</sup> Pausa
Vernal Equinox	0hr	31/01/3308 BC	19-59-25 hrs	Psc	7 <sup>th</sup> Chaitra

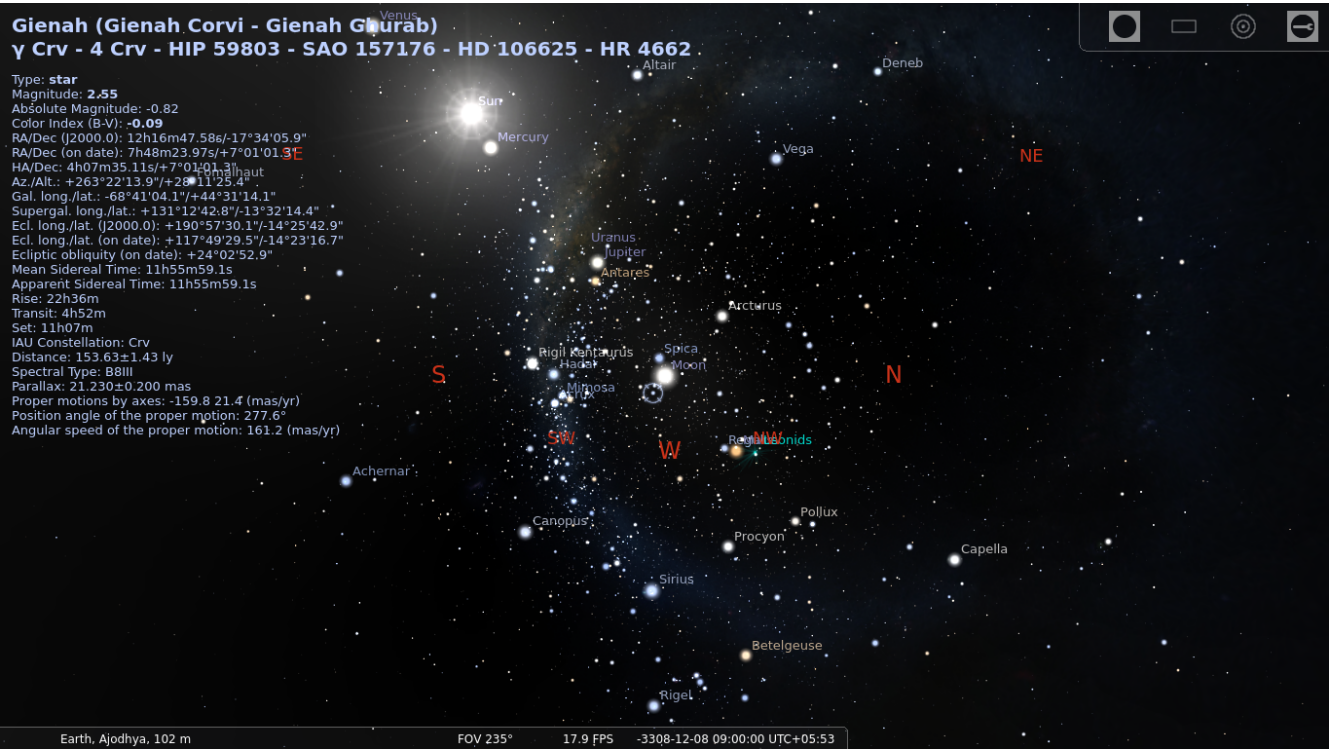
TABLE 6

Western month	Bengali month	Full moon date	Moon in	Lunar month	Calender month	New moon date
JAN 3309 BC	Phalgun-Chaitra	13/01/3309 BC	Leo	Phalgun	Phalgun	28/01/3309 BC
FEB	Chaitra-Baisakh	11/02	Vir	Chaitra	Chaitra	26/02
MAR	Baisakh-Jaistha	11/03	Lib	Baisakh	Baisakh	27/03
APR	Jaistha-Ashada	10/04	Sco	Jaisthya	Jaisthya	25/04
MAY	Ashada-Sravana	09/05	Sgr	Ashada	Ashada	25/05
JUNE	Sravana-Bhadra	08/06	Cap	Sravana	Sravana	23/06
JULY	Bhadra-ASwin	07/07	Aqr	Satabhisha	Bhadra	22/07
AUG	Ashwin-Kartika	06/08	Peg	Uttara bhadrapada	Ashwin	21/08
SEP	Kartika-Margasirsa	05/09	Ari	Ashwin	Kartika	19/09
OCT	Margasirsa-Pausa	05/10	Tau	Krittika	Margasirsa	18/10
NOV	Pausa-Magha	03/11	Ori	Margasirsa	Pausa	17/11
DEC	Magha-Phalguna	03/12	$\alpha$ Cnc	Pusya	Magha	17/12
JAN 3308 BC	Phalguna-Chaitra	01/01/3308 BC	$\alpha$ Leo	Magha	Phalguna	15/01/3308 BC
FEB 3308 BCE	Chaitra-Baisakh	31/01/3308 BC	$\beta$ Leo	Phalguna	Chaitra	15/02/3308 BC

Now we finally proceed to find the time line of the Ramayana war. It is mentioned above that Hanumana returned from Lanka on 5<sup>th</sup> November. Distance of Kiskinda from Rameshwaram is nearly 1000 Km. So, Hanumana and the army took at least 20 days to reach Kiskinda moving at an average speed of 50 Km per day. They reached Kiskinda around 25<sup>th</sup> November. Hearing the message of Sita Rama and Sugriva consulted together to decide the next step to be done. In a hurry Sugriva collected a large regiment and prepared to leave for Lanka within 10 days. Let it be roughly 5<sup>th</sup> December which was a Magha K3 day. Valmiki mentioned that Rama started for war on a morning when the moon was at beta Leonis (Uttarphalguni) and on the next day it would be at Corvi (Hasta) [ VR 6-4-5]. He also mentioned that Lakshmana studied the sky map minutely on the next day after they started from Kiskinda. Venus was rendering light going down horizon. Vishakha was shining at Libra. Big dipper was glowing in northern sky and the crux from south [VR 6-4-46 to 50]. The relevant date was 7<sup>th</sup>



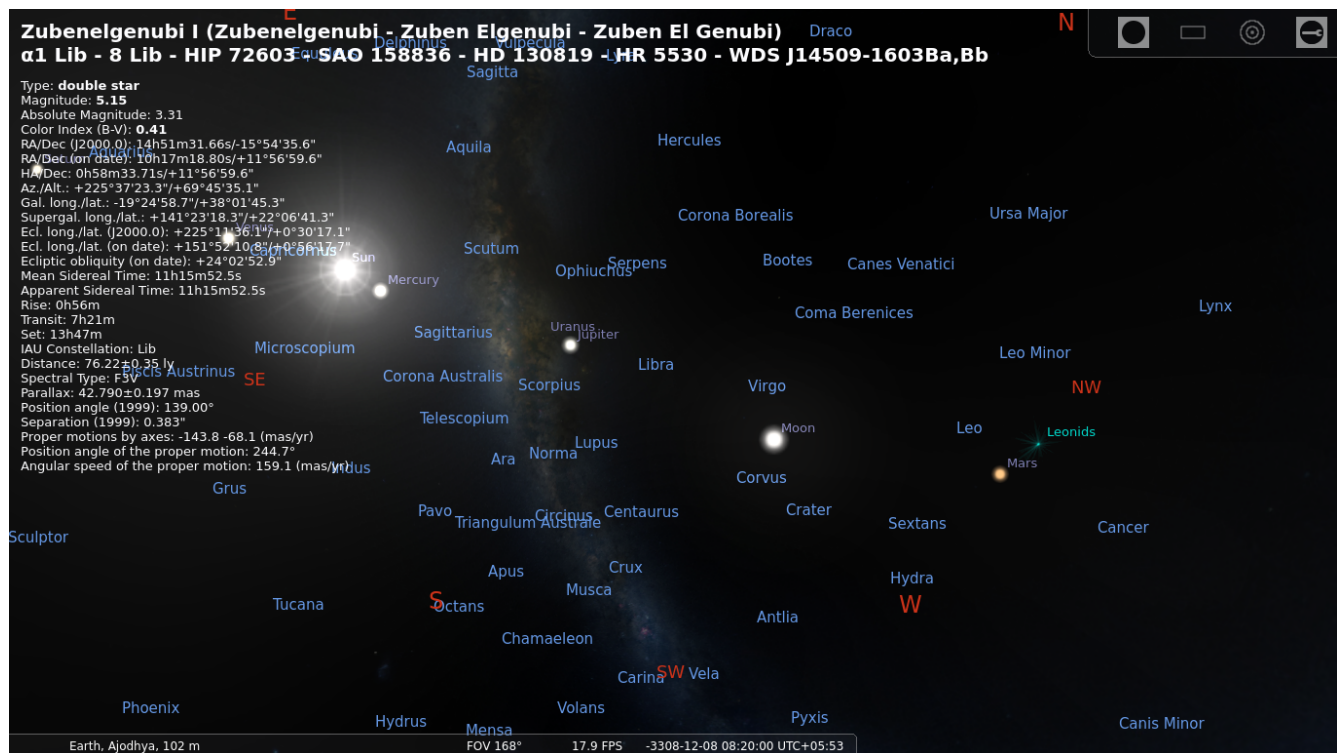
December 3309 BCE as the date of departure from Kiskinda. We have simulated sky position for 8<sup>th</sup> December 3309 BCE. The following slides 33 to 36 confirm our computation. The day was Magha K6.



SLIDE 33 :      MOON IN CRV(HASTA) ON 8TH DEC 3309BCE



SLIDE 34 :      VENUS BELOW HORIZON ON 8TH DEC 3309BC



SLIDE 35: VISHAKHA (ALPHA LIB) SHINING AT LIBRA ON 8TH DEC 3309 BCE



SLIDE 36 : BIG DIPPER SHINING AT NORTHERN SKY ON 8TH DEC 3309 BCE

It is said that Hanumana carried Rama and Angada carried Lakshmana. The army marched hurriedly towards sea and reached the sea shore by 25<sup>th</sup> December 3309 BCE. They had to wait at sea shore for 3 days to find the way to cross the sea. Then bridge was built over the sea and they crossed the sea on 1<sup>st</sup> January 3308 BCE and took rest at night on Subela hill top. The night was a full moon night. The great war was started on Phalguna K1. On the day K14 Indrajit was killed by Lakshmana. Ravana was highly shocked and rushed to kill Sita as a revenge. But one of his fellow commander Suparsha stopped him to do so. He advised Ravana to walk to the battle field on the next day which would be incidentally a new moon day of Phalguna month [ VR6-92-66] to win the battle and to win Sita. As a matter of fact that Ravana was killed by lord Rama in the battlefield. After a ding dong encounter between Rama and Ravana for non stop 8 to 10 days lord Rama was able to kill Ravana on spot. The day of fall of great demon king Ravana might be between S8 and S10. The eastern people believe that Ravana was killed in the tithi Dasera and the people celebrate Dasera festival as the day of demise of Ravana. This Dasera is the day of Vijaya Dasami as celebrated at Durgapuja which occurs in the lunar month of Ashwin -Kartick. If we accept S10 as the day of fall of Ravana but that did never happen in the lunar month of Ashwin or Kartika. It occurred in the lunar month Phalguna. After the battle was over Bibhishan was throned as the king of Lanka by lord Rama. Bibhishan was deeply shocked at the demise of demon king Ravana but he realized the situation that the great Ravana became doomed owing to his over confidence and also due to his merciless fault against Sita. Ultimately Bibhishan and wives of Ravana completed the funeral rituals and their duties to keep Ravana in peace for ever. Some time was over. Rama and his family including Sita along with Bibhishan and close associates started for Ayodhya. Taking few halts on the way to Ayodhya lord Rama finally entered Ayodhya after fulfillment of his 14 years exile in forest and took the charge of Ayodhya in the month of Chaitra which was the month of beginning of his exile. Chaitra month begun on 24<sup>th</sup> January 3308 BCE. War ended around 25<sup>th</sup> January when the Indian Calender month Chaitra was on. So it is clear that Rama entered Ayodhya in the month of Chaitra and definitely before lunar Chaitra purnima that was occurred on 1<sup>st</sup> March 3308 BCE with the preceding new moon day on 14<sup>th</sup> February.

## 9. EVENTS RELATED WITH THE RAMAYANA

TABLE 7

Date	Event	Astronomical references
14 <sup>th</sup> Feb 3348 BCE	Birth of lord Rama	Chaitra Shukla navami. Moon was in Pollux. Five planets (Sun, Jupiter, Venus, Mars and Saturn) were shining with full illumination. Tentative time between 1-30 and 2 PM
15 <sup>th</sup> Feb 3348 BC	Birth of Bharata	Moon at Pusya
15 <sup>th</sup> Feb 3348 BC	Birth of Shatrughna & Lakshmana	Moon at Ashlesha
27 <sup>th</sup> Feb 3322 BCE	Exile of lord Rama	Jupiter and Mercury were visible on the horizon. Jupiter rises at 16-50-36 hrs on eastern sky and Mercury sets at 16-49-32 hrs on western sky

30 <sup>th</sup> Oct 3310 BCE	War with Khar	Solar eclipse was visible from Nasik at 15-53-02 hrs.
25 <sup>th</sup> April 3309 BCE	Lord Rma killed Bali	Solar eclipse was visible from Kiskinda with ecliptic factor 92.49% from 17-22-23 to 17-22-44 hrs
3 <sup>rd</sup> November 3309 BCE	Hanuman entered Lanka	Paus Purnima. Moon was in Gemini.
5 <sup>th</sup> November 3309 BCE	Hanuman left Lanka	Moon and the Sun together were visible in the sky. Many Nakshatras from Pusya to Sravana were scattered in the sky.
7 <sup>th</sup> December 3309 BCE	Lord Rama started for war from Kiskinda	Moon was at Uttaraphalguni.
1 <sup>st</sup> January 3308 BCE	Lord Rama took rest at Subela mountain just before war	Phalguni Purnima
25 <sup>th</sup> January 3308 BCE (tentative)	War was ended	Shukla Dasami
19 <sup>th</sup> February 3308 BCE (tentative)	Lord Rama stayed with Bharadwaj sage on the way to Ayodhya	Chaitra Shukla Panchami(S5)
20 <sup>th</sup> February 3308 BCE (tentative)	Lord Rama returned Ayodhya after completion of forest exile.	Chaitra Shukla Sasthi (S6)

## 10. FAMILY TREES OF RAMA, SITA AND RAVANA

### 10.1 ANCESTORS OF RAMA :

Rama belonged to Ikshavaku dynasty. Vishnu Purana and Valmiki Ramayana described the chronology of the ancestors of Lord Rama. According to Vishnu Puran Rama was 62nd descendant from Ikshavaku the first king of Ayodhya. The chronology (VISHNU PURANA) is furnished below:

- 1.IKSHAVAKU → 2. BIKUKSHI → 3. PURANJAY (KAKUSTHA) → 4. ANENA →
5. PRITHU → 6. BISTARASHWA → 7. YUBANASHWA → 8. SHABANTA →
9. BRIHADASHWA → 10.KUBALAYASHWA (DHUNDHUMAR) → 11. DRIRASHWA →
12. HARSASHWA → 13. NIKUMBHA → 14. AMITASHWA → 15. KRISHASHWA →
16. PRASENJIT → 17. YUBANASHWA → 18. MANDHATA → 19. PURUKUTSA →

20. TRASADDASYU → 21. ANARANYA → 22. PRITHADASHWA → 23. HARSASHWA  
→ 24. HARSA → 25. SUMANA → 26. TRIDHANYA → 27. TRAYARUNI →  
28. SATYABRATA (TRISHANKU) → 29. HARISHCHANDRA → 30. ROHITASHWA →  
31. HARIT → 32. CHANCHU → 33. VIJAY → 34. RURUKA → 35. BRIKA →  
36. BAHU → 37. SAGAR → 38. ASAMANJAS → 39. ANGSUMAN → 40. DILIP →  
41. BHAGIRATH → 42. SUHOTRA → 43. SHRUTI → 44. NABHAG → 45. AMBARISH  
→ 46. SINDHUDIP → 47. AYUTAYU → 48. RITUPARNA → 49. SARBAKAM →  
50. SUDAS → 51. SOUDAS → 52. ASHMAK → 53. MULAK → 54. DASHARATH →  
55. ILIBIL → 56. BISHWASAH → 57. KHATTANGA → 58. DIRGHABAHU →  
59. RAGHU → 60. AJA → 61. DASHARATHA → 62. **LORD RAMA**

## **10.2 ANCESTORS OF SITA :**

In Valmiki Ramayana the family tree of Sitaji was also described. In ancient time a king named Nimi lived in Mithila. The consort of Rama belonged to the family started from the king Nimi. The chronology is as follows:

1. NIMI → 2. MITHI → 3. JANAK → 4. UDABASU → 5. NANDIBARDHAN →  
6. SUKETU → 7. DEVARAT → 8. BRIHADRATH → 9. MAHAVIR → 10. SUDHRITI  
→ 11. DHRISTAKETU → 12. HARYANKA → 13. MARU → 14. PRATIDHAKA →  
15. KIRTIRATHA → 16. DEVAMIR → 17. BIBUDHA → 18. MAHIDHRAT →  
19. MAHARAMAN → 20. SWARNARAMAN → 21. HRASWARAMAN → 22. JANAK &  
KUSHADHWAJ. 23. JANAK → SITA & URMILA

KUSHADHWAJ → MANDAVI & SHRUTAKIRTI.

## **10.3 FAMILY TREE OF RAVANA :**

In Valmiki Ramayana we also find some information regarding the family tree of the demon king Ravana. In far ancient period before the time line of the Ramayana a demon king named Sukesh lived at Lanka. It is believed that he was uprooted from Lanka along with his associates by Lord Vishnu and the Lanka became demon-less. Pulastya was a great sage who resided near the river Narmada. He had a



son named Vishrava who was very talented and courageous like his father. He married the daughter of sage Bhardwaj named Devabarni. Vishrava and Devabarni gave birth of two sons Kuber and Vaishnavan. They begun to stay at Lanka which was demon-less at the then period. During their presence Lanka was once again filled with demons. As a consequence Vaishnavan became the king of Lanka. The demon Sukesh being absconded for a long period came out in locality. He had three powerful sons Malyavan, Sumali and Mali. Sumali had a nice looking daughter named Kaikeshi. Kaikeshi was directed by his father to marry Vishrava the father of Kuber and Vaishnavan. Vishrava was not willing to marry her but finally he accepted Kaikeshi. The demon king Ravana is the son of Vishrava and Kaikeshi followed by Kumbhakarna, Surpanakha and the youngest Bibhshana. Ravana was very powerful and realized himself to be almighty. He had boon from Prajapati Brahma that he would not be killed by any Deva or by any demon. He did never think that an ordinary human would be able to perish him. Thus the given boon did not restrict the activity of a human being. Ravana dethroned the then king of Lanka and became the almighty king of Lanka. Finally he was destroyed by a human, none other but by Lord Rama.

## **11.CONCLUSION**

The present work computed the probable time line relevant to the period of Lord Rama and related contemporary events. We have come to a conclusion that Lord Rama was born on 14<sup>th</sup> February 3348 BCE (Julian day) which according to Gregorian calender estimated as 30<sup>th</sup> January. The date of his exile from the royal palace is hereby calculated as the 27<sup>th</sup> February 3322 BCE (Julian) which was in the month of Chaitra and 7 days before the Chaitra lunar full moon day. After completion of 14 years forest exile he returned in the month of Chaitra before Chaitra full moon day, the relevant year was 3308 BCE (Julian). Solar eclipses were occurred in India during the encounter between Rama and the demon Khara & between Rama and the Banara king Vali. We have calculated the relevant dates as 30<sup>th</sup> October 3310 BCE and 25<sup>th</sup> April 3309 BCE using Stellarium software as our simulating tool. All the important dates and incidents related with the epic Ramayana which were simulated in this work are in well agreement with the text composed by sage Valmiki.

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