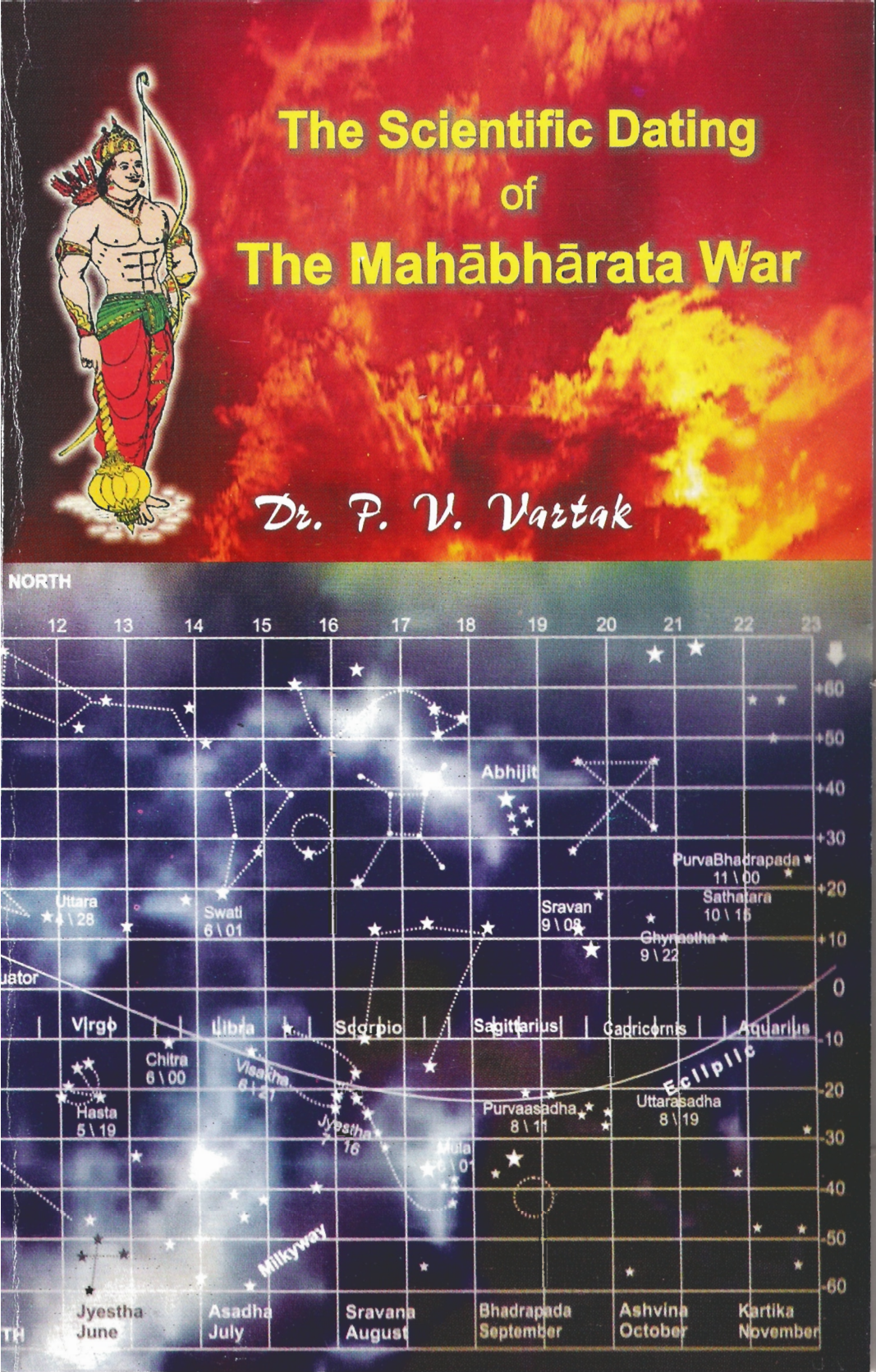
The Scientific Dating
of
The Mahābhārata War
Dr. P. V. Vartak
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Ghynaotha
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Uttara
4 \ 28
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Scorpio
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Uttarasadha
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July
Sravana
August
Bhadrapada
September
Ashvina
October
Kartika
November

The Scientific Dating
of
The Mahābhārata War

16th October 5561 BC

Author

Dr. Padmakar Vishnu Vartak

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THE SCIENTIFIC DATING OF THE MAHĀBHĀRATA WAR. A SINCERE REQUEST

The Mahābhārata war is the most important incident in the history of india, because it affected and changed the whole history of India. It is a great challenge to the historians and Sanskṛta scholars to fix the date of the Mahābhārata War. For the last century scholars are working on this subject, but there is no conclusion yet. Everybody will agree that the date has to be fixed once for all, at any cost. To achieve that goal cooperation of all the scholars is essential.

To undertake this responsibility Veda Vidnyāna Mandala, Pune has come forwards. The founder member of the Veda Vidnyāna Mandala, Pune, Dr. P. V. Vartak has done a deep research, since 1968, on the chronology of the Mahābhārata, Rāmāyaṇa, Vedas etc. and has read research papers in many conferences all over India. All his papers were highly appreciated by the sectional presidents and the delegates at the all India Oriental Conferences held at Pune, Śāntiniketana, Jaipura, Ahmedabad, Viśākhāpaṭnam; All world Sanskṛta Conference (Wārāṇaśi), All India Rāmāyaṇa Conferences at Bhadrāchalam and Ayodhya, the South Indian History Congress Pune, Astronomical Conferences at Hyderabad and Calcutta.

It is highly commendable that though he is a Physician and Surgeon by profession having his own private medical practice and having a well equipped Nursing Home, he is taking keen interest to do research in the ancient Indian Culture. He has exposed advanced science from ancient Indian literature.

We have selected the research paper written by Dr. P. V. Vartak to publish because it is exhaustive and very scientific. He has considered all the possible evidences to prove the date of the Mahābhārata war. He is very consistent in presenting all his evidences. He has taken into account various opinions of other scholars. We have seen that there is no consistency in the evidences given by other scholars, whose approach to the problem appears to be piecemeal. Other scholars have considered only a few evidences neglecting others. Dr. Vartak has shown descrepancies in the works of other scholars. He has solved many riddles from the Mahābhārata giving logical interpretations. He has surpassed all the scholars because he has fixed the dates of almost sixty incidents from the Mahābhārata, proving the historicity of the Epic. We are confident that nobody else in this world has done such a great research work on the Mahābhārata as Dr. Vartak has done.

His printed paper is in your hands, now. Please give your detailed comments or criticism for further research.

We have printed other well studied research paper on the Date of the Rāma-Rāvaṇa War and the Vedic Chronology, written by Dr. P. V. Vartak. Please read it and give comments or criticism.

We are thankful to Mr. Mahālingam (Madras) for his kind donation for publication of the first edition of this book.

Dr. S. B. Lokhande, M. Sc. Ph. D. (Tech) was a very efficient chemist. Having a scientific attitute he turned to the study of ancient Indian sciences. He took important part to establish the Mumbai branch of the Veda Vidnyāna Mandala, in 1981 and since the foundation of the branch he held the post of the Chairman of the Mumbai Branch of the Veda Vidnyāna Mandala. With his able hands and sincere activities the Mumbai branch flourished well. He read papers in each yearly seminars. He also attended all the seminars in Pune.

He was impressed by the research paper written by Dr. P. V. Vartak. viz. "The Exact Date of the Mahābhārata War" and wished that it should be pulished in English. But unfortunately it could not be published in his life. To fulfill his desire his bereaved widow Mrs. Pushpā Lokhande donated Rs. 2,000/- for the publication of the first edition of this research paper.

We are very much grateful to Mrs. Pushpā S. Lokhande for donation.

Thanks. Yours Sincerely,

G. L. Chandrātrerya ... Chairman. **M. B. Pant..... Secretary.**

The Veda Vidnyāna Mandala, Pune,

FOREWORD

Dr. Padmakar Vishnu Vartak M.B.B.S. F.U.W.A.I.,Ph.D.(Lit.) [Washington DC] is our founder member and Chairman of the Board of Trustees. He is our most active research worker doing research in Ancient Indian Science and Culture since 1956. He has written and published 12 books in Marathi and four books in English and has earned a reputation as the original thinker and researcher having clear and open mind .

As Dr. Vartak is our closest and dearest friend we feel that it will not be proper for us to write a formal foreword, so we print here two of the letters from experts. When this article was in the process of printing we received this letter on 8th Feb,1989. We feel that the Destiny has forwarded this letter backing and blessing the work of Dr. Vartak, so we use it as a foreword.

Dr.Hira Lal Gupta,
Ex.Senior Professor & Head of
History Deptt.University of Sagar.

Present Address,191 Kheldar,
Fatehpur,U.P. Pin.212 601
2.2.1989.

Dear Dr.Vartak Padmakar Vishnu,

I have read with considerable interest your article entitled "Perfect Dating of the Rāma-Rāvaṇa War by Astronomical Method" from 3rd November or Phalguna Kṛṣṇa 3rd to 15th November or Phālguna Amāvāsyā,7292 years B.C. It sheds considerable light on the dating of various incidents in the life of Rāma at a time when Archeaological excavations have not yielded any tangible and convincing result. Your approach is novel and laudable and interest of a medical practitioner in the subject, foreign to his scope, is admirable. I congratulate you for this great contribution. Perhaps you are the second scholar in the country next to Lokamānya B. G. Tilak to base historical findings and literary writings on astronomical calculations. It is a novel method worth trying wherever it may be applicable. In the absence of any other method it may be incontrovertible and convincing too. It may solve several historical riddles.

Not being conversant with astronomy, I am interested in your findings. You have fixed the date of the Mahābhārata by the same method. I would request you to send me various dates of the incidents of the life of Shri. Rāma as well as articles on the Mahābhārata and dates of the Epic battle and Gitā .

As historians are not the competent authority to judge the veracity of your paper, may I advise you to give wider publicity to your articles in the standard astronomical journals of India and abroad after modifying the titles of your articles so as to give them astronomical instead of historical look, so that you may receive authoritative and worthwhile comments of some notable scholar of astronomy on your method and calculations. When the subject is thrashed out by competent astronomical authorities, the historians' attention may be drawn to it and may be considered for acceptance.

With best wishes, Yours Sincerely

H.L.GUPTA.

We agree with Dr. Gupta that astronomers should examine Dr.Vartak's novel method and calculations. Wrangler G. L. Chandratreya has examined this paper and is satisfied. Other mathematicians are requested to examine this paper and report to us. Historians and Sanskrit Scholars are requested to examine the historical aspect. With this interdisciplinary cooperation we can definitely fix the Date of the Mahābhārata War. Please note that the Super Computer has given the same date as Dr.Vartak's.

We are glad to publish the letter of wrangler Chandratreya here.

THE CORRECT DATE OF THE MAHĀBHĀRATA WAR
Derived by Dr. P.V. Vartak.

Wrangler G. L. Chandratreya, 1233 B Apte Road,
Pune 411 004
21st August 1986

Quite a number of efforts have been made by various scholars to find the date of the Mahābhārata War. Various methods have been used, using historical references in the purāṇas, language conditions, archeaological findings etc. A few have used astronomical methods to determine the time of the Mahābhārata. It is possible to determine the date of an astronomical reference by considering the movements of the planets including the Sun and the Moon in the various constellations of the sky, the movement of the Earth with its axis inclined to the ecliptic and the precession and nutation of this axis as well as the seasonal changes referred to in the text.

I had the pleasure of going through the work done by Dr. P.V. Vartak, 'The Scientific Dating of The Mahābhārata War' and I find it very interesting. The astronomical references in the Mahābhārata have been gone through carefully and the positions of the planets Saturn, Jupiter, Mars etc. in the various constellations are finalised by properly understanding the distribution in the Sāyan and Nirayan systems. This has been done by considering the references from the view-point of consistency. A particular period has been obtained from the references to various dynasties of kings, account of writings of foreign visitors to India and of references in those countries in this connection like Greece, Egypt and Persia.

The periods of the various planets being known, have been used to find the positions of the planets, including Rāhu and Ketu in the constellations of the sky by mathematical method. These positions agree with those given in the Mahābhārata text. The agreement cannot be by chance and so it is reasonable to argue that the date of the Mahābhārata war is 16th October 5561 Years B.C. as given by Dr. P.V. Vartak.

The seasonal references to various incidents in the Mahābhārata are investigated and they also agree with calculations of the exact dates during the period mentioned. The Tropical year and the Sideral year have been used for verifying these dates. Thus the references to the Equinoxes and Solstices (Ayanas) have also been accounted for.

Of course, it is presumed that the astronomical references are genuine and do refer to the incident mentioned in the text of the Mahābhārata. I am unable to say if all the references (astronomical) have been taken into account. But it is quite reasonable to conclude that the dates as obtained by Dr. P.V. Vartak are correct. It has been shown that the other dates are inconsistent with the references.

Additional efforts will have to be put in by calculating the positions of the planets at some other times and verifying the method used. It is possible to find the dates of other works, medieval and ancient, and verifying these with the actuals as known to us. It will also be useful to determine the changes in the seasons mentioned and comparing them to the period obtained by applying the principle of the two systems of calendar - Solar and the Luni-Solar and calculating the difference due to the precession of the earth's axis.

All in all, it is possible to state that the dates as derived by Dr. P.V. Vartak are more correct than the various other dates propounded

by other workers in the field who have been carried away by the statements made by Western scholars. They have been prejudiced against the richness of the Indian Civilization in the past and have always tried to attribute much later dates and consequently to denigrate the glorious past of India.

G. L. Chandratreya.

Before the advice of Wrangler Chandratreya, Dr. Vartak had already calculated the positions of the planets for a known date in the past and got confirmation from the past records. Wrangler Vishnupant Naralikar (Senior) also had accepted the date of the Mahābhārata derived by Dr. Vartak. Thus expert historians and astronomers-mathematicians have praised the work of Dr. P. V. Vartak. Therefore the Veda Vidnyana Mandal feels proud to publish the second edition of Dr. Vartak's research paper.

Because the whole research paper is based mainly on Astronomy, Dr. Vartak has provided an astronomical map which is printed on the cover, which will be useful for readers to refer to for understanding the subject.

During 1989, we had circulated about700 copies of the first edition to scholars throughout India. Out of 700 we received about 80 responses by letters, all upholding Dr. vartak's date of the Mahābhārata war and his method.

Members of Executive Committee
Veda Vidnyana Mandal,
497 Shaniwar Peth, Pune - 411030.
Maharashtra, India.

Dr. Padmakar Vishnu Vartak , M.B.B.S., F.U.W.A.I.,
Ph.D.{Washington DC}
Address : 521 Shaniwar Peth, Pune 411030, Maharashtra, India. Tel. No. 020.24450387.
Birth at Pune, On 25 – 2 – 1933.

Education : first class with distinction throughout school and college. Stood first in 'London Chamber of Commerce' examination (1946) as well as in the Intermediate Drawing examination (1946). Body Beautiful Champion in school days. Passed M.B.B.S. in the first attempt with distinction in Preventive Medicine, in 1956. Studied for Master of Surgery. Worked as lecturer in Surgery at Lokamanya Tilak Ayurveda College, Pune and Hon. Assistant Surgeon at Seth Tarachanda Ramnath Hospital, Pune from 1956 to 1969.

Began private practice in 1956. Set up Vishnuprasad Nursing Home, fully equipped with X-ray, E.C.G., Pathology Laboratory, etc at 521 Shaniwar Peth, Pune.

Began studies of Yoga and Adhyātma Śastras [Spiritual sciences] since 1956 and practised it as a science. Got extraordinary experiences since 1959.

First experiment of Astral Travel in Samādhi to the planet Mars was done on 10th August 1975. The report with 21 points was kept published out of which 20 points got full corroboration by the spaceship Viking 1 in July 1976,while the 21st point about ancient water and moss on the Mars was tallied by the Pathfinder in 1997. The second Astral Travel to the Mars was done on 12th August 1976 to see the docking of Viking 1 and Viking 2. The report was kept published which got full corroboration after one month by N.A.S.A. Third Astral Travel was done to the planet Jupiter on 27th August 1977. 18 points were published out of which 10 were corroborated, two years later by Voyager in 1979. In Samādhi, saw a man on a planet in a nearby solar system in 1980 and is kept published awaiting corroboration by science in future.

Authored and published twelve **books in Marāṭhi** [1]Swayambhu showing Bheema as the hero of the Mahābhārata, establishing the dates of 60 incidents from the epic and showing how far science was advanced then around 5561 years before Christ. [2] Vāstava Rāmāyaṇa narrating true history of Rāmā, fixing dates of almost 50 incidents with the help of Astronomical mathematics. [3] The Scientific Explanation of the Upanishads, two volumes,(4) Pātanjala Yoga and (5) the Geetā. [6] Autobiography,in which are recorded the experiences of 48 years in the practice of Yoga. [7] Punarjanma i.e. Rebirth. [8] Jesus

Christ was a Hindu Tamil Brahmin. [9] Bājirao the Great – a T.V.serial or Cine script. [10] Veer Savarkar – Geetā Personified. [11] Veer Hanumān. **English Books** : [12] The Scientific knowledge in the Vedas [published by Hindujā Foundation, Delhi.] [13] Scientific dating of the Mahābhārata War. [14] Scientific dating of the Rāmāyaṇa and the Vedas. [15]Scientific Knowledge in the Upanishads and Geetā is handed over to Hindujā Foundation, Delhi for publication. [16] Jesus the Christ was a Hindu, published by Vedic Science, Delhi.

Have read many research papers in many conferences like the Oriental, the Spiritual, Medical, Sanskṛta etc.

Have delivered more than 2500 lectures all over India, particularly Mahārāshtra.

T.V. - have taken part in 8 T.V.episodes on DD1, 3 on DD2, Cable TV Māyaboli, Cable TV [Mumbai]on Bheema [in Hindi & Marathi],Christ and Bājirao the Great. Took part in discussions and gave lectures. **All India Radio** – many lectures are given from Pune, Mumbai, Alahabad, Ratnāgiri.
Has got Fellowship of United Writers' Association of India, in September 2000. Many research papers have gone on www internet.

Still in practice of medicine as well as Yoga. Still helping the people by the Spiritual as well as the medical knowledge.

Has founded two Institutions : [1] Adhyātma Samshodhana Mandira for research in the spiritual sciences, in July 1975. [2] Veda Vidnyāna Mandala for researches into the ancient Indian sciences in May 1976. Both at Vartak Ashram,497 Shaniwar Peth, Pune 411030.

People of Mumbai confered an Honorable degree of ' ***Brahmarśi*** ' on 25-4-1993 in the hall of Rājā Shivāji High school in Hindu Colony, Dadar, Mumbai 28, at the hands of Shri Sudheer Phadke, a renowned musician, along with Shri. S. G.Shevade, a scientist Shri. Bal Gangal, Acharya Balarao Savarkar etc, for the great research work done in the past 40 years. During the All World Rigveda Conference held at Vile Parle, Mumbai, honoured by confering a degree '**Samāja Bhooṣaṇa**' on 29 Dec.1996. The Brahmin Sabha, Girgaon, Mumbai awarded '**Śraddhānanda**' on 17 June 2004, for the great work done about Indian Culture and Science.

Has received 'Fellowship of United Writers' Association of India' during September 2000.

Has received a **degree of Doctor of Philosophy, in Literature, by The International University of Contemporary Studies, Washington DC, U.S.A., dated 25th April 2001.**

THE SCIENTIFIC DATING OF THE MAHĀBHĀRATA WAR

CONTENTS

For Correct pronunciation of the Sanskrta words and letters we have used the letters as follows :-

अ = a आ = ā ऋ = Ṛ च = Ch छ =Chh ट = ṭ ठ =ṭh ड = ḍ

ढ = ḍh ण =ṇ त = t थ = th द = d ध =dh श =ś ष =ṣ

ळ = l ज्ञ = Jna

THE SCIENTIFIC DATING OF THE MAHĀBHĀRATA WAR.

INTRODUCTION

The Mahābhārata War is an important landmark in the history of India. There is a great Epic written by Vyāsa on this war and the politics behind it. Many other books also refer to the great war. So it is beyond doubt that the Mahābhārata War did happen in reality; it is neither an imagination of poet Vyāsa, nor any metaphor.

In spite of so many references to the Mahābhārata War its date could not be fixed uptill now, because while writing the history of the great war Vyāsa has not used any dates and has not given any years in a way which we can understand. It does not mean that Vyāsa has not given any source to fix the date of the war, but we can say that whatever he has recorded is beyond our scope. The fault is ours, not of the sage.

To find out the period of the Mahābhārata War, during last century so many scholars, Indians as well as foreigners, have laboured a lot, but nobody could give a satisfactory period. The sources tackled are (1) Astronomy (2) Genealogy (3) References from the Purāṇas and other Indian Literature (4) Foreign Records (5) Beginning of Kaliyuga Era (6) Beginning of Yudhiṣṭhira Era (7) Saptarṣi Era (8) Inscriptions (9) Linguistics (10) Archaeology (11) Astrology.

The author of the Mahābhārata is Vyāsa. He has stated himself[36] that he vouched at the beginning of the war to establish the fame and honour of the heroes of the war permanently (Bhiṣma 2/13). The statement shows that Vyāsa was the contemporary of the war between Pāṇḍavas and Kauravas and he wrote the history of the war. This fact gives a great importance to the Epic Mahābhārata. Though the Mahābhārata is in the form of an Epic, it is a true history. Hence any wise man will depend on the Mahābhārata to establish the date of the great war. Every scholar at the first instance tried the Mahābhārata but totally failed and therefore they switched on to the other sources. Why did the scholars fail in fixing the date of the war from the Mahābhārata ? The first reason is that they could not find out any date given by Vyāsa, expressly, in a language which the scholars could understand. No scholar took pains to understand the science of time reckoning evolved by ancient India. Except a few scholars nobody was conversant with Astronomy which is the foundation of the Indian science of time measurement.

Those who tried Astronomy took wrong data from the Mahābhārata and followed a wrong method. (This is explained in the article). They were perfect in calculations but the data was wrong, so they failed. Due to their failure other scholars turned away from Astronomy.

European scholars could not understand the Indian style of reckoning time by Astronomy. So they neglected this science totally, and blindly following their path, the Indian scholars also neglected Astronomy. Therefore nobody could fix the period of the Mahābhārata War so far. As a result, the scholars turned to other sources.

LINGUISTICS

Some scholars depended on linguistics. The study of language can help to do some conjecture about the writing of the book; but can not fix the exact date of the writing and can never fix the date of the incident narrated in that writing. So linguistics is unable to fix the date of the Mahābhārata War. It may probably show the period when the Epic was written. I say "may probably" because in the past there was no method of printing and therefore the copies were produced by hand-writing. As the time flows, the language changes and when the change is effected the person copying from the original or previous scripture is bound to change the fashion, so that the then people can understand easily. In this version, the words, sentences and the style may change but the very sense is never changed. In every hundred years the outer body of the Epic will change but its soul will never change. Hence examination of the outer body will not help to fix the time of the inner soul. In the modern times the Mahābhārata is translated in many languages but the very text is not changed, it remains that of Vyāsa.

Moreover it is to be noted that the pattern of any language does not progress all the time, it may, at times, regress also. But this fact of regression is not taken into account by the scholars. For example, the English Language fifty years ago was much better than that at the present. Sanskṛta language of Kālidāsa 2000 years ago was far superior than that at present. If this is not considered (and is usually not considered) a present author like me may be taken back to the past, before Kālidāsa or Vālmiki, simply because their language is far better than mine. Considering my poor language I will be put in the time when Sanskṛta arose, then will come Vyāsa, then Vālmiki and then Kālidāsa.

Thus, if we depend only on the pattern of the language our dating will be topsyturvy. The language of Vālmiki and his poetry is far better than those of Vyāsa and therefore many scholars say that the Mahābhārata is more ancient than the Rāmāyaṇa. I have shown how wrong this concept is !

The style of the language of one and the same person changes from time to time. So it is not wise to say that some insertion is done later, only on the ground that style or pattern is changed. I shall request you to do one experiment of this kind. You yourself select one topic and write a few lines on it. Next day or some days later you again write on the same topic, afresh. Then compare the two, you will find a lot of difference. The same person in a day changes his style and pattern, then why rely on these factors to fix the date of the writing? If there is no other method available then it is tolerable to depend on the language, otherwise it is futile. So I respect those who tried to find out when the Mahābhārata is written, studying the language when no other method was available to them; but now, I request them to keep away their ego and with an open mind examine all the evidences, particulary Astronomical and come to a definite conculsion, about the date of the Mahābhārata War.

INSCRIPTIONS

Some scholars rely on the various inscriptions found in the temples and elsewhere to fix the date of the Mahābhārata War. If there is no other alternative then this method is tolerable, otherwise it is not reliable because all the known inscriptions are dated as far back as 400 AD. Those who prepared those inscriptions were not conversant with the scientific methods available now in the modern Science Age. So, why should we depend on the conjectures of the ancient people? Why not use scientific method to come to the conclusion ourselves? I will prefer the use of the modern scientific ways to fix the date of the Mahābhārata War rather than to rely on the Inscriptions which are vague and inconclusive. Let us examine two famous inscriptions always quoted by the scholars.

AIHOLE INSCRIPTION

All the scholars have relied on this inscription found in the Jain Temple at Aihole prepared by one Chalukya King Pulakeśi. It says, according to scholars, that the temple was constructed in 30+3000+ 700+5 = 3735 years, after the Bhārata War and 50+6+500 = 556 years of Śaka era in Kali era. Today Śaka era is 1925 while Christian era is 2003. Hence 1925-556 = 1369 years ago the temple was constructed. Thus the year of inscribing this note is 634 AD. At this time 3735 years had passed from the Bhārata War. So the date of the War comes to 3101 BC. This is also the date of Kali Yuga commencement. Naturally, it is evident that relying on the beginning of Kaliyuga Era and holding that the war took place just before the commencement of Kaliyuga, this inscription is prepared. It is obvious from the Mahābhārata that the War did not happen near about the beginning of the Kali Yuga. (I have considered this problem fully at a later stage.) If we can see that the inscription is prepared by relying on some false assumption, we have to neglect it, because it has no value as an evidence. Moreover the interpretation done by the scholars is doubtful, because they have not considered the clauses separately and they held Bhārata War and Kali Era as one and the same.

The verse inscribed is :

त्रिंशत्सु त्रिसहस्रेषु भारतदाहवादित : ।
सप्ताब्द शतयुक्तेषु गतेष्वब्देषु पंचसु ।
पंचाशत्सु कलौकाले षट्सु पंचाशत्सु च ।
समासु समतीतासु शकानामपि भूभुजाम् ॥

I would like to interprete the verse considering the clauses of the verse. It says " 3030 years from the Bhārata War" in the first line, त्रिंशत्सु त्रिसहस्रेषु भारतदाहवादित: where the first clause of the sentence ends. In the second line, the second clause starts and runs up to the middle of the third line thus ''सप्ताब्द शतयुक्तेषु गतेषु पंचसु पंचाशत्सु कलौकाले'' This means 700+5+50 = 755 years passed in the Kali Era. The remaining third clause is ''षट्सु पंचाशत्सु च समासु समतीतासु शकानामपि भूभुजाम्'' It means 6+50=56 years passed of the Śaka Kings.

Here the verse does not specifically say the Śālivāhana Śaka but scholars have taken granted that it is Śālivāhana Śaka without any base or reasoning. The verse may have mentioned some other Śaka kings from ancient era. So we will neglect the doubtful part of the Śaka

counting which is useless and we adhere to the Kali era expressly mentioned. It is clear from the former portion of the verse that 3030 years passed from the Bhārata war and 755 years passed from the Kali Era. The Kali Era started from 3101 BC. out of which 755 years have passed. So 3101-755 = 2346 BC is the year when 3030 years had passed from the Bhārata War. So 2346+3030 = 5376 BC appears to be the date of the Bhārata War.

HISSE BORALĀ INSCRIPTION OF DEVA SENĀ

This inscription is of 5th Century AD and scholars hold that it throws light on the time of the Mahābhārata War. It states that Saptarṣis were in Uttarā at the time of this inscription. Scholars hold that Saptarṣis were in Maghā at the time of Yudhiṣṭhira, because Varāhmihira has stated so in Bṛhat-Samhitā. Scholars also hold that Yudhiṣṭhira's time is 3137 BC. Saptarṣis stay in one Nakṣatra for 100 years,[12] and there are 27 Nakṣatras. Hence Saptarṣis would be again in Maghā 2700 years later during 4th century BC. From here if we count upto 5th century AD we get eight Nakṣatras. Hence in the 5th century AD, Saptarṣis should be in Anurādhā and not in Uttarā. From Anurādhā to Uttarā Aṣāḍhā there is a difference of five Nakṣatras, while from Anurādhā to Uttarā Phalguni there is a difference of six Nakṣatras. So it is quite evident that at the time of Yudhiṣṭhira, Saptarṣis were not in Maghā as held by the scholars. Here I have shown a mistake of five to six hundreds of years. Moreover, there are three 'Uttarās' and the inscription has not stated specifically which Uttarā it denotes. Thus this source is unreliable and should be rejected. I have considered Saptarṣi reckoning in details at a later stage on page 28.

While going to examine the sources scientifically, I shall give the honour of the first place to Astronomy. One may question that how far Astronomy was advanced in those olden days? I say affirmatively that Astronomy was far advanced in the ancient times, and the ancient Indian sages had perfected the science of time measurement relying on Astronomy.

THE SCIENCE OF MEASURING TIME IN ANCIENT INDIA.

Before going in details of the sources of dating the Mahābhārata let me explain how perfect is the Indian Science of measurement of time. This science is evolved since Vedic period. The Vedic sages observed that every day the Moon changes its shape and size. There is waxing and waning of the Moon. Once the Moon is full and after 15 days it vanishes completely. The day when the Moon is not seen at all is called as 'Amāvāsyā' since Ṛgveda. Amāvāsyā means staying together. So it is obvious from the name itself that the Vedic sages knew the reason why the Moon vanishes. Because the Moon stays with the Sun it is not seen. The modern scientific age uses the word "New-Moon-day" for Amāvāsyā. This word is quite unscientific because we do not get new Moon every month. This shows the scientific attitude of the Vedas.

From Amāvāsyā to Pourṇimā there is gradual increase in the Moon's size, day by day. Relying on this shape and size of the Moon 'Tithis' are named as Pratipadā, Dwitiyā, etc. From Amāvāsyā to Pourṇimā usually there are 15 days and this fortnight is called as 'Śukla Pakṣa'. From Pourṇimā to Amāvāsyā we call 'Kṛṣṇa Pakṣa'. Thus a month of 30 days is divided into two Pakṣas and each Pakṣa is composed of 15 Tithis.

The month is named after the Nakṣatra in the vicinity of the Full-Moon. If the Full-Moon is near Chitrā Nakṣatra we call it as 'Chaitra' Māsa. These are lunar months and the lunar way of counting and naming the days. If this method is used and the name of the lunar month is given, we can find out the positions of the Sun and the Moon in constellations. There was another method of naming and counting the days which depended on the position of the Moon in the Nākṣatra cycle. If tonight the Moon is seen in Chitrā Nakṣatra the next night it will be in the next Nakṣatra Swāti. Every day the Moon changes the Nakṣatra. After 28 days it comes to the original position again. Thus the days are known by Nakṣatra's names. This Nākṣatra month is composed of 28 days.

The Moon and its movement through the 27 Nakṣatras was observed by some sages and time was measured accordingly. At the same time some sages observed the Sun and its movements. Every day at dawn the sages used to offer some water to the rising Sun. In this practice they observed that the Sun moves to the South for some period and then it reverses and starts moving to the North. After a period

the Sun approaches the extreme point in the North and returns towards the South again. This swinging movement of the rising Sun is named as Uttarāyaṇa and Dakṣiṇāyana The passage of the Sun from the extreme Southern Point- Winter Solstice- towards the North is termed as Uttarāyaṇā which occupies the time from 22th December to 21st June according to the Modern Scientific Calendar. Dakṣināyana means the journey of the Sun from the northernmost point (Summer Solstice) towards the south i.e. in the modern language from 22nd June to 22 December.

The Indian sages observed that when the Sun goes to the extreme South (Winter Solstice) there is severe cold. They took this as the mid point of the cold season which is composed of four months. They divided this cold season into two Ṛtus, Hemanta and Śiśira, each comprising of two lunar months. Hemanta ended with the winter solstice and Śiśira started with it.

The sages observed that when the Sun was at the extreme North (Summer Solstice, 22nd June) there was hot season and as soon as the Sun started its travel to the South, rains came in all over India. Ṛgveda 6-32-5 and Vālmiki Rāmāyaṇa 2/63/15 state expressly that Rainy season (Varṣā) started with the Dakṣināyana. The phenomenon is experienced even at present.

In this way the sages prepared six seasons related to the positions of the rising Sun and named them as Vasanta (21 Feb. to 21 April), Greeṣma (21 April to 21 June), Varṣā (22 June to 21 Aug.), Śarad (21 Aug. to 21 Oct.), Hemanta (21 Oct to 21 Dec.) and Śiśira (22 Dec. to 21 Feb.). They also noticed the Viṣuvān Day when the day and night were equal. (21st March and 23rd September} These are the vernal and autumnal equinoxes. See figure on page 87.

The sages were keen enough to note down the position of the Sun at the cardinal points of the Equinoxes or Solstices. Because they recorded solar position in the Nakṣatras at these points, we can assume that they knew the phenomenon of the precession of equinoxes, which is a peculiar motion of the Earth's axis, due to which we see that the Sun recedes back on the equinoctial days at the rate of 72 years per degree or 960 years per Nakṣatra.

The seasons depend on the Solstices and Equinoxes i.e. on the

relation of the Sun and the Earth. Hence due to the precession the Ṛtus shift back on the Lunar months at the rate of one month in (30x72=) 2160 years. At present Rainy Season starts in India in Jyeṣṭha Māsa but Kālidāsa describes the onset of the Rainy season in Āṣāḍha Māsa. One month is shifted so we can say that Kālidāsa was 2000 years ago. This is true to the known history. Bhāgawata describes rainy season in Śrāvaṇa Māsa, so it is about 4000 years old i.e. 2000 BC. Harivanśa describes hot summer in Śrāvaṇa[45] so it is 4000 BC. Vālmiki in his Rāmāyaṇa describes onset of Rainy season at Āśvini Pourṇimā. In other words on 22nd June at the Summer solstice the Sun was residing in Chitrā Nakṣatra during the Rāmāyaṇa era. At present the Sun on 22nd June resides in Ārdrā. The Sun at Summer solstice has shifted by nine Nakṣatras from Chitrā to Ārdrā. Multiplying 9 by 960 we see that 8640 years ago the Rāmāyaṇa happened.

Thus by this method we can get approximate span of the period in question if these points are available.

The ancient sages were keen to note down in their 'Sankalpa' of any function, the Tithi, Vāra, Nakṣatra, Pakṣa, Lunar Month, Ṛtu, Ayana and Varṣa. From this we can find out the period when a particular thing happened. Their season-Ṛtu consisted of two lunar months. They had also deviced ' Ārtava Māsa' i.e. seasonal months. Thus Madhu and Mādhava were the two months of Vasanta Ṛtu. Greeṣma consisted of Śuchi and Śukra, Varṣā was composed of Nabha and Nabhasya, Śarad covered Iṣa and Urja, Hemanta was divided into Saha and Sahasya, Śiśira was composed of Tapa and Tapasya. (Taittiriya samhita 4-4--11) These seasonal months match exactly with the modern scientific months and are fixed to the Sun's position in relation to the Earth.

Here it is very important to note that these seasonal months were used and the Lunar months were also used, right from the Taittiriya Samhitā, but they were not the same. Many scholars have wrongly translated Madhu Māsa as Chaitra. These two were superimposed during last two thousand years and therefore people started thinking that Chaitra means Madhu. But if we see the principle we can immediately understand that the seasonal months are quite different from the lunar months. Seasons shifted back on the lunar months.

The sages had noticed that the lunar year was shorter than the solar year by 10 days. Lunar year is of 354.367 days while the solar year is of 365.256 days. So the difference is 10.889 days. Due to this deficit in a period of five years, they noticed the change in a season by two lunar months. So they deviced a method to intercalate two lunar months after a period of five years. Upto the Mahābhārata this was the custom[33] From Vedānga Jyotiṣa the custom was changed and they started taking one intercalary month in every third year.[47] By this ingenious way they correlated the lunar year with the solar year.

If we bear this knowledge in our mind we can easily find out the approximate period of any incident, because if we know the lunar month and the Ṛtu we can locate the position of the Sun and the Moon. For finer details we need Tithi and Nakṣatra.

In addition to this superb method of fixing the time the ancient sages deviced one more method to pinpoint the time by giving the planetary positions. The custom is still present in the Sankalpa uttered by any Brahmin at the beginning of any function. The Brahmins give the positions, in the Nakṣatra cycle, of all the planets. By their positions time can be fixed exactly if we know the rotational period of the planets.

Thus Astronomy was developed and was used in the science of time measurement in the Ancient India. But this method was not studied so critically by the scholars and therefore they could not estimate the real value of these records, in fixing the dates of various incidents. If we take the help of the modern scientific calendar the dates can be easily estimated because the modern calendar has permanently fixed the dates of winter solstice on 22nd December, summer solstice on 22nd June, the vernal equinox on 21st of March and the autumnal equinox on 23rd September. Thus even if these dates change due to some reason or other, they will be again adjusted to these cardinal points. We can make use of this fixed calendar and can easily calculate the dates in the past history, relying on motion of the Earth around the Sun and the precessional rate, provided we get the records kept in the Indian style showing the lunar month and the Ṛtu. The Mahābhārata, the Rāmāyaṇa and other literatures give such data and so we can fix their dates.

THE PERIOD OF THE MAHĀBHĀRATA

Let us now consider in what Period the Mahābhārata happened :

Late Mr. C. V. Vaidya has done a lot of work on this matter and has fixed the date of the Mahābhārata war as 3101 BC. He has proved all other dates from 700 BC to 2526 BC as false, so I need not consider here the dates in that range. I will show how 3101 BC is also wrong.

The Late Mr. Vaidya arbitrarily took 3101 BC as the date of the Mahābhārata, relying on the assumption that after the death of Lord Kṛṣṇa Kaliyuga started and he relied on the years from beginning of Kaliyuga as are noted in Almanacs. The Mahābhārata has not mentioned the beginning of Kaliyuga at all. It has mentioned the evening of Dwāpara Yuga (Ādi 2/13[5], Vana 149-39[6], Śalya[7] 60-25). Sabhā A-53 mentions Dwāpara Yuga in clear words.[8] Thus the assumption was wrong so the date is wrong. Taking this wrong date, he requested Prof. Apte of Gwalior to calculate and find the Planetary positions on 3101 BC. Prof. Apte sent him the calculated planetary positions which did not tally with the planetary positions mentioned by Vyāsa in the Mahābhārata, so he labelled that Vyāsa has written the planetary positions ignorantly, without knowledge of Astronomy.

This allegation is false. You cannot arbitrarily take any date and try to correlate planetary positions with it. There is a definite mathematics behind the rotations of the Planets. So we have to find a date on which all the planets will show the positions given by Vyāsa in the Mahābhārata. I am the only person who went on this scientific path and got success. Before going to the Astronomical part let us see, by other evidences, how old is the Mahābhārata.

GREEK RECORDS

1. All the historians give importance to the writings of Greek people. The Greek Ambassador Megasthenis has recorded that 138 generations have passed between Kṛṣṇa and Chandragupta Maurya. Many scholars have taken this evidence, but taking only 20 years per generation they fixed the date of Kṛṣṇa as 2760 years before Chandragupta. But this is wrong because the record is not of ordinary people to take 20 years per generation. In ordinary people we say that when a son is born new generation starts, but in the case of kings the name is included in the list of Royal Dynasty only after Coronation to the throne. Hence we cannot

take 20 years for one king. We have to find out the average per king by calculating on various Indian Dynasties. I have considered 60 kings from various Indian Dyanasties and calculated the average of each king as 36 years. Here is a list of important kings with the number of years of ruling.

1.	Chandragupta Maurya	330- 298 BC	32 years.
2.	Bindusāra	298 - 273 BC	25 years.
3.	Ashoka	273 - 232 BC	41 years.
4.	Puṣyamitra Śunga	190 - 149 BC	41 years.
5.	Chandragupta Gupta	308 - 330 AD	22 years.
6.	Samudragupta	330 - 375 AD	45 years.
7.	Vikramāditya	375 - 414 AD	39 years.
8.	Kumāragupta	414 - 455 AD	41 years.
9.	Harṣa	606 - 647 AD	41 years.
		Total	327 years.

Thus the average is 36 years per King (327 divided by 9 = 36.3)

I have taken here only the Indian rulers because the tradition of India is to take care of the young King and his Kingdom without doing self-coronation by killing the young king. Hindu Kings never killed their fathers or brothers to become a king. Examples are Rāma -Bharata, Bhiṣma, Rajārāma (the son of Shivāji the great) etc. Because there were no murders of the kings, the Hindu Kings ruled for prolonged time so the average is 36 years per King.

Multiplying 138 generations by 36.3 years we get 5013.9 years before Chandragupta Maurya. Adding Chandragupta's date 320 BC to 5014 we get 5334 BC as the date of Lord Kṛṣṇa.

2. Megasthenis, according to Arrian, has written that between Sandracotus to Dianisaum 153 generations and 6042 years passed. From this data of 6042 years for 153 generations, we get the average of 39.5 years per king. From this we can calculate 5451 years for 138 generations. So Kṛṣṇa must have been around 5771 years BC.

3. Pliny gives 154 generations and 6451 years between Bacchus and Alexander. This Bacchus may be the famous Bakāsura who was killed by Bhimsena. This period comes to 6771 years BC.

Thus we see that the Mahābhārata period ranges from 5334 BC to 6700 BC.

ŚRIMAD BHĀGAWATA

a) Bhāgawata (9-22-35 onwards)[9] gives a list of future Emperors and not of ordinary kings. It is told to King Parikṣit. Naturally these Kings are later than Parikṣit. It gives 28 Kaurava Kings from Parikṣit to Kṣemaka. "From Kṣemaka the Pāṇḍava Dynasty will end in Kaliyuga, and Māgadha Dynasty will start." This is the quotation from Bhāgawata 9-22-45. The two facts are clearly told here:

1. 'Pāṇḍava Dynasty will end in Kaliyuga.' This shows that these 28 Pāṇḍava Kings were prior to the Kaliyuga, i.e. they ruled before 3101 years B.C.

2. 'After the end of Pāṇḍava Dynasty, Māgadha Dynasty will start.' Ignoring these facts many scholars have super-imposed Māgadha rulers on Pāṇḍava rulers though they have taken Māgadhas, Pradyotas, Śiśunāgas and Nandas one after another .

b. Further it is stated in the Bhāgawata that after 28 Kaurava Kings, Māgadha Dynasty would rule and 22 Māgadha Kings would govern for 1000 years.[10] Here it has given the average of 1000 years for 22 kings. So we can find out that 28 Kaurava kings have ruled for 1273 years and then Māgadha Dynasty started with king Sahadeva, whose son was Somāpi. On the other hand Meghasandhi was the son of Sahadeva and the grandson of Jarāsandha according to the Mahābhārata, Āśvamedha 82. Many scholars have neglected this fact and assumed that this Sahadeva fought in the Mahābhārata War and was the son of Jarāsandha.

c) Ripunjaya is the last king in the list of 22 Māgadhas. But the Bhāgawata12/1/2-4 mentions that Puranjaya will be the last king, who will be killed by his minister Śunaka. It is to be noted that there is no mention of the kings between Ripunjaya and Puranjaya. People have wrongly taken the two names as of one and the same person, without any evidence. We will consider these kings a little later.

d) The Bhāgawata 12-1-2 to 4 states that Śunaka would coronate his son Pradyota as the King and later five Kings would rule for 138 years. After this Pradyot Dynasty, Śiśunāga Kings, ten in number, would rule for 360 years, thereafter nine Nandas would rule for 100 years. Nanda would be destroyed by a Brahmin and Chandragupta

would be enthroned. We know that Chandragupta Maurya came to the throne in 324 years B.C. So we can calculate :

9	Nandas	100 years.
10	Śiśunāgas	360 Years.
5	Pradyotas	138 Years.
22	Māgadhas	1000 Years.
28	Kauravas	1273 Years.
74	Kings	2871 Years.

e) We find here only 74 Kings but Megasthenis tells about 138 Kings. So 138- 74 = 64 kings are missing. These may be from the period of Ripunjaya to Puranjaya. Let us calculate the period for 64 Kings from the data that 74 kings ruled for 2871 years. The figure for 64 kings, comes to 2496 years. Adding the two we get 5367 years for 138 kings. This is before Chandragupta, who came to the throne in 324 years BC. Hence 324+5367 = 5691 years BC is the date of Parikṣit.

YUDHIṢṬHIRA ERA

Vikrama Era started at 3O44th year of Yudhiṣṭhira Era. Vikrama Era started at 56 BC. So it is taken that Yudhiṣṭhira Era started at 56+3044 = 3100 B.C. Relying on this people say that the Mahābhārata also took place at 3100 BC. But there is a mistake in accepting this date for the Mahābhārata because the Mahābhārata does not mention anywhere that Yudhiṣṭhira started any Era. At the time of Aśvamedha of Yudhiṣṭhira, Vyāsa has given descriptions in minute details like collection of 'Śruvā', formation of wells and lakes and halls etc, but he does not write even a word about Yudhiṣṭhira Era which was very important.

Moreover, the Mahābhārata does not give any chronology according to the Yudhiṣṭhira Era. At least as a novelty Vyāsa might have used the Era often. So it is evident that when the Mahābhārata was written there was no Yudhiṣṭhira Era in use. Naturally the Mahābhārata must have been written earlier than 3100 B.C. The Mahābhārata has not mentioned any other Era so it is clear that when the Mahābhārata was being written

there was no custom of counting the years in a particular fashion from a particular date. Much after the great publicity of the Mahābhārata some chronologist got an idea of counting the years. Hence he must have used the name of the famous king Yudhiṣṭhira to his method and started Yudhiṣṭhira Era at 3101 years B.C. The onset of Kaliyuga is also assumed from the same date.

KALI YUGA

Usually many scholars hold that the Mahābhārata War took place at the beginning of Kali Yuga. But there is no evidence in the Mahābhārata itself to support this view. The Mahābhārata has never mentioned the beginning of Kaliyuga anywhere, even at the time of Kṛṣṇa's death.

a) The Mahābhārata, Adi Parva A.2 Śloka I3 states[5] that the War took place when the interphase between the Kali and Dwāpara approached.

अन्तरे चैव संप्राप्ते कलिद्वापरयोः अभूत ।

"Antare" means the inter-phase between any two points or the intermediate period between any two points. 'Samprāpte' means when approached. Thus it makes clear that the evening of Dwāpara was not yet ended and the Kali Yuga had not started when the great war took place.

b) The Mahābhārata, Vana Parva 149/39 states that the Kali Yuga is going to start soon[6]. Thus the beginning of Kali Yuga is not told. It was still the Dwāpara Yuga, but they were foreseeing the coming of Kaliyuga.

It is important to note here that even today many people talk and write about the calamities coming with the end of Kaliyuga and say that the end of Kaliyuga is very near. But there are still more than four lacs of years of Kaliyuga remaining. In the same way the ancient people of Dwāpara Yuga were talking about the end of Dwāpara Yuga and the onset of Kali.

c) Moreover this sentence is uttered by Hanumān who lived from the end of Tretā Yuga to the end of Dwāpara Yuga i.e. Eight lacs and sixty four thousands of years. A person having such a great expanse of life is saying "Soon the Kaliyuga will start!" What will this 'Soon' mean ? A few years? or a few thousand years? Natu-

rally Mãruti's 'Soon' must be measuring a few thousand years. So Kali Yuga was to start a few thousand years after the great War.

d) The Mahābhārata, Śalya Parva 60/25 states the talk of Lord Kṛṣṇa. Kṛṣṇa says to Balarãma, "Assume that the Kaliyuga has started."[7] Here the word "Viddhi" is deliberately used and it means "assume". In the assumption there is no real state of affairs. For example, I shall cite a Mantra from Kaṭhopaniṣad, Adhyāya I, Valli III, Mantra 3rd.

आत्मानं रथिनं विद्धि शरीरं रथमेव तु ।
बुद्धिं तु सारथिं विद्धि मनः प्रग्रहमेव च ॥

Here it is suggested to assume Atman as the owner of a Chariot, body as the chariot, the intelligence as the driver of the chariot. Atman is not really a chariot-owner and intelligence is not the driver in reality. The Mahãbhārata, Āśrama 39, Śloka 10 states -

कलिं दुर्योधनं विद्धि शकुनिं द्वापरं तथा ।
दुःशासनादीन् विद्धि त्वं राक्षसान् शुभदर्शने ॥

Does this mean that Duryodhana was actually Kali, Śakuni was really Dwãpara and Duśśãsana and others were Rãkṣasas in reality? Of course not. But it is told to assume.

Similarly, actual Kali Yuga had not really started, but it was to come in the future. So Kṛṣṇa told Balarãma to assume that Kali had started and therefore to neglect the deeds of Bhimasena, which were appropriate for the Kali Yuga. If we forget to take the real sense of the word "Viddhi" as 'to assume' and if we wrongfully take that Kali Yuga had already started it would be a great blunder. Unfortunately this blunder is made by many scholars. From the above explanation the readers will be convinced that the Kali Yuga had not at all started at the time of writing of the epic Mahãbhārata or at the time of the Mahãbhārata War.

e) The Mahābhārata, Āraṇyaka Parva 188 (B.O.R.I.) mentions the forecast done by sage Mãrkaṇḍeya. Yudhiṣṭhira asks him, "What will happen at the end of the Yuga?[35] What will happen in the Kali Yuga?" This shows that Kali Yuga had not started then. Naturally, by the end of the Yuga, Yudhiṣṭhira meant the end of the Dwãpara Yuga. In the reply Mãrkaṇḍeya tells him the future. In those verses many end with ''भविष्यन्ति युगक्षये'' while many others end with ''युगान्ते पर्युपस्थिते' or ''युगसंक्षये''. Thus Mãrkaṇḍeya also meant the end of Dwãpara Yuga.

This shows that Kaliyuga had not started and was not to start in the recent future.

f) Usually it is held that the Kali Yuga started soon after the death of lord Kṛṣṇa. This supposition is based on the statement from Śrimad Bhãgawata 12/2/29 that Kali entered into the population at the death of Kṛṣṇa and therefore the people are indulged in sins.[12] I raise two objections here. First the Bhãgawata has not mentioned that Kali Yuga started after Kṛṣṇa's death in this verse, it only mentions that Kali entered the people. This shows that the mind of the people was poisoned with sin. It has no relation to the measurement of Time. The next Śloka 30th[12] makes this idea clear by saying that till the time Kṛṣṇa was alive, Kali could not conquer this world.

विष्णोर्भगवतो भानुः कृष्णाख्यो असौ दिवं गतः ।
तदाविशत् कलिर्लोकं पापे यद् रमते जनः ॥ २९ ॥
यावद् स पादपद्माभ्यां स्पृशन्नास्ते रमापतिः ।
तावत् कलिर्वै पृथिवीं पराक्रान्तु न चाकशत् ॥ ३० ॥

Second objection is that the statement is from the Bhãgawata which is written much later than the Mahãbhãrata writing and still more later than the actual death of Kṛṣṇa. So it has no value as an evidence. Hence, even if Bhãgawata12/2/33 mentions the beginning of Kali Yuga, it has no value at all because the Śloka itself tells that 'it is said so.' इति प्राहुः। Thus only one hearsay is recorded by the Bhãgawata and not the true fact.

g) The beginning of the Kaliyuga is taken at 3101 years B.C. But this concept has no base. Ārya Bhatta arbitrarily took this year. Varãhamihira, Kalhaṇa, Garga etc. took 2526 years before Śaka as the beginning of Kali Yuga. So there is no unanimity about the commencement of the Kaliyuga. Moreover it is said that at the beginning of the Kaliyuga, all the planets were at about 360° (zero degree) i.e. Meṣārambha. The modern mathematics does not show the planets at about zero degrees in the year 3101 BC or 2526 years before Śaka. I have calculated and found that all the planets were around zero degrees near Meṣārambha in the year 4218 B.C. Thus Saturn was at 355°, Jupiter at 355°, Ketu at 19°, and in the month of Chaitra the Sun, the Mars, the Mercury and the Venus were at or near Zero degrees. In the year 4597 B.C. the Saturn was at 30°,

Jupiter at 0°, Rahu 346^0, and in the Chaitra month the Sun, the Mercury, the Venus and the Mars were around zero degrees. Hence the Kaliyuga must have started on 4218 years B.C. or 4597 years B.C.; but definitely not at 3101 years B.C.

h) In spite of this mathematical fact, one scholar from Hyderabad Mr. Veda Vyāsa has shown in his book 'Astronomical Dating of Mahābhārata War' that there was gathering of all the planets near 360° according to the methods of Siddhānta Śiromaṇi, Ārya Siddhānta and Parāśara. Mr. Veda Vyāsa has criticised the works of Bentley, Bailey etc. showing that their methods were wrong. Veda Vyāsa has shown that on 18th February 3102 B.C. Kaliyuga started and at that time Saturn was at 357^0 to 360^0. He tells that the Mahābhārata War started 36 years before this in 3139 B.C. He also states that during the War the Saturn was at Viśākhā in the Sign Scorpio at 200^0. Let us examine his view. It is well known that the Saturn completes one full rotation of 360° in 29.454483 years. Hence 30 years ago the Saturn was at 360^0. Now we have to see where would it be still more 6 years ago. Saturn traverses one Rāśi of 30° in 2.5 years. So before 6 years the Saturn was 72^0 behind 360^0. That means Saturn was at 288^0. But Mr. Veda Vyāsa shows it at 200^0. A mistake of 88^0 that is almost three Rāśis, in a period of only six years is not tolerable and therefore Mr. Veda Vyāsa's date of the Mahābhārata War and date of Kali Yuga commencement is not acceptable.

i) I will raise one more point here assuming that Kali Yuga started at 3101 BC. Kali Yuga has a span of four lacs and 32 thousand years. The span of Dwāpara Yuga is eight lacs and 64 thousand years. In between the two Yugas there is the evening of Dwāpara Yuga which extends upto 32000 years. Hence the Mahābhārata War might have happened some time in these 32000 years. Then why insist to take the very beginning of Kail Yuga at 3101 BC, where we cannot show the planetary positions as stated by sage Vyāsa in his Mahābhārata ?

j) If we assume 1200 years for Kailyuga, 2400 years for Dwāpara, 3600 for Tretā and 4800 for Satya Yuga something strange happens. See how ! Kali Yuga started at 3101 BC and ended after 1200 years at 1901 BC. Then Satya Yuga started which continues for 4800 years from 1901 BC. It means that Satya Yuga will continue upto 2899 AD, and we all are in the Satya Yuga. Is it acceptable ? Not at all.

k) One more point props up here if we admit that the Mahābhārata War took place at the commencement of Kali Yuga and 36 years after the War in the reign of Yudhiṣṭhira Kali Yuga started. This means Yudhiṣṭhira is responsible for Kali Yuga. Vyāsa tells in the Mahābhārata Śānti 70/6 that the King is responsible for the era. राजा कालस्य कारणम् ।

Further Vyāsa tells that if the king rules with three parts of sin and one part of Dharma he starts Kali Yuga. युगस्य च चतुर्थस्य राजा भवति कारणम्। says Vyāsa in śloka 25. Thus the responsibility of starting Kali Yuga goes to Yudhiṣṭhira. Lord Kṛṣṇa has to share this responsibility because he helped Pāṇḍavas to win the War and come to the throne. Will anybody accept that Kṛṣṇa and Dharmarāja Yudhiṣṭhira were responsible for starting Kali Yuga ? It is impossible. So we have to neglect Kali Yuga era in toto.

1) From those Verses cited above it is certain that Vyāsa has never used Yuga system to count the years. Vyāsa looks into the quality of time and names the era according to the quality. Similarly Vālmiki also looks into the quality of the time and not the number of years. (Vālmiki Rāmāyaṇa, Yuddha 35/15)

2) Thus it is not wise to take the beginning of Kali Yuga as the date of the Mahābhārata war.

We have to find the date by using other methods, depending on Astronomy. But this date should be from the Dwāpara Yuga, much before Kali Yuga. I strongly say so because the Mahābhārata has mentioned Dwāpara Yuga in clear words while narrating the talk of Duryodhana in Sabhā A.53/24 (B.O. R.I. Sabhā A.49/24). It clearly shows that the Mahābhārata war happened in Dwāpara Yuga. The Verse is:

अन्धेनैव युगं नद्धं विपर्यस्तं नराधिप ।
कनीयांसो विवर्धन्ते ज्येष्ठा हीयन्ति भारत ॥ २४ ॥

Here it is to be noted that counting years in Kali Yuga era began from 3101 BC. Therefore it can be used for a peried after 3101 BC but certainly not prior to 3101 BC.

SAPTARṢIS

a) The Bhāgawata states at 12/2/27 to 32 that Saptarṣis stay 100 years in one Nakṣatra[12]. At the time of king Parikṣit Saptarṣis were at Magha[12]. When they would go to Purvāṣāḍhā Kali would flourish i.e.

Kali Yuga would start. There are eleven Nakṣatras from Maghā to Purvāṣāḍhā. Hence it is seen that Sukāchārya tells Parikṣit that Kali Yuga will start after 1100 years. Kaliyuga started at 3101 years B.C. Hence 3101 + 1100 = 4201 years B.C. is the date of Parikṣit.

b) It is also stated in the Bhāgawata that Nanda will also flourish when Saptarṣis go to Purvāṣāḍhā. Due to this statement Nanda will go back to 3101 B.C., which is not possible. So we have to reconsider the meaning. It is to be noted that when the future is written in a few verses some code language is used. The same thing has been done here. Both the statements that (1) Kali Yuga will start with Saptarṣis in Purvāṣāḍhā and (2) Nanda will flourish with Saptarṣis in Purvāṣāḍhā are true; but there is a cycle of 2700 years in between. So when Saptarṣis went into Purvāṣāḍhā first, the Kali Yuga started. After a cycle of 27 Nakṣatras and 2700 years Saptarṣis came to Purvāṣāḍhā again and Nanda came to the throne. The above mentioned 1100 years plus these 2700 years of Nakṣatra cycle comes to 3800 years. So Parikṣit must have been 3800 years before Nanda. Last Nanda came to the throne in 330 B.C. Adding 3800 years, we get the period of Parikṣit as 4130 years B.C. Let us tally this in other way.

4130	years	BC	Saptarṣis in Maghā - Parikṣit
-1100	years		
3030	years	BC	Saptarṣis in Purvāṣāḍhā - Kali Yuga began.
-2700	years		
330	years	BC	Saptarṣis in Purvāṣāḍhā, Last Nanda came to throne.

Thus the correct date of Parikṣit appears to be 4130 BC, which is very near to the previously calculated date of 4201 years BC.

c) But who is this Parikṣit ? Is he the son of Abhimanyu ? No. If we think minutely we understand that this is not Abhimanyu's son because the Bhāgawata is told to this Parikṣit. On the other hand the Mahābhārata is told to Janamejaya.[13] In the Mahābhārata death of Parikṣit is recorded[14]. So it is evident that the Mahābhārata was written and published after the death of Parikṣit, the son of Abhimanyu.[15] The Bhāgawata is written after the Mahābhārata

according to the Bhāgawata itself[2]. This Bhāgawata is told to some Parikṣit. How can this Parikṣit be the son of Abhimanyu, who died before the Mahābhārata writing ? So this Parikṣit appears to be somebody else than Abhimanyu's son.

d) Harivanśa -Bhaviṣya Parva, Adhyāya 1 gives further Kings from Janamejaya[19] the son of Parikṣit, as Chandrāpida- Janamejaya (Satyakarṇa) -Śvetakarṇa —Ajapārśva. These four Kings may have ruled for 200 years. In this period there was no Parikṣit. So the Son of Abhimanyu will recede back by at least 200 years from 4130 B.C. Thus the Mahābhārata will go back to 4500 years B.C.

e) The Bhāgawata tells **Ikṣwāku Dynasty**. In it 59th is Rāma and 88th is Bṛhadbala, the contemporary of Pāṇḍavas, who took part in the Mahābhārata War. The last king in this list is 118th Sumitra. So it is evident that this Sumitra was contemporary to the Bhāgawata narration. Thus it is clear that 118-88 = 30 Kings occupied between the Mahābhārata and the Bhāgawata. Bhāgawata itself gives average of 1000 years for 22 Kings. So for 30 Kings average will be 1363 years. So 1363 years before Parikṣit of 4201 B.C. i.e. at 5564 years B.C. the Mahābhārata must have taken place.

f) Please note that I have not considered the motion of Saptarṣis at the rate 100 years per Nakṣatra, because such a motion is not present in the case of Saptarṣis. Ancient sages knew this fact but they used this method just for the sake of counting the years. In the current age we say 'nineteen hundred and eighty fifth year'. In the same way they used to tell the year but instead of a century they talked of Saptarṣis in a particular Nakṣatra. Nakṣatras are 27 in number, so they developed a cycle of 2700 years. When they say 25th Year with Saptarṣis in Bharaṇi they mean 125th year, because Bharaṇi is the second Nakṣatra, so it denoted completion of first century. Similarly we can say of 1885 as eighty fifth year with Saptarṣis in Mula Nakṣatra because Mula is the nineteenth Nakṣatra. For 1989 we can say 89th year with the Saptarṣis in Purvāṣāḍhā. To clarify this idea I will cite one example here :

भुजवसुदशमित शाके श्रीमत् बल्लाळसेन राज्यादौ
वर्षैक षष्टि भोगे मुनयस्वासन् विशाखायाम्
इति लोचनपंडितविरचिता रागतरंगिणी समाप्ता ।

One Lochana Paṇḍita has written a book Rāga Taraṅgiṇi. (This book is published by Paṇḍita D. K. Joshi in Marāṭhi in 1918). In this book he has mentioned when he finished the writing. He says it in a code language. Bhuja = 2, Vasu = 8, Daśa = 10. This has to be written from right to left, अंकानां वामतो गति : So the figure is 1082. It means 1082 years of Śaka. In the second line he writes the year in another fashion. Here he says that in 61st year with Saptarṣis in Viśākhā, he completed his book. Viśākhā is the 16th Nakṣatra. Saptarṣis were in 16th Nakṣatra that means 15 centuries were completed and of the 16th century 61 years were passed. i.e. 1561 years.

Now let us tally this result. Kalhaṇa tells in his Rājataraṅgiṇi that 653 years of Kali passed and then Pāṇḍavas appeared -Yudhiṣṭhira era started. This Kali means Saptarṣi Era and not the Kaliyuga Era. Garga tells that Yudhiṣṭhira Era started 2526 years before Śaka. From this data we will tally the two methods.

653	years	of Kali
+2526	years	of Yudhiṣṭira Era
+1082	years	of Śhaka
4261	years	from the beginning of Saptarṣi Era.
- 2700	years	of one Nakṣatra cycle deducted
1561	years	Rāga Taraṅgiṇi

Thus both the methods seem to be correct and the calculations based on Saptarṣi era have to be accepted. But please note that this method started after the Mahābhārata writing and hence it is not used anywhere in the Epic Mahābhārata. Hisse Boralā inscription does not fit in this too.

EQUINOX

The Mahābhārata mentions the ancient tradition as 'Śravaṇādini Nakṣatrāṇi'[16.17] i.e. Śravaṇa Nakṣatra was given the first place in the Nakṣatra cycle (Ādi-7l /34 and Aśvamedha 44/2). Viśwāmitra started counting the Nakṣatras from Śrawaṇa when he created 'Prati Sṛṣṭi'. He was angry with the old customs. So he started some new customs. Before Viśvāmitra's time Nakṣatras were counted from the one which was occupied by the Sun on the Vernal Equinox. Viśvāmitra changed

this fashion and used diagonally opposite point i. e. Autumnal Equinox to list the Nakṣatras. He gave first place to Śravaṇa which was at the Autumnal Equinox then. The period of Śravaṇa Nakṣatra on autumnal equinox is from 6920 to 7880 years B.C. This was Viṣvāmitra's period at the end of Tretā Yuga. The Mahābhārata War took place at the end of Dwāpara Yuga. Subtracting the span of Dwāpara Yuga of 2400 years, we get 7880 -2400 = 5480 B.C. as the date of the Mahābhārata War.

ASTROLOGY

Some scholars rely on the horoscope of Lord Kṛṣṇa to calculate his birth-date so as to establish the period of the Mahābhārata. But they do not realise that the horoscope is a forged one, prepared many thousand years after Kṛṣṇa's death. The Mahābhārata, the Bhāgawata and the Viṣṇu Purāṇa have not given the planet positions at the time of Kṛṣṇa's birth. It is well-known and is recorded in many scriptures that Kṛṣṇa was born in a jail, then who could have casted his horoscope? Moreover Kṛṣṇa was not a prince so nobody would have casted his horoscope. Hence it is not wise to rely on the horoscope. It is prepared recently by considering the charateristics of Kṛṣṇa and so is useless to fix the date of the Mahābhārata.

Mr. G. S. Sampath Iyengar and Mr. G. S. Sheshagiri have fixed the birth-date of Kṛṣṇa as 27th July 3112 BC. The horoscope shows Lagna and Moon 52^0 15' Rohiṇi, Jupiter 91° 16' Punarvasu, Sun 148°15' Uttarā Phalguni, Mercury 172° 35' Hasta, Venus 180° 15' Chitrā, Saturn 209° 57' Viśākhā, Mars 270° 1' Uttarā Āṣāḍhā, Rāhu 160°1'

At present on 27th July 1979 the Sun was at 99° 57', while at Kṛṣṇa's birth, according to their opinion, the Sun was at 148° 15'. The difference is 48° 18'. This shows that the Sun has receded back by 48° 18' due to the precession at the rate of 72 years per degree. Multiplying 48° 18' by 72 we get 3456 years. This shows that Kṛṣṇa was born 3456 years ago or substracting 1979 from it we can say that Kṛṣṇa was born during 1477 BC. Thus 3112 BC is found to be wrong. We cannot accept such a wrong date derived from a manipulated horscope. (This horoscope is printed in "The Age of Bharat War" on page 241-Publisher Motilal Banarasidas 1979)

Mr. B. V. Raman in ' Notable Horoscopes' gives Krishna's Birth date 19-7-3228 BC, and shows the Sun at 139^0 48'. From this let us

calculate the Sun on 19-7-1997. We have to see 3228+1997=5225 years hence. The rate of precession is 72 years for one degree. So dividing 5225 by 72 we get 72^0 34' precession. Deducting it from 139^0 48', we get 67^0 as the Sun's position, on 19-7-1997; but actually the Sun was at 92^0. So his date is wrong. The Sun on 19 July 2004 was at $92^0$7'. We have to see the Sun of 19-7-3228 BC i.e. 5232 years ago. Precession at the rate of one degree in 72 years causes the Sun to recede in 5232 years by 72.6 degrees. Therefore adding 72.6 to the present Sun's position 92.7 degrees we get 165.3^0 as the Sun's position on 19-7-3228 BC. Mr. Raman Shows 139^0 48', which is wrong.

Please see the horoscope of Kṛṣṇa prepared by me after fixing Kṛṣṇa's birth date, on page 90.

ARCHEAOLOGY

In 1971, when I hinted at the date of the Mahābhārata War as 5500 years BC, Archeaologists frowned at me saying it as impossible because no culture was found in India dating so much back. But now evidences are pouring in Archeaology itself showing cultures in India upto 30000 to 40000 years BC. Padmaśri the Late Mr. V.S.Wākaṇkara has dated the paintings in the caves of Bhimbetakā of Madhya Pradesh, India to about 40000 BC.

Motilala Banārasidāsa News Letter October 1988 gives a news on page 6 under the heading -

"50,000 YEARS OLD RELICS"

Spectacular culture and physical relics dating back to 50,000 years BC have been excavated from the Central Narmada Valley in Madhya Pradesh, India. A team of Anthropological survey of India recently conducted the excavation. It explored ten sites in two districts Sehore and Hoshangabad.

In my book "Vāstava Rāmāyaṇa" I have shown the presence of culture in India as far back as 72000 years BC. This recent news points to that ancient period. I am sure after some time Archeaology may get evidence to show the presence of culture in India around 72000 BC.

In Vāstava Rāmāyaṇa I have shown that Bali, the demon king went to south America during 17000 BC, when the vernal equinox was at Moola Nakṣatra. MLBD News letter Oct. 1988 gives a news thus :- "Dravidians in America" -According to a press report the Brazillian

nuclear physicist and researcher Arysio Nunes dos Santos holds that the Dravidians of South India had reached America much before Christopher Columbus.

Mr. Nunes dos Santos, of the Federal University of Minas Gerais maintains that the Dravidians colonised a vast South American region 11,000 years before the Europeans reached the new world. Vestiges of the Dravidian presence in America, he says, include the strange phonetics of Gourani, Paraguay's national language.

Moreover Bananas, Pine apple, coconut and cotton, all grown in India could have been taken to America by those navigators.

Saraswati river was flowing during the Mahābhārata, as is evident from Balarāma's religious tour to the river. The American speceships have given data from which the scientists have published that the river Saraswati was flowing 8000 years ago. Afterwards the river gradually vanished. The date 5561 BC, which I have derived, fits well in this period.

A SUBMERGED CITY - 7500 BC

Recently one more evidence came to the surface accidently, which supported my dates about the Rāmāyaṇa and the Mahābhārata. It is reported in 'India Today,' dated Feb. 2002 as a cover story. "In February 2002 a team of technologists doing research on the pollution of the sea got an evidence accidently, in the bay of Cambay or Khambāyata, near Gujarātha. It is in the form of a submerged city, which had a drainage system and a dam to provide water to the city, in short a well estabhlished city with all amenities. The date of that city is fixed as 7500 years B.C. by carbon dating. This accidental finding has revolutioned history, pushing back the age of civilizations by 2000 years." This submerged evidence strongly supports my dates of the Rāmāyaṇa and the Mahābhārata.

The Indian Express, Pune, Monday 19 July 2004 reports on Page 7 a news from Press Trust of India, Delhi, dated 18 July 04, thus - Researchers at the National Institute of Ocean Technology have found evidence of preshistoric human activity dating back 9500 years in the Gulf of Cambay, Gujarat.

In an underwater survey carried out in the gulf, N.I.O.T. Scientists discovered a civilisation where people of the early holocene Age, about 9500 years before the present era, mixed clay with straw to make bricks

for their homes. Bricks found on the sea-bed were used in construction, which indicates the people of that age led an advanced and settled form of life.

Housing material, artefacts and a submerged Palaeo-Channel found on the sea bed at a depth of 20-40 metres below the sea level, proves the existence of a civilisation much before the Mohanjodaro and Harappa civilisation. Basement like features in a grid pattern were also found to a length of nine kilometres.

By the carbon dating technique researchers examined a wooden log, found on the upper part of the deposit, and fixed it's age about 9500 years. The area surrounding the Gulf of Cambay had been occupied by man for the last two lacs years, said Śri Gupta H. K., the secretary, Dept. of Ocean Development.

Kṛkalāsa, the Dinosaur

National Geographic channel showed on 26.12.2003 in 'Hot Science' that remnants of Dinosaurs are found in Gujarath. The same news is flashed by 'Tarun Bharat' Mumbai, dated 29-2-2004 that Dinosaur's egg is found in Gujarath, 65 km from Ahamedabad at Balasinore. The egg is of Rajasaurus Narmadensis.The egg weighs 5 kg. This variety of Dinosaurs once inhabited near Narmada river. They used to grow about 30 feet long.

I have shown in my Marāṭhi book "Swayambhu" that Kṛṣṇa had seen such a huge lizard named as Kṛkalāsa, as is noted in the Mahābhārata, Annususana 70, This fact shows the great antiquity of the Mahābhārata.

SHAPELY SKULLS

I got recently one more evidence by e.mail which is as follows : from http://www.economist.com/science on 4th Sept. 2003.

Dr. Gonzalez-Jose examined many skulls, thought to be from the Pericu tribal group who were hunters living near the southern tip of the Baja peninsula in early historic times. He found them to be a mere 2000 years old. He examined the skulls stored at National Museum of Anthropology in Mexico City and La Paz. After careful examination of the skulls by a technique of "Geometric Morphometrics" a computerise curve fitting technique based on 14 points on the skull and also by examining those skulls with usual method of considering the length of the skulls,

the length of the face, the width of the eye sockets, etc. he reveated that both the methods link the paleoamericans to southern Asians. He concluded that the south Indians did come to America at an ancient period of 12000 years B.C.

STAR VEGA SLIPPED

For the remote antiquity of the Indian civilization there is a strong proof in the epic Mahābhārata, at Vana Parva A 230/8 to 11. Here it is stated that the star Abhijit i.e. Vega slipped down in the sky. There are innumerable stars in the sky, but Vyāsa tells about only one star Vega. Modern Astromomy has proved that the star Vega, in fact, had fallen down to become a Pole star during 12000 B.C. This modern discovery approves the truth of Vyāsa's report. Slipping of the Star began around 20000 B.C. according to Vyāsa, because he states that Kṛttikā was at the Summer Solstice then. Because the Slipping of Abhijit was noticed at 20000 B.C. the Sky observation must have been done for at last 5000 years prior. It means there was a civilization who observed the stars from 25000 B.C. onwards. Such an ancient is the Indian civilization.

ASTRONOMY

Now let us fix the date of the Mahābhārata War with the help of two scientific tools. Astronomy and Mathematics. Many scholars think that Astronomy was not developed in ancient India and therefore they neglect it. But it is proved even by the foreign scholars like Bailey, Wallace and others that the Indian Ephemeris was quite old and had been reduced to writing even before 3100 years B.C. (Age of the Mahābhārata War - G. C. Agrawal page 27).

Whether Astronomy in ancient India was advanced or not is a sub-ordinate problem, because we can, with the help of the modern science, calculate from the planetary positions given by Vyāsa who was an Eye-witness to the planet positions. So we can safely rely on Astronomy. Some scholars have used Astronomy but they did one mistake. They fixed one date, arbitrarily, in their mind and tried to correlate the planetary positions with that date. So they failed. So far not a single scholar has shown all the planetary positions stated by Vyāsa to be correct to their proposed date. I worked in the reverse way, with the data of planetary positions I calculated back, so I could fix the exact date on which all the twelve planets show precise positions.

Moreover, there are many riddles in the Mahābhārata which nobody has solved yet. Here is my successful attempt to solve the riddles of the planetary positions and to determine the period of the Mahābhārata War. It is stated in the Mahābhārata (Adi 1/80) itself that these riddles are deliberately inserted by Vyāsa himself.[44] There is no solid ground to disbelieve this statement. So we accept the riddles and solve them.

SOME RIDDLES OF THE MAHĀBHĀRATA SOLVED AND THE MAHĀBHĀRATA PERIOD DETERMINED.

It is quoted that the Mars was in Maghā [21] as well as in Anurādhā[24]. Jupiter was in Śravaṇa[21] and near Viśākhā[23] (Swāti), Saturn was in Purvā Phalguni[21] and Rohiṇi[20]. It was the month of Kārtika[20] so the Sun was in Jyeṣṭhā and it was eclipsed.[21,24] But still, Rāhu is said to be between Chitrā and Swati[23]. Venus was in Purvā Proṣṭhapadā.[21]

All this data is present in Bhiṣma 2, 3 and Udyog 143.

This description of the planets is the greatest puzzle because the planets cannot occupy two Nakṣatras simultaneously. Moreover, if the Sun was in Jyeṣṭhā (at 240 degrees) Venus could never be in Proṣṭhapadā Purvā at 330°, 90° away from the Sun; because Venus never goes beyond 47 degrees from the Sun. There was an eclipse of the Sun (Bhiṣhma,[21, 23], 3/11,29; 19/39[27] and 17-3[26,24], so the Rāhu must be in union with the Sun in Jyeṣṭhā; but it is said to be between Chitrā and Swāti i.e. three Nakṣatras or 40° away from the Sun.

As these are the Astronomical puzzles so we have to take the help of the Mathematics. If we carefully see the twin positions of the planets we notice that there is a definite sequence. There is a difference of eight Nakṣatras between the twin positions of a planet. From this sequence it is evident that Vyāsa has used two methods having their zero points eight Nakṣatras apart, to denote the planets. For finding out these two methods, again, we have to take the help of modern Mathematics. In Mathematics we first assume something and later prove it to be correct by correlating it with the data. For this assumption let us have some sound basis.

In India a lunar month is named after the Nakṣatra which is occupied by the full Moon in that month. Thus, if the full Moon occupies Maghā Nakṣatra the name of that month will be Māgha. This is theory, but it is not always possible, because 27 Nakṣatras are divided into 12

groups. Hence the Moon may be two or three Nakṣatras away. If we carefully see the latest almanacs it is evident that the position of the full Moon is not always correct according to the name of the month. For example, in 1979, On Mārgaśirṣa Pourṇimā the full moon was on Kṛttikā instead of Mṛga; while on Phālguni Pourṇimā, the full Moon was on Maghā instead of Phalguni. In 1982 January on Pouṣa Pourṇimā the full Moon was on Ārdrā instead of Puṣya showing a mistake of three Nakṣatras. Even then we do not call the month by the name of the proper Nakṣatra occupied by the Moon . This is a fallacy which has to be accepted; then why not accept it to solve our riddle? When Vyāsa mentions Māgha Māsa every body assumes that the full Moon was in Maghā, why not assume that it was in Hasta? This was quite possible, particularly when there was a dispute about Adhika Māsas. As they took five Adhika Māsas at a time after 13 years[33] there was overcorrection. To rectify this over - correction one Kṣaya Māsa was necessary, which they did not take. That is why they called that Month as Māgha even when the full Moon was in Hasta.

Considering the above fallacy we can say that the full Moon might have been in Hasta but still Vyāsa called the month as Māgha instead of Phālguna and prepared a riddle. Let us, now, assume that in the month of the so-called Māgha the full Moon was in Hasta and let us solve the riddle.

Bhiṣma expired in the month of Māgha according to the Mahābhārata. Scholars have calculated the Mahābhārata period taking for granted that the full Moon was in Maghā in that month and their period comes to 1600 to 2600 years BC. But this period is wrong because other evidences do not corroborate with this, the Planetary positions do not tally and the seasons recorded in the Mahābhārata cannot be explained on the basis of this period. This period comes in the Kaliyuga, while the Mahābhāratata states often that there was the evening of the Dwāpara Yuga.[5,8,6,7] (Adi 2/13, Sabhā 53, Vana 149/39, Śalya 60/25) This evening was supposed to be of 32000 years. Kaliyuga started at 3101 years B. C, so at least 2000-3000 years prior to that the Mahābhārata War must have taken place. In addition,there is one more prominent fallacy encountered.

'Ratha-Saptami' is the day of celebration of the beginning of Uttarāyaṇa. the northward journey of the Sun. It comes on Māgha Śuddha Saptami and the very next day Bhiṣma expired[49] (Śanti 47/64). Had the Mahābhārata been written in the period of 1600 to 2600 years B.C. the writer would have definitely referred to Ratha Saptami, because the Winter Solstice was on Māgha Śuddha Saptami in the period between 1600 to 2600 years B.C. The Ratha Saptami ceremony is not at all mentioned in the Mahābhārata even though there was an occasion. So it must have been written prior to 2600 B C and Bhiṣma must have expired before 2600 years B.C. Hence the said Māgha month should not be taken as the real Māgha with the full Moon in Maghā Nakṣatra. Considering the error of three Nakṣatras, Vyāsa must have constructed this puzzle and have deliberately mentioned the month as 'Māgha' instead of Phālguna. Vyāsa gives a clue that on Śuddha Aṣṭami day there was Prājāpatya Nakṣatra i.e. Rohiṇi. Naturally, it must have been Phālguna Māsa in which Śuddha Aṣṭami usually bears Rohiṇi Nakṣatra.

Correcting the mistake of three Nakṣatras we can say that in the said month of Māgha when Bhiṣma expired, the full Moon was in Hasta. Naturally the Sun, which is exactly opposite the full Moon on Pourṇimā, must have been in Revati. At this time with the Sun in Revati, Uttarāyaṇa started. The vernal Equinox recedes with a definite pace of 960 years per Nakṣatra. The Winter solstice also recedes with the same pace. Today the Winter Solstice is on Mula Nakṣatra. From this we can calculate back and find that the Winter Solstice in Revati means a period of 5480 to 6440 years B.C. This must be the period of the Mahābhārata war.

2. On certain assumption that the full Moon was in Hasta at the Winter Solstice, we have found out this period. Let us now see if it stands to other tests based on the other evidences.

a) At the time of the Mahābhārata, Rohiṇi was divided by the Saturn. (Bhiṣma.2/32) "Ākāśe Rohiṇim Bhettum" is the wording of Mahābhārata. (Edition DI of BORI) This division of Rohiṇi Śakata by Saturn had happened during 5294 years B.C. or a few centuries before this year. This period is also shown by the great Astromathematician the Late Mr. Dixit S. B. (History of Indian Astronomy). Our period of 5480 years B.C. comes in the same range, so it must be correct.

b) Mahābhārata Śānti Parva A. 100 states thus : "Mārgaśirṣa and Chaitra are the two months suitable for wars because at that time there is plenty of food grains, grass, water etc. and there is no rain, neither servere cold, nor severe heat". This description comes true in our period of 5480 years B.C.

With the Winter Solstice on Revati, the Vernal Equinox was on Punarvasu and in the month of Phālguna Uttarāyaṇa started. Hence the next month Chaitra was of moderate cold. At that time Bhādrapada Lunar month was covering the Summer Solstice. Naturally rainy season was during Bhādrapada and Āśvina. Allowing one more month of Kārtika, we can say that in Mārgaśirṣa there was no mud though there was plenty of water and the crops were in hands. Thus our period of 5480 years B.C. corroborates with the description of the Mahābhārata.

c) Because Mārgaśirṣa month was having plenty of water, food grains, and grass and because it's weather was very pleasant and cheerful with moderate cold due to cessation of the rainy season, Lord Kṛṣṇa said in Geetā "Māsānām Mārgaśirṣoham" (Bhiṣma 34/35).

Please note that Kṛṣṇa has enumerated everything the best and not everything the first.[29] So it is erroneous to take Mārgaśirṣa as the first month. (If we take Mārgśirṣa as the first month we have to take Spring as the first season during Mārgaśirṣa and then the period will go back to 16000 years B.C.)

Descriptions of the seasons and months from the Mahābhārata thus, appear to be correct if we accept 5480 years B.C. as the Mahābhārata period. Let us now see if the Planetary positions also are correct, which will give the final verdict.

3. Again we have to remember that Vyāsa has constructed the puzzles[44] deliberately to deceive Lord Gaṇapati, the most intelligent and learned man of the day, who was the chief of the Gaṇas or the republic. For the preparation of these puzzles Vyāsa has accepted the mistake of three Nakṣatras on the full Moon day and he has used both the Sāyana and Nirayana methods. Whether the Sāyana method was in use in those days is a separate question. But I can say that Vyāsa might have invented the Sāyana method because he had extraordinary brain. Vyāsa has devised a wise way of listing the Nakṣatras. As the Winter Solstice was on Revati, Vyāsa used the

very next Nakṣatra Aśvini to start the list, giving Aśvini the first place in the list of Nirayana Nakṣatras. Thus he started "Āśvinyādi Gaṇanā." This tradition continued further so that Vedānga Jyotiṣa listed Nakṣatras from Dhaniṣṭhā where the Winter Solstice was present then. As the Vernal Equinox was present in Punarvasu, Vyāsa took it as a zero point. The first Nakṣatra from this point is Puṣya. So, for his Sāyana method, Vyās took Puṣya as the first Nakṣatra in the Sāyana list and called it as 'Aśvini'. Puṣyādi Gaṇanā was in use since the Rāmāyaṇa Era when the Vernal Equinox was on Puṣya Nakṣatra.

In the Sāyana method we take the position of the Sun at the Vernal Equinox as the zero point. The first zone of 13 degrees and 20 minutes from this zero point is taken as the first Nakṣatra and it is named as Aśvini and further names are allotted in order. Today the first Sāyana Nakṣatra Aśvini is actually the Nirayana Uttarā Bhādrapadā. Similarly, Vyāsa called Puṣya as Aśvini in his Sāyana method, and named later Nakṣatras accordingly. Using this technique Vyāsa raised the riddles about the Planetary positions. Let us solve these riddles now. Please note that Sāyana Aśvini is Nirayana Puṣya so the Sāyana names of Nakṣatras are eight Nakṣatras behind the Nirayana names. The same distance is found in the twin positions of the planets given by Vyāsa.

The Mars is given two positions -Anurādhā[24] and Maghā[21]. Anurādhā, which is 8 Nakṣatras ahead of Maghā, is the real Nirayana position of the Mars. Anurādhā is the tenth from the Vernal Equinox at Punarvasu. Taking Aśvini as the first, the tenth is Maghā. Hence, Nirayana Anurādhā is the same as Sāyana Maghā. Thus Vyāsa has given correct position of the Mars by two methods.

The Jupiter is described in Śravaṇa[21] and also near Viśākhā[23] i.e. Swāti. Śravaṇa which is ahead, is the Nirayana Nakṣatra where Jupiter was actually situated. Śravaṇa is fifteenth from the zero point Punarvasu. The fifteenth from Aśvini is Swāti, so Śravaṇa is called as Sāyana Swāti which is situated near Visākhā. Hence the description of the Mahābhārata is correct.

Saturn is said to be in Purvā Phalguni and Rohiṇi. Purvā Phalguni is the actual Nirayana position where the Saturn was situated. But it is fourth from Punarvasu (the zero point), so it is named as Rohiṇi, in the Sāyana way.

At the time of the beginning of the war, the Saturn was in Nirayana Purvã Phalguni, but only seven and half years ago, Saturn was seen in between the arms of Rohiṇi. At the time of the war, though the Saturn was in Purvã Phalguni, it was still bisecting Rohiṇi by its 'Śara'. It means that the Saturn was on the same latitude as the Rohiṇi, so that if it released an arrow by a bow it would have hit the Rohiṇi. Thus the statement of Vyãsa is correct.

4. The riddle in the statement "Viśākhāyāha Sameepasthou Bṛhaspati Śanaiścharou"[23] (Jupiter and Saturn are near Viśākhã -Bhiṣma 3/27) is now solved. Purvã Phalguni and Śravaṇa, the Nirayana positions of Saturn and Jupiter respectively, are equidistant from Viśākhã; so the planets are said to be near Viśākhã.

   Thus two or three Nakṣatras of all the three great planets are well explained.

5. **"Bṛhaspati Samparivãrya Rohiṇim"**[43] (Karṇa 94/51). This statement is a riddle which nobody has solved yet. Apparantly from this statement scholars held that Jupiter was in Rohiṇi. But it is a mistake, which is done by many eminent scholars like the late Mr. Vaidya, mistake because they did not care for the context. If we consider the context it will be evident that Vyãsa has described impossibilities here. Earlier statements are thus -"When Karṇa fell down in the battlefield rivers stopped flowing, Mercury shined instensely like the Sun, the sky got torn, the Earth roared, mountains started moving and the Jupiter covered Rohiṇi (or Jupiter entered the group of stars of Rohiṇi family) and appeared like the Moon and the Sun.[43]

   Vyãsa has shown here that Jupiter coming in the family of Rohiṇi is as impossible as a mountain moving. The ancient Indian Astronomy knew this fact very well. Ancient Indians knew that only the Mars and the Saturn can come into the family of Rohiṇi. The late Dixit S.B. has stated this in "'History of Indian Astronomy." The modern Astronomy also has proved that the Jupiter can never come in the arms of Rohiṇi because it does not move northwards to that extent (2° 35' to 5°28'). Only the Mars and Saturn can do so. Thus the riddle of the Jupiter in Rohiṇi stands solved.

6. **Riddle of the Mars :** Bhiṣma 3/18 states that the Retrograde Mars had aspected Śravaṇa and 'Brahmarāśi'. Earlier we have seen that

the Mars was in Anurādhā. On reversal of its pace, Mars naturally came into Viśākhā, from where its fourth aspect affected Śravaṇa, proving the statement of Vyāsa to be true. Brahmarāśi means Brahmā's constellation. A group of stars alloted to Brahmā, as Deity, is no other than Rohiṇi. Hence Brahmarāśi means Rohiṇi. Rohiṇi is aspected by the seventh or eighth sight of Mars from Anurādhā or Viśākhā. So this riddle is also solved.

Assuming the Mars to be retrograde, I have shown here how the statement of Vyāsa is correct. But Mars was not retrograde at that time with the given positions of the Mars and the Sun. Mars becomes retrograde only when it is more than 132° 51' distant from the Sun (ahead or behind). In other words Mars is retrograde if it is in the 5th, 6th, 7th, 8th, 9th house of horoscope from the Sun. If Mars was in Anurādhā or Viśākhā while the Sun was in Jyeṣṭhā or Uttarā-Āṣāḍhā, Mars could never be retrograde. Even if it was in Maghā with Sun in Jyeṣṭhā it could not be retrograde. No scholar, so far, has given a date on which Mars was retrograde. With the given positions Mars could never be retrograde, therefore another meaning of the verse has to be sought for. Here I present one rational meaning.

VAKRĀNUVAKRA वक्रानुवक्र means very crooked. ŚRAVAṆAM श्रवणं means study or knowledge. The sentence means "perverting and making the knowledge of study crooked." Brahmarāśi means the whole mass of the sacred knowledge ब्रह्म. समावृत्य means covering completely. Thus the stanza can be translated as "Perverting and making the knowledge (gained by study) crooked, the Mars लोहितांग is situated masking completely the whole mass of the sacred knowledge". Thus Vyāsa has described the astrological effect of Mars rather than Astronomical positions. पावकप्रभ लोहितांग may represent red or 'Tāmasa' Kṣatriya race, brave like fire. (Mahābhārata, Śānti Parva A.76 and 188 have alloted Red colour to the Kṣatriyas). Kaurava -Pāṇḍavas were educated but they perverted their knowledge and behaved in such a way that the whole mass of sacred knowledge was masked totally.

This meaning of the verse fits well with surrounding verses and hence is acceptable. Thus the riddle is solved.

7. "Śukrah Proṣṭhapade Poorve Samāruhya Virochate" Bhiṣma 3/15[21] This statement is a great riddle because if the Sun was in Jyeṣṭhā, Venus could never be in Purvā Proṣṭhapadā, 80 degrees away. Venus

is always within 47 degrees from the Sun. It is impossible for a genius like Vyāsa to give erroneous position of the Venus which can be easily seen with naked eyes. Sun's constellation can never be seen; it is to be calculated from the position of the Moon. As Moon's position can be mistaken Sun's position also gets mistaken. We have seen above that there is a mistake of three lunar Nakṣatras. The same mistake was carried over to the Sun and it was supposed to be in Jyeṣṭhā. If we correct this mistake we can see that the Sun was in Uttarā Āṣāḍhā and not in Jyeṣṭhā. If the Sun was in Uttarā Āṣāḍhā, Venus in Purvā Bhādrapadā appears to be natural and correct, because it is only 46 degrees away from the Sun. Thus our correction is proved to be true as the riddle of the Venus in Purvā Proṣṭhapadā is solved.

8. Vyāsa has mentioned that Rāhu was between Chitrā and Swāti.[23] This is a puzzle created by giving Rāhu's position according to Sāyana method to mislead the readers. By the method given above we can find out Rāhu's Nirayana position as Uttarā Āṣāḍhā, (eight Nakṣatras ahead of Chitrā) where the Sun was present. Naturally there could be an Eclipse and it is described in the Mahābhārata (Bhiṣma 2, 3, 17)[21,23,24,26,27] Thus the riddle of Rāhu's position is solved and the Sun's position got confirmation.

Thus by using Sāyana and Nirayana methods Vyāsa has prepared the riddles which are now solved, satisfactorily. The puzzles based on deceptive words like 'Brahmarāśi' are also solved. The positions of all the planets are now confirmed and found to be correct according to the description.

9. These positions solve two more riddles. Bhiṣma[30] 17/2 and Karṇa[31] 37/4 state that seven planets appear to march on each other or collide with each other. So far nobody could explain this riddle. Now, from the above planetary positions it is seen that the Moon, Mars, Mercury, Jupiter, Venus, Sun and the Dragon's Head Rāhu occupied a small area in the sky extending from Anurādhā to Purvā Bhādrapadā. Naturally, they appeared to the Poet to be colliding with each other.

10. Now, we have proved that the riddles of all the planets are clearly solved on the assumption that the Moon was in Hasta on 'Māgha' Pourṇimā, seven days after the death of Bhiṣma. Let us, now, see if this position is cofirmed by the Sun. We have seen that the Sun was

in Uttarã Ãṣãḍhã at the beginning of the War. Bhiṣma collapsed on the tenth day and was on the arrow-bed for fifty-eight nights[32]. Thus after Sixty-eight days from the onset of the War, Bhisma expired on the occasion of the Winter Solstice. The Sun travels about one degree per day. So the Sun must have travelled about 68-69 degrees from Uttarã Ãṣhãḍhã. This comes to Revati, where there was the winter solstice, then, as shown in 2(b). Thus, we reached the starting point again, proving our assumption and calculations as correct.

11. The Mahãbhãrata War started on Amãvãsyã with the Sun on Uttarã Ãṣãḍhã; so this month should have been named as Mãrgaśirṣa, but was called as Kãrtika. The cause of this error is that they took five months at a time as Adhika Mãsas after an interval of thirteen years.[33] Hence there was an overcorrection. This had to be rectified by taking a Kṣaya Mãsa. Kãrtika-Kṣaya-Mãrgaśirṣa should have been the name of that month, but this adjustment was not done. So they named Mãrgaśirṣa as Kãrtika and Phãlguna as Mãgha. That is why the riddles appear in the Mahãbhãrata. Now I have solved these riddles with the help of mathematics and Astronomy.

I shall give here an explanation how this mistake occured. The dispute appeared whether Pãṇḍavas completed 13 years or not.The Verdict was given by Bhiṣma that Pãṇḍavas did complete 13 years by lunar method. He explained that after five years two Adhimãsas are born[33]. Accordingly, in 13 years (13 x 2÷5=)there arose 5 months and 6 days. Bhiṣma has used the word द्वादश क्षपा. Many scholars have translated this as twelve days, but it is wrong. Rãtri or Kṣapã means a 12 hour unit extending from Sun-set to Sun rise. Hence द्वादश क्षपा means six अहोरात्रि or six full days. Here Bhiṣma has given a rough estimate hence there appeared a mistake. The Moon does not travel by a rough estimate. She has her definite velocity by which she travels from one Amãvãsyã to the next Amãvãsya in 29.53058 days. So the Lunar year is composed of 354.367 days while the solar year is of 365.256 days. This shows that the Lunar year is shorter by 10.889 days. In three years 10.88x3=32.64 days become deficient. This deficiency is adjusted by taking Adhimãsa. In 13 years there will be a deficit of 10.889 x 13 = 141.557 days = 4 months and 23 days. So to be accurate 4 months and 23 days were to be adjusted, but Bhiṣma adjusted 5 months and 6 days. Thus

there was over correction of 14 days. This had to be re-adjusted by taking Kṣaya Māsa but it was not taken.

Actually while taking Adhimāsa there is no need to consider days. If we do not consider days, we reveal that a mistake of one month appeared because actual Adhimāsas born were four, but Bhiṣma took five. Hence instead of Mārgaśirṣa, Bhiṣma called it Kārtika Māsa.

I shall further explain this riddle by another simple method. Please note that Pāṇḍavas used Lunar years, while Kauravas used Solar years. Let us start from Chaitra month. After completion of one year both had Chaitra month of the next year. After five years two Adhimāsas originated, which were not considered by Pāṇḍavas as Adhimāsa. Hence when the fifth Lunar year ended and Pāṇḍavas started Chaitra of the sixth year, there was Māgha of the fifth year of Kauravas. After completion of five years Chaitra of Pāṇḍavas coincided with Māgha of Kauravas. After ten years Chaitra of Pāṇḍavas coincided with Mārgaśirṣa of Kaurvas, after 13 years Kārtika of Kauravas coincided with Chaitra of Pāṇḍavas. Thus five Masas were taken as supernumary months. But actually there had to be taken only four supernumary months. Thus Bhiṣma did a mistake of one month. Instead of calling it Mārgaśirṣa, he called it Kārtika. But the Moon was not to follow Bhiṣma's rough calculation. She had her own course. Hence the Moon was actually in Mṛga Nakṣatra and the month was to be termed as Mārgaśirṣa but Bhiṣma called it Kārtika.

This mistake had to be corrected by taking one Kṣaya Māsa. Actually the name would have been Kārtika-Kṣaya -Mārgaśirṣa. But it was not given. People started calling it as Kārtika and the following months were labelled accordingly. So the mistake was carried forward and real Phālguna was called as Māgha. Even though people termed it Māgha, the Moon did not appear near Maghā. The Moon was in Hasta and therefore the month should have been termed as Phālguna.

12. Bhiṣma did a mistake before the war began, but as the months passed he revealed the mistake because the Moon was ahead of the supposed position. So he said, on the death bed, माघोऽयं समनुप्राप्तः He says 'this' Māgha. Why should he say 'this Māgha' ? Because he recognised that it was not the real Māgha, it was Phālguna. But People

called it Māgha. So ironically, he uttered the words, 'this Māgha'.Vyāsa also understood the mistake, so he wrote the words of Bhiṣma and used those as a puzzle. If we do not understand this situation, we will take Māgha month with Full Moon at Maghā Nakṣatra and we will fall in the trouble because without proper data no mathematics will help us to prove the date of the Mahābhārata with proper positions of planets.

Eduka Chinha

Now, we have fixed the period of the Mahābhārata to be at least 5460 years B.C. because the planetary positions and the seasons are corroborated. But one may put forth the presence of the word 'Eduka Chinha'[34]. (Vana Parva 190/68) Scholars mean it as edifices built over the dead relics of Buddha and bring the Mahābhārata epic period later than Buddha. This is erroneous as there is no mention of Buddha anywhere in the Mahābhārata. Moreover, recently it is proved that two ślokas from Geetā (7th and 8th from A. 15) pertaining to rebirth, are found translated in an Egyptian Pyramid dated 3000 years B.C. (The Daily Navabharat Times, 18th April 1967, Age of Mahābhārat War -B. Chaturvedi, page 309 : Mr. V. B. Athavale, Nasik 1950). In this ancient age of 3000 years B.C. the Geetā had reached Egypt, so it must have been computed much earlier. Hence our period of 5480 years B.C. appears to be correct. Edukas must be the Pyramids built on the Mummies. I suggest here the transition of the word as -Pyramidos -midos -idos -idok -eduk. This is how the word may have reached India. Due to those huge pyramids built on the dead, criticism is done in the Mahābhārata that if such a fashion flourishes there will be no place left for the living human beings and their Gods[34]. (B.O.R.I. Vana Parva 188/64, 65) The criticism appears true in the case of Pyramids. So Eduka means Pyramid and shows antiquity of the Epic as or more than 3000 years B.C.

ṚGVEDA

Scholars may question how to accept my date of 5560 B.C. because the Rigved period is 5000-6000 B.C. according to Lokamānya B. G. Ṭiḷaka. My explanation is that the late Ṭiḷaka has stated himself that he has shown the last phase of the Ṛgveda as between 5000-6000 B.C. In the last phase of the Ṛgveda Śantanu and Devāpi are referred to

in 10-98-7.

यद् देवापिः शन्तनवे पुरोहिता होत्राय वृतः कृपयन्नदीधेत्।

Śantanu was the king of Hastināpura and Devāpi was his elder brother. Śantanu's son was Vichitravirya and grandson was Paṇḍu. Paṇḍu's sons were Pāṇḍavas who fought with Kauravas. Thus only four generations had passed between the last phase of the Ṛgveda and the Mahābhārata War. According to the Indian average we can say 4x35 = 140 years before the Mahābhārata War Śantanu was ruling the Hastināpura at 5701 BC.

Here one may raise a doubt whether Śantanu and Devāpi referred to in the Ṛgveda were the same as ancestors of Pāṇḍavas. My explanation is that in the whole of the literature of the Purāṇas, Upaniṣads, Brāhmaṇas and Vedas there is only one Śantanu and only one Devāpi, who were brothers. Hence it is not possible that some other persons are referred to in the Ṛgveda.

The Rāmāyaṇa is before the Mahābhārata and happened during the Ṛgveda period. This is seen from the fact that the Deities referred to in the Rāmāyaṇa are the same as Ṛgveda. Deities of the Mahābhārata are comparatively recent and quite different than the Rāmāyaṇa and the Ṛgveda.

The Mahābhārata, Anuśāsana Chapter 30 (or B.O.R.I. Chap. 31) gives 15 descendents of the famous Ṛgvedic sage Gṛtsamada. The last is Śounaka who lived at the time of the Mahābhārata. Souti told the Mahābhārata to Śounaka. Fifteen generations show a span of about 600 years from the Ṛgveda. The Mahābhārata period was so close to the Ṛgveda. Therefore, the grand student of Vyāsa namely Yājnavalkya ventured to compose a new Yajurveda. After Śukla Yujurveda the tradition of writing the Vedas came to an end.

Uptilnow nobody has satisfied all these problems. I have done this job. Now we will proceed to the mathematical calculations with details of evidences to show the exact date of the Mahābhārat War as 16th October 5561 B.C

Figure to show how an external planet is seen Retrograde in motion. Ref. page 54.

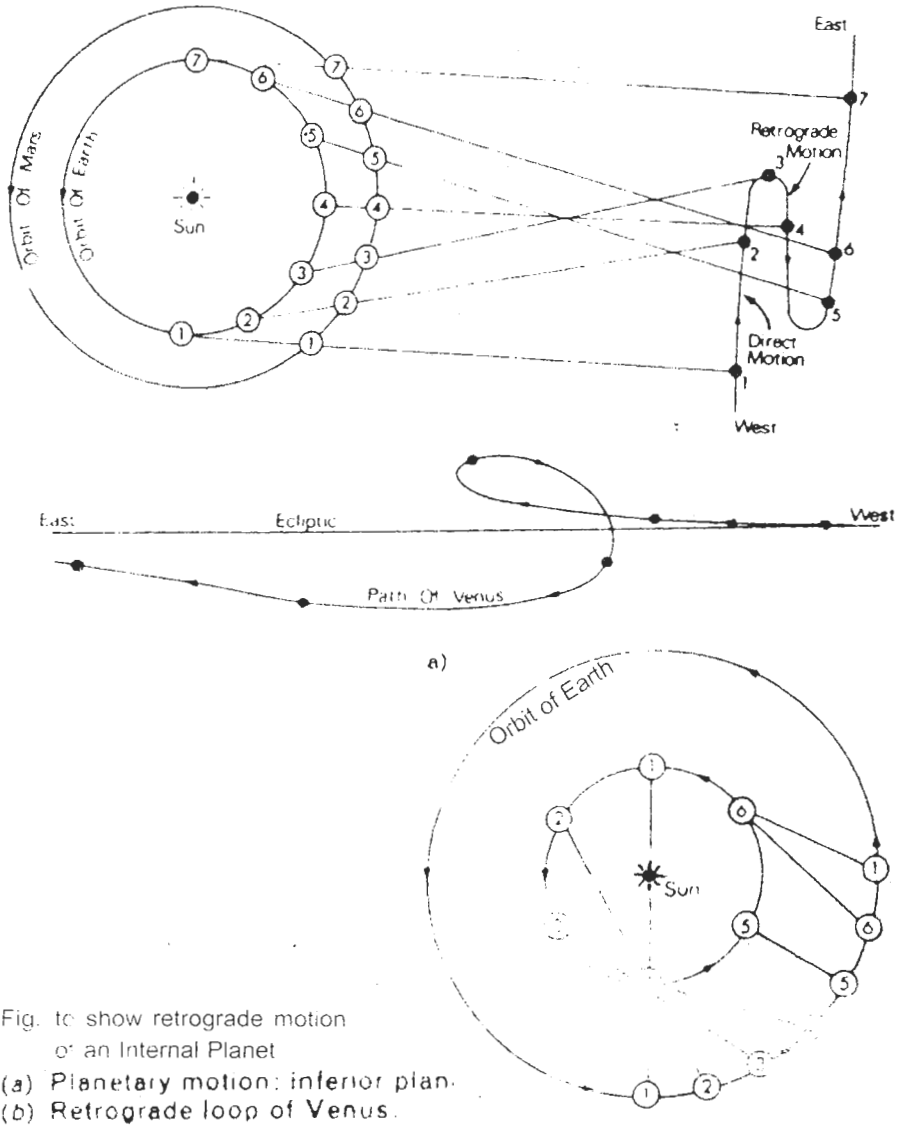


Fig. to show retrograde motion of an Internal Planet
(a) Planetary motion: inferior plan.
(b) Retrograde loop of Venus.

THE EXACT DATE OF THE MAHĀBHĀRATA WAR

16TH OCTOBER 5561 YEARS BEFORE CHRIST

After solving the Astronomical riddles of the Mahābhārata, it is seen that the Mahābhārata period lies between 5480 and 6440 years B.C. This can be easily proved by the evidence of the seasons. Harivanśa (Viṣṇu Purāṇa A. 5) states that when Nanda carried Kṛṣṇa to Gokula on Śrāvaṇa Vadya Navami day, there was dry cow-dung spread all over the ground and trees were cut down[45]. The presence of dry cowdung all over in Gokula indicates the presence of Summer in the month of Śrāvaṇa. Trees are usually cut down in Summer to be used as fuel in the rainy season. The seasons move one lunar month backwards in two thousand years. Today the rainy season starts in Jyeṣṭha Māsa but two thousand years ago, at the time of Kālidāsa rainy season used to start in Āṣāḍha Māsa. At the time of Kṛṣṇa's birth the Summer was in the month of Śrāvaṇa while today it is in Vaiśākha. Thus the Summer is shifted by four months, hence Kṛṣṇa's period comes to 4x2000 = 8000 years ago approximately. This means about 6000 years B. C. The same period we have seen above.

At the time of the Mahābhārata, the Vernal Equinox was at Punarvasu. Next to Punarvasu is Puṣya Nakṣatra. So Vyāsa used 'Puṣyādi Gaṇanā' for his Sāyana method, and called Nirayana Puṣya as Sāyana Aśvini. He shifted the names of further Sāyana Nakṣatras accordingly. At that time Winter Solstice was on Revati, so Vyāsa gave the next Nakṣatra Aśvini the first palce in the Nirayana list of Nakṣatras. Thus he used Aśvinyādi Gaṇanā for the Nirayana method. Using at times Sāyana names and at times Nirayana names of the Nakṣatras, Vyāsa prepared the riddles. By the clue that Nirayana Puṣya means Sāyana Aśvini, it is seen that Nirayana names of Nakṣatras are eight Nakṣatras ahead of the Sāyana names. Thus the Saturn was in Nirayana[21] Purvā and Sāyaṇ Rohiṇi[24], the Jupiter was in Nirayana Śravaṇa[21], and Sāyana Swāti[23] (near Viśākhā)[23], while the Mārs was in Nirayana Anurādhā[24] and Sāyana Maghā[21], Rāhu was between Chitrā and Swāti[23], by Sayana way that means it was in Nirayana Uttarā Āṣāḍhā (8 Nakṣatras ahead). From these positions of the major planets we can calculate the exact date. My procedure is as follows :-

I found out that on 5th May 1950 the Saturn was in Purvã Phalguni. From 1950, I deducted 29.45 years to get the year 1920 when the Saturn was again in Purvã. In this way I prepared a vertical column of the years when the Saturn was in Purvã. Similarly, I prepared vertical columns of the years when the Jupiter was in Śravaṇa and Rãhu in Uttarã Āṣāḍhã. Then I searched in horizontally to find out the year common in all the three columns. It was 5561 B.C. when all the three great planets were at the required places. Then I proceded for the detailed calculations.

Bhiṣma expired at the onset of Uttarãyaṇa i.e. on 22nd December. This is a fixed point according to the modern Scientific Calendar. He was on the arrowbed for 58 nights[32] and he had fought for ten days. Hence 68 days earlier than 22nd December the War had started. This shows that the War started on 16th October. We have to calculate the planetary positions of 16th October 5561 B.C.

THE SATURN :

Encyclopaedia of Astronomy by Larousse states that one rotation of Saturn takes 29 years and 166 days. One year means 365.25 days. So the Saturn's round takes 29.4544832 years. On 5th May 1950, Saturn conjugated with Purvã. We have to see its position at 5561 years B.C. So 5561+1950 = 7511 years ago. 7511 divided by 29.4544832 gives 255.00362 rounds. This means that Saturn completed 255 rounds and has gone ahead by 0.00362 round or 1.3 degrees. Hence Saturn was in conjugation with Purvã on 5th may 5561 B.C. On 16th October 5561 B.C. i.e. 164 days later it must have travelled [0.0334597 degrees (daily pace) multiplied by 164 days =] 5.487 degrees forwards. So Saturn was at 141 degrees or in Purvã Nakṣatra.

In October 1962, Saturn was at 281^0. 1962 + 5561 = 7523 years. 7523 divided by 29.4544832 gives 255.41103 turns. After completing 255 full turns, Saturn has gone back by o.411003 turn i.e.148^0. 281-148 = 133^0. This was the position of Saturn in Purvã.

Calculating from 1931 or 1989 also Saturn appears at 141 degrees in Purvã.

Thus on16th of October 5561 B.C. Saturn was in Purvã as told by Vyãsa in the Mahãbhãrata.

Rāhu takes 18.5992 years per rotation. It was at 132 degrees on 16th Oct. 1979. 1979 + 5561 = 7540 divided by 18.5992 gives 405.39378 turn. 0.39378 turns means 141.7^0 Rāhu always goes in reverse direction. We have to go in the past, so adding 141.7^0 to orginal 132^0 we get 273^0. This is Uttarāṣādhā where Rāhu was situated (by Nirayana method).

Calculations from 1989, 1962 and 1893 confirm Rāhu in Uttarā Āṣāḍhā.

THE JUPITER:

Jupiter takes 11.863013 years per rotation. On 16th October 1979, it was at 129^0. 1979+5561=7540. 7540 divided by 11.863013 gives 635.58892 turns. 0.58892 turn means 212^0 So the Jupiter was 212^0 behind the orginal position. 129^0 -212^0= -83^0. -83^0 means 360^0 -83^0 = 277^0. 277^0 is the position of the star of Śravaṇa. So the Jupiter was in conjugation with Śravaṇa The span of Śravaṇa is 280°to 293°.

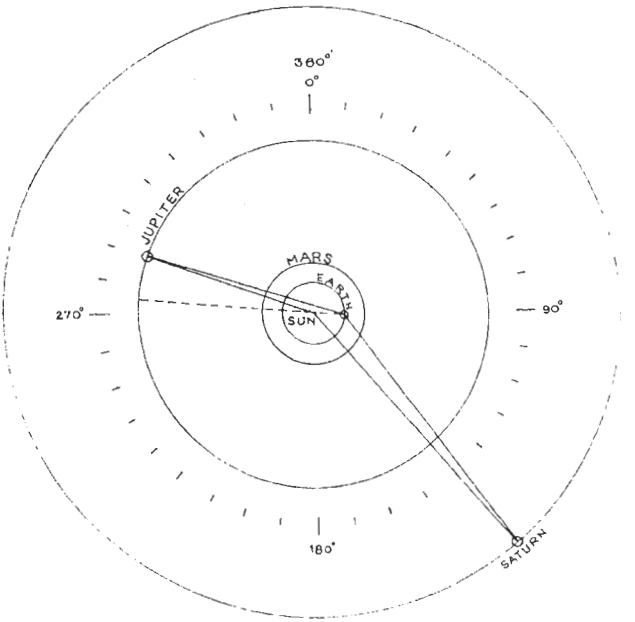
Calculations from 1989,1932 and 1977 show the Jupiter at 285^0 and 281 degrees or in the zone of Śravaṇa. This confirms the position told by Vyāsa.

THE MARS : Mars takes 1.88089 years per rotation. On 16th October 1979, the Mars was at 108^0. 1979 +5561=7540 yrs. 7540 divided by 1.88089 gives 4008. 7405 turns. 0.7405 turn means 266^0. The Mars was 266^0 behind the original position of 108^0. 108^0-266^0 = -158^0. 360^0 -158^0. = 202^0 This is just beyond the star of Viśākhā which is at 200^0. Though In the Viśākhā-zone, the Mars has crossed the Star of Viśākhā, so the description of Vyāsa (Anurādhām Prārthayate) that it requests or appeals Anurādhā, appears to be correct.

Calculations from 1962 and 1900 show the Mars at 206^0 and 208^0 and therefore though in Viśākhā, it can be called appealing Anurādhā, "Anurādhām Prārthayate". Thus it is seen that Vyāsa has used tricky but correct terms. He has not written any false statement because he was theTruth-abiding Sage.

HELIOCENTRIC AND GEOCENTRIC

Here an expert may raise a question whether I have used Heliocentric method or Geocentric method. I make it clear here that I have used the Heliocentric method. That means I have considered the rotations of planets around the Sun. But after fixing the position of the



The Geometric figure to consider the difference between Heliocentric and Geocentric positions of the planets.

planet around the Sun, I have also seen where that planet will be seen from the earth. For this purpose I used Geometry. In the figure nearby I have sketched the orbits of the Saturn, Jupiter, Mars and the Earth around the Sun. The distances of the planets from the Sun are respectively 880 millions of miles, 500 millions of miles, 150 millions of miles and 90 millions of miles. To represent these distances I took the radii of the orbits as 88 mm, 50 mm, 15 mm and 9 mm respectively, from the centre, which represents the Sun.

I have plotted the Saturn at 140° and have joined it to the central Sun by a straight line. At that time the Sun was in Uttarāsāḍha i.e. at 275° as seen from the Earth. So I drew a line from 275° to the centre and I extended it so as to get the position of the Earth at 275°- 180° = 95°. Now from this Earth's position I drew a line to Saturn's position at 140°, I measured the angle between the lines Earth-Saturn and Saturn-Sun. It was less than 2.° It shows that from the Earth the Saturn would have seen only 2 degrees here or there. Anybody will agree that this difference is immaterial because Vyāsa has given Nakṣatras having a span of 13° 20'.

By the same method in the case of the Jupiter we see that its displacement, as seen from the Earth, would be less than 2 degrees which, also, is immaterial.

I would like the scholars to consider one more point here. When I say that an insect is sitting near one 0' clock position on your watch or clock, one may think that the insect is between 12 and 1, while other may think that it is between 1 and 2. So the span to find that insect is from 12 to 2. Similarly, Vyāsa has mentioned the Nakṣatra in the vicinity of the planet and therefore we have a scope of one Nakṣatra on either side to find out the planet. Thus if our answer is between +13 ° and -13° from the given position we are successful. In my calculations I have achieved the perfect positions, but by chance, if somebody gets a different position he is requested to consider a span of ± 13 degrees. The positions given by other scholars are far away than the positions recorded by Vyāsa, so they are not acceptable.

I request the scholars, to be careful while doing calculations, not to take a retrograde position of the present planet, because that may give a false position.

Please note that all the planets become retrograde only apparently when our Earth is approaching them. We need not consider their retrograde motion each year because their rotational periods around the Sun are fixed and in that rotation they are seen retrograde from the Earth only apparently. We have to see if the last position of the planet is retrograde. This can be done easily by considering the position of the Sun and the planet. Any external planet becomes retrograde when it is in the house (of a horoscope) from 5th to 9th from the Sun. Please see the figure on page 49.

LEAP YEAR :

Please note that I have taken 365.25 days for a solar year. It covers the general leap years, but it does not take into account the leap years abandoned at centuries. At the interval of 400 years leap years are taken according to the modern scientific calendar. If these century years are considered, there may be an error of 50 days in 7500 years duration. As for dates these 50 days are automatically accounted for because we have taken the winter solstice as fixed on 22nd December, and it is referred by Vyāsa, while describing Bhiṣma's death. As far as the planets like Saturn, Rāhu and Jupiter are concerned 50 days are

immaterial because in 50 days the Saturn will move only 1.6° while Jupiter 4.1° as an average. Hence the error is negligible.

Now, we have seen that all the four important planets satisfy their positions as told by Vyāsa on 16th October 5561 B.C. Hence we have no other way but to accept this date as the exact date of the Mahābhārata War.

Please note that, so far, not a single scholar has shown a date with the planetary positions satisfying the description by Vyāsa in the Mahābhārata. The Late Mr. C. V. Vaidya and Prof. Apte show 3102 B. C. but their Mars is in Āṣāḍhā, Jupiter is in Revati, Saturn in Śatatārakā and Rāhu in Jyeṣṭhā. Prof. K. Shrinivas Raghavan, Mr. Sampat Ayangar and Sheshagiri show 3067 B.C, but they put Jupiter and Saturn in Rohiṇi and Sun, Rāhu, Mars in Jyeṣṭhā. Garga, Varāhmihira and Taraṅgiṇi show 2526 Before Saka i.e. 2449 B.C. But their Mars comes in Dhaniṣṭhā, Jupiter and Saturn in Bharaṇi and Rāhu in Hasta. P.C. Sengupta gives 2448 B.C. with Saturn 356°, Jupiter 8°, Mars 157°, Venus 200°, Sun 200° (Ancient Indian chronology, Calcutta University). The Western scholars as well as Romeshchandra Datta and S. B. Roy show 1424 B.C. but their Saturn is in Śatatārakā, Jupiter in Chitrā, Rāhu in Purvā and Sun in Anurādhā with no eclipse. Billandi Ayer shows 1193 years B.C. but his Mars comes in Mula, Jupiter in Purvā Bhādrapadā, Saturn in Purvā Āṣāḍhā and Rāhu in Punarvasu. At 900 B.C. as is proposed by many other scholars, Jupiter comes in Mula, Rāhu in Viśākhā and Saturn in Jyeṣṭhā. Thus not a single scholar could corroborate his date with the facts written by Vyāsa. Hence, their dates have to be dismissed. (C. V. Vaidya 'Upasamhāra' page 94. Age of the Mahābhārata War)

I have shown all the planetary positions correct to the description of the Mahābhārata. In addition I have shown that the seasons tally with my date, and the seasons do not tally with other dates. I have solved all the planetary riddles from the Mahābhārata which nobody could dare. So **16th October 5561 BC. is the exact date** of the first day of the Mahābhārata War. At the beginning of the War, Vyāsa promised Dhṛtarāṣṭra that he will write History of the Kauravas[36], so most probably Vyāsa must have written the Astronomical data immediately.

Uranus, Neptune and Pluto were Known to Vyāsa in 5561 years B.C.

All the planets viz. Sun, Moon, Mars, Jupiter, Venus, Saturn and Rāhu , show correct positions mentioned in the Mahābhārata on 16th October 5561 years B.C. So this must be the exact date of the Mahābhārata War. After pin-pointing the exact date, it struck to me that the three additional planets mentioned with positions by Vyāsa in the Mahābhārata, may be Uranus, Neptune and Pluto. Vyāsa has named them as Śveta, Śyāma and Teevra. Let us see if this conjecture is correct. We have to see this with the help of Mathematics, because we have to go scientifically.

Viśeṣena hi Varṣṇeya Chitrām Peedayate Grahah[24] |10| Udyoga/143 Śvetograhastathā Chitrām Samatikramya Tiṣṭhati[21]/ 12 / Bhiṣma 3.

In these two stanzas Vyāsa states that some greenish white (Śveta) planet has gone beyoned Chitrā. This means that the planet was in Swāti (or Viśākhā, because Chitrā and Swāti are close together). This is Sāyana position, hence Nirayana position is eight Nakṣatras ahead in Śravaṇa (or Dhaniṣṭhā). Neelakaṇṭha calls this Śveta as 'Mahāpāta' which means having a greater orbit. Greater orbit indicates a planet beyond the Saturn. Hence I assumed Śveta to be the Uranus. Let us calculate and see if this is true.

In October 1979, Uranus was at 206 degrees. Uranus takes 84.01 years per rotation. 1979 + 5561 = 7540 divided by 84.01 gives 89.75122 turns. 0.75122 rotation means 270.4392 degrees. 206 -270 = -64 = 296 degrees. This comes in the zone of Dhaniṣṭhā, but the star of Dhaniṣṭhā is at 297 degrees, so the position given by Vyāsa is confirmed. Hence Śveta must be Uranus.

In October 1883, Uranus was at 151 degrees. 1883 + 5561 = 7444 years. 7444 divided by 84.01 gives 88.608498 rotations. 0.608498 turn means 219 degrees. 151-219=292 degrees. This is Śravaṇa Nakṣatra. So Uranus was in Śravaṇa during the Mahābhārata War as stated by Vyāsa under the name of Śveta.

Calculations from 1930 show Uranus to be at 292.54 degrees or Śravaṇa. Thus our mathematics proves that Vyāsa has given correct position of Uranus under the name of Śveta. This proves that Vyāsa had

knowledge of Uranus, a planet supposed to be recently discovered in 1781 by Herschel. Vyāsa has given the name Śveta to this planet. Śveta means greenish white. Uranus is actually greenish white in colour. So Vyāsa must have seen Uranus with his own eyes. Uranus is of Sixth magnitude and is visible to the naked eye according to the modern science.

Neelkaṇṭha of 17th Century also had knowledge of Uranus or Śveta. He writes In his commentary on the Mahābhārata (Udyog 143) that Śveta or Mahāpāta was a famous planet in the Astronomical science of India.[25] Neelkaṇṭha was about one hundred years before Herschel, who, it is supposed, discovered Uranus. So we can conclude that one hundered years before Herschel, Uranus was known to the Indian Astronomers and Vyāsa had discovered it at or before 5561 years B. C.

NEPTUNE :

In 1781 A. D. Herschel discovered Uranus; but its calculated positions never corroborated with the actual positions. So the experts thought of another planet beyond Uranus. They fixed its position by mathematics and at that site it was discovered by German Astronomers in 1846 AD. I have found out that Neputne is also mentioned by Vyāsa in the Mahābhārata, under the name Śyāma.[23]

Śukrah Proṣṭhapade Purve Samāruhya Vorochate
Uttare tu Parikramya sahitah Samudikṣyate II 15 II[21]
Śyāmograhah Prajjvalitah Sadhooma iva Pāvakah [23].
Aindram Tejasvi Nakṣatram Jyeṣṭhām Ākramya Tiṣṭhati/16/Bhiṣma.)

Here Vyāsa says that there was some luminary with Venus in Purvā Bhādrapadā. He adds further that a bluish white (Śyāma) planet was in Jyeṣṭhā and it was smoky (Sadhoom). Sāyana Jyeṣṭhā means Nirayana Purvā Bhādrapadā. So this is the description of one and the same planet, named by Vyāsa as 'Śyāma'. Neelkaṇṭha calls it 'Parigha' in his commentary.[22] Parigha means circumference, so this planet may be at circumference of our solar System; and so may be Neptune. Let us see by Mathematics if this concept is true. We will find out the position of Neptune on 16 October 5561 B.C.

Neptune takes 164.78 years per rotation. It was at 234 degrees in 1979. 5561+1979= 7540 years. 7540 divided by 164.78 gives 45.75798 rotations. 0.75798 turn means 272.8 degrees. 234 -272.87 = - 38.87 =

321.13 degrees. This is the site of Purvā Bhādrapadā. So Neptune was in Purva Bhādrapadā during 5561 years B. C.

In 1948, Neptune was at 172 degrees. 1948 + 5561 = 7509 divided by 164.78 gives 45.56985 turns. 0.56985 turn means 205 degrees. 172-205 = -33. 360-33 =327 degrees. This is the zone of Purvā Bhādrapadā.

In 1879, Neptune was at 20 degrees. 1879 + 5561 = 7440 years. 7440 divided by 164.78 gives 45.15111 turns. 0.15111 turn means 54.39 degrees. 20-54.39 = -34.39. 360 -34.39 = 325.61 degrees. This is Purvā Bhādrapadā.

Thus the position of Śyāma or Parigha is factually proved in the case of Neptune. Therefore, we conclude that Vyāsa did know Neptune, too. Vyāsa might have got this knowledge of Neptune by Yogic power (Clairvoyance) or by Mathematics or by using lenses. Mathematics was far advanced, then, that is why ancient Indian sages fixed the rate of precession of Equinoxes accurately. Even the world famous scientists praised the Indian sages for this marvellous work of Mathematics. So Vyāsa could have mathematically calculated the position of Śyāma or Neptune. Mirrors are mentioned in the Mahābhārata, so lenses too might have been present then. They had microscopic vision[46] (Śānti A. 15 and 308) I have proved this in my Marāṭhi book 'Swayāmbhu' and have read a paper in Poona medical Congress on this in 1971, which is published in the Mahārāṣṭra Medical Journal 1971. As microscopic vision was present, they might have Telescopes too. Planets can be seen with mirrors as well as lenses. Vyāsa must have seen Neptune; its proof lies in the fact that he says it is bluish white (Śyāma). Neptune is in fact, bluish white in colour. Hence, we conclude that the Neptune also was known to Vyāsa in 5561 B.C.

Pluto was also known to Vyāsa in 5561 BC.

Kṛttikām Peedayan Teekṣṇaihi Nakṣatram/30/Bhiṣma 3/
कृत्तिकां पीडयन् तीक्ष्णै: नक्षत्रम्। ३०। भीष्म ३.

Vyāsa states that there was one Nakṣatra i.e. some immobile luminary troubling Kṛttikā (Pleides) with its sharp rays[23]. This 'star' in Kṛttika must have been some 'Planet'. It must have been stationary for many years, that is why Vyāsa called it 'Nakṣatra.' Nakṣatra means a thing which does not move, according to the Mahābhārata itself. न क्षरति इति नक्षत्रम् । ३६ शांति. २९०

Hence that Nakṣatra was a planet moving very slowly like Pluto which takes about nine years to cross one Nakṣatra of 13 degrees. My assumption that this Nakṣatra was Pluto gets confirmation by B.O.R.I. Edition which states thus: Kṛttikāsu Grahasteevro Nakṣatre Prathame jvalan/26/Bhisma 3. Some editions mention 'Grahasteekṣṇah'. Thus Teevra, Teekṣṇa and Nakṣatra are the names of one and the same planet (Graha) which was in Kṛttikā during 5561 B.C. Let us see if Vyāsa has given these names to Pluto and if Pluto was in Kṛttikā then. It is stated that Kṛttikā was troubled with sharp rays by that planet. This indicates that it was Nirayana Kṛttikā.

Pluto was at 175 degrees in 1979. It takes 248 years per rotation. 1979+5561=7540 years. 7540 divided by 248 gives 30.403223 turns. 0.403223 turn means 145 degrees. 175 -145 = 30 degrees. This is the site of Kṛttikā. Thus it is proved beyond doubt that Vyāsa has mentioned the position of Pluto, which was discovered to the modern world in 1930. Vyāsa could have used his Yogic Vision or mathematical brain or a lens or some other device to discover Teevra, Teekṣṇa or Nakṣatra or Pluto.

Thus all the three so-called 'New' planets were discovered by Vyāsa. It is usually held that before the discovery of Herschel in 1781 AD, only five planets were known to the world. This belief is wrong because Vyāsa has mentioned **'seven Great Planets'**, three times in the Mahābhārata.

Deepyamānāscha Sampetuhu Divi Sapta Mahāgrahāh/2/ Bhiṣma 17[30]. This stanza states that the seven great planets were brilliant and shining; so Rāhu and Ketu are out of question. Rāhu and Ketu are described as 'Tamograha' or shadows, in the Mahābhārata. They are also called as 'Paruṣ Graha' meaning Nodal point. (Paruṣ means a node). Evidently Rāhu and Ketu are not included in these seven great planets. The Moon also is not included, because it was not visible on that day of Amāvāsyā with Solar Eclipse. From the positions discovered by me and given by Vyāsa it is seen that Mars, Sun, Mercury, Jupiter, Uranus, Venus and Neptune were the seven great planets accumulated in a small field extending from Anurādhā to Purvā Bhādrapadā. So they appeared to the Poet as colliding with each other,[30] during total solar eclipse.

Nissaranto Vyadṛśanta Suryāt Sapta Mahāgrahāh/4/Karṇa[31].

This stanza clearly states that these seven great planets were 'seen' moving away from the Sun. As these are 'seen', Rāhu and Ketu are out of question. This is the statement of sixteenth day of the War, naturally the Moon had moved 180^0 away from the Sun. Hence the Moon, Mars, Mercury, Jupiter, Uranus, Venus and Neptune are the seven great planets mentioned by Vyāsa.

Prajā Samharaṇe Rājan Somam Sapta grahā Iva[40]/22/Droṇa 37. Here again seven planets are mentioned excluding the Moon.

Even if we do not consider the planetary positions, from the above three stanzas it is clear that seven planets are mentioned which do not include the Sun, Moon, Rāhu and Ketu. Naturally the conclusion is inevitable that Vyāsa did know Uranus (Śveta) and Neptune (Śyāma) as planets.

If they were known from 5561 years B.C. then why were they forgotten ? The answer is simple, that these two planets, Uranus and Neptune were not useful in predicting the future of a person. So they lost importance and in the course of time they were totally forgotten. But, in any case, Neelakaṇṭha from 17th century knew these two planets very well. Neelakaṇṭha is about a hundered years ancient than Herschel, and he writes that Mahāpāta (Uranus) is a famous planet in the Astronomical science of India.[25] He also mentions the planet 'Parigha' i.e. Neptune.[22] So both were known in India, at least one Hundered years before Herschel. Vyāsa is 7343 years ancient than Herschel, but still he knew all the three planets Uranus, Neptune and Pluto.

Other points supporting the date 16th October 5561 B. C.

Kṣaya or Viśvaghasra Pakṣa -A fortnight of only thirteen days is told by Vyāsa which occured just before the great War. Such a fortnight comes at the intervals of 22 years. Calculations show that at 5561 B.C. Kṣaya Pakṣa did occur. It had occured in 1962 and 1940. 1962+5562 = 7524 is completely divisible by 22.

Amāvāsyā confirmed - Kṛṣṇa and Karṇa fixed the day of War on Amāvāsyā[42] (Udyog 142.) Vyāsa also indicates in Bhiṣma 2 and 3 that the War started on the day of second Amāvāsyā, because two

successive Amāvāsyās appeared then.[37] Bhiṣma died on the day after 67 (58+9) nights from the onset of the War, at the begining of Uttarāyaṇa i.e. 22nd December. So the War must have commenced on 16th October.

Let us see if Amāvāsyā comes on this day.

In 1979, Amāvāsya was on 21st of October. Amāvāsyās repeat after the intervals of 29.53058 days. The Lunar year is of 354.367 days while the Solar year is of 365.25 days. 1979+5561 = 7540 multiplied by 365.25 and divided by 354.367 gives 7771.5616 Lunar years. 0.561685 Lunar year means 199.0125 days. 199.0125 divided by 29.53058 give 6.7392005. This indicates that 6 Amāvāsyās are completed and 0.7392005 lunar month or 22 days are left. These 22 days are left for 21st October and we have to go behind upto 16th October. So adding these 6 days to 22 we get 28 days. After 28 days Amāvāsyā can occur. After 29 days it always occurs. Thus on 15th and 16th October 5561 year B.C, there were two successive Amāvāsyās as mentioned by Vyāsa.

Another method gives the same conclusion. At the internal of 19 years the Amāvāsyā falls on the same date. 19x365.25 divided by 29.53058 gives 235.00215. So in 19 years 235 Amāvāsyās are completed. I found that on 17th October 1963, there was an Amāvāsyā. 1963+5561 = 7524 divided by 19 gives 396. This division is complete, so there was an Amāvāsyā.

Thus it is established that Vyāsa has reported Amāvāsyā correctly.

Where did this Amāvāsyā happen ?

We know that the Sun recedes back at the rate of 1 degree in 72.2 years due to the Precession of equinoxes. With the help of this rate of precession we will find out the place of the Sun on 16 Oct. 5561 B.C. On 9th Oct. 1999 there was Amāvāsyā at 171^0 in Hasta Nakṣatra. 1999 + 5561 B.C. = 7560. In 7560 years the Sun has receded by (7560 divided by 72.2=) 104.7^0. Therefore on 9 Oct. 5561 B.C. the Sun was 104.7^0 ahead of 171^0. It means that the Sun was at 275^0 in Uttarā Aṣāḍhā on 9 th Oct. 5561 B.C. On 16th Oct. 5561 B.C. the Sun would have been 7^0 ahead at 282.7^0. The span of Uttarā Āṣāḍhā is upto 280^0. The Sun comes only 2.7^0 away from it. Hence can be taken as in Uttarā Aṣāḍhā.

Vyāsa tells that the Amāvāsyā had **Śakra** as its Deity. Śakra has two meanings, Indra as well as number 14. Taking the meaning as Indra all the scholars held that it was the Kārtika Amāvāsyā at Jyeṣṭhā Nakṣatra whose Deity is Indra. But we have seen above that it was Mārgaśirṣa Amāvāsyā. Here the number 14 comes for help. Vyāsa knew that the vernal equinox was at Punarvasu then. So Puṣya was the first Nakṣatra and Uttarā Āṣāḍhā was the 14th. Thus the Amāvāsyā was on the 14 th Nakṣatra. Hence enigmatically Vyāsa wrote that it was Śakra Amāvāsyā.

Thus this puzzle also stands solved.

Eclipses -Vyāsa has mentioned that there was a Solar as well as a Lunar eclipse in one month[23] at the time of the Mahābhārata War. Calculations confirm that in October 5561 B.C, both the Solar and Lunar eclipses did occur. Rāhu and Sun were in Uttarā Āṣāḍhā at 273° & 279°, so total eclipse of the Sun took place, on the Mārgaśirṣa Amāvāsyā day. Only 13 days earlier, according to Vyāsa, there was Pourṇimā with lunar eclipse, causing pallor of the Moon. Thirteen days earlier the Sun would have been 13° behind at (279-13=) 266° in Purvā Āṣāḍha. It was Pourṇimā so the Moon was diagonally opposite at (266-180=) 86° in Punarvasu, just beyond Mṛga, so it was Mārgaśirṣa Pourṇimā, though it is wrongly or enigmatically told to be Kārtika Pourṇimā. Rāhu was at 273° so Ketu was diagonally opposite at 93° in Punarvasu, only 7° away from the Moon, so the eclipse of the Moon was possible which was not total. (See Fig. On page 86.)

A Big comet -. Vyāsa has mentioned that at the time of the Mahābhārata War a big comet was seen just beyond Puṣya Nakṣatra.[21] There are many comets. Indian Astronomical works refer to more than 500 comets, but big comets are very few. Haley's comet is one of the big comets which comes at the regular intervals of 76/77 years. It was seen in 1910 and 1986. If we add 1910+5561 = 7471. 7471 is divisible completely by 77. Evidently it seems that it was Haley's comet seen at the Mahābhārata War .

Conclusion:

All the twelve planets confirm their said positions on 16th October 5561 years B. C. along with two Amāvāsyās, two eclipses, Kṣaya Pakṣa, and a comet. Thus, in all eighteen mathematical points fix the same

date. Therefore, we have to accept this date of the Mahābhārata War, if we want to be scientific. Please note that all the twelve plantes will come in the same positions again only after 22290 millions of years. That means it will never happen again in the life of our Earth, because life of the Earth is only 4000 millions of years. So the date of the Mahābhārata War is pin-pointed as 16th October 5561 B.C., Mārgāśirṣa Amāvāsyā.

In my meditation I learnt that the Mahābhārata war began on Sunday. 16 Oct. 5561 B.C. was Sunday. See how ! 16 Oct. 2003 was Thursday. 2003 + 5561 = 7564. 7564 x 365.2563773 = 2762799.1. dividing by 7 we get 394685.58. 0.58x7 = 4.06, So we have to go 4 days behind Thursday. It comes to Sunday.

Computer :

After completing my research with the help of an electronic calculator and satisfying myself that the date of the Mahābhārata War is 16th October 5561 B.C. I thought of using a computer to do this difficult work. Accordingly I approached a person expert in the computer work. I explained him how I worked. Then he fed the computer with the necessary data, and to my extreme joy the computer gave only one date "-5560" for the planets to be stationed at the locations stated by Vyāsa. The computer gave the positions thus-Saturn 141°, Rāhu 277°, Jupiter 293°, Mars 203° , Uranus 296°, Neptune 322°, Pluto 34° during minus 5560. I say 5561 B.C. while computer tells -5560. This difference of one year has occured because the computer takes zero between +1 and - 1, while in practice we do not take a zero year between 1 B.C. and 1 AD. Hence -5560 means 5561 B.C.

Thus even the computer has given 5561 B.C. as the date of the Mahābhārata War which has to be accepted in this computer Age.

DATES Of PREWAR AND POST WAR INCIDENTS

After fixing the exact date of beginning of the Mahābhārata War as 16th October, 5561 before Christ, we will proceed to examine the details of and fix the dates of various incidents in the life of Pāṇḍavas.

Vyāsa has given minute details which can help us fix the various dates, but so far nobody has done any work on this problem. When did Pāṇḍavas go into forest? When did they go underground into secret existence ? When did they come out of their secrecy ? All these and

such other problems are yet unsolved. Here I have solved all these questions.

Vyāsa has not directly told when Pāṇḍavas went into forest life. But at the beginning of the forest life it is stated that the summer was over long ago (Vana 25/17) and therefore Sāga and such other trees had flowered.[53] As Grişma was over, it might be either Varşā Ṛtu or Śarad Ṛtu. Sāga trees usually flower during June to September. So the forest life appears to have started during these four months. That is the proof why 'Tapa' means the summer and not the first month of Śiśira. In Vana Parva 182 or 179/16 it is stated that the rains stopped, Śarad (Autumn) started, out of which Kārtika Pourṇimā[54] was over and then twelve years of banishment were completed.[55] (Vana 183) Thus it is evident that in Autumn or Śarad Ṛtu, in Kārtika Vadya Pakşa twelve years were completed. Naturally, it is clear that the forest life must have started at Kārtika Vadya Pakşa in Śarad Ṛtu.

Here, we have considered the seasonal years but while considering the secret period we have to take into account the lunar years; because Pāṇḍavas had completed 13 Lunar years. Now we have to find out when the secret life started. Pāṇḍavas had that plan to use lunar method in their mind before starting the underground phase.

This is evident from Bhima's statement [56] that they had completed 13 months (Vana 35). So at least Bhima was counting the lunar months. The counting of months is evident from the fact that Pāṇḍavas were celebrating Darśa-Poorṇa-Māsa-Yāga i.e. New Moon day[57] and full Moon day. (Vana 25) So the reference of Kārtika Pourṇimā at the end of 12 years is correct.

Eventhough it is stated that 12 years were completed on Kārtika Pourṇimā it does not mean that after that day Pāṇḍavas went underground. They must have the plan to use lunar years and to reduce the period, before the expiry of 12 solar years of the forest-life. Kauravas were not to come to visit Pāṇḍavas to order them to go into secret life. So when to go underground was in the hands of Pāṇḍavas. Moreover, the underground period was more dangerous to them because if seen by Kauravas, during that year, they had to repeat the forest life again. Hence they were after reducing the secret phase. Therefore they took help of the lunar year system.

It was a custom that after 5 years two Adhimāsas[33] were taken. (Virāṭa 52) So after ten years four Adhimasas had erupted. After 12 and half years one more Adhimāsa was to be taken. Thus in all 5 Adhimāsas arose but were not taken by Pāṇḍavas. Twelve solar years' period was to end in Kārtika Vadya Pakṣa. If we subtract five lunar months we get Jyeṣṭha Vadya Pakṣa. So it seems that Pāṇḍavas ended their forest life and entered into secret life during Jyeṣṭha Vadya Pakṣa.

While going into incognito exile Pāṇḍavas kept their weapons well protected so that rain should not spoil them.[58] (Virāta 5) This clearly shows that rainy season was to come in future within a year. Naturally, it must be summer or spring. (ग्रीष्म/वसंत) In Summer there are showers of Premonsoon, so it must have been the spring. It was that much ancient Era when Jyeṣṭha Māsa coincided with the spring, 5561 years B.C.

Five Māsas make two and half Ṛtu. Forest life was to end in Śarad by seasonal years but by Lunar method it ended two and half Ṛtu earlier in the middle of the spring or Vasanta.

When Keechaka molested Draupadi she came to Bhima. Here Bhima advised her to endure because only 15 days[59] were left to end their secret phase.[59] (Virāta 21) When the news of Keechaka's death, came to Hastināpura, Kauravas sent their agents to find out Pāṇḍavas thinking that there were still four or five months due. Actually there were only 13 days left (Virāt 23/27) by lunar method.[60]

When Suśarmā on behalf of Kauravas invaded Virāta it was घर्मपक्षस्य समयी (Virāta 29/27) 'Gharma' means hot season. Which Pakṣa is not mentioned by Vyāsa. But there are four Pakṣas of each season. So we have to take it as the first Pakṣa of summer. Once there was such a method of counting days. (The Indian Eras -Alexander Cunningharn - Indological book House, Vārāṇaśi 1970).

Here it is to be noted that the word used is suggesting hot season which includes latter half of Vasanta too. Vasanta extends from 21 February to 21 April. Second half of Vasanta is from 21 March to 21 April which is very hot in India.

When Bhima killed Keechaka it was Vasanta [62] (Virāta 21/49) and he said "only 15 days are left".[59] So it appears that in the last Pakṣa of

Vasanta he killed Keechaka and in the first Pakṣa of Greeṣma, Suśarmā attacked on Saptami day. This was Jyeṣṭha month as seen earlier. So the day of Suśarmā's aggression is Jyeṣṭha Vadya Saptami. The very next day on Jyeṣṭha Vadya Aṣṭami Kauravas attacked on Virāṭa.[63]

Why was it Kṛṣṇa Pakṣa ? The answer is given at Virāṭa 32/1,2, where it is stated that at the evening the soldiers stopped fighting due to darkness; but a little later the Moon arose and darkness disappeared.[64] As the late Moon-rise is noted it was definitely Vadya Pakṣa. It is also noted twice that it was Greeṣma (Virāṭa 47 & 49).[65]

On Jyeṣṭha Kṛṣṇa 7th Suśarmā attacked Virāṭa. Bhima and others fought day and night and defeated Suśarmā, and arresting him they carried him in the city next morning [66] i.e. on Jyeṣṭha Kṛṣṇa 8th.

On the same Aṣṭami Kauravas attacked and were defeated by Arjuna and Uttara. Three days later[67] on Jyeṣṭha Kṛṣṇa 11th, Pāṇḍavas exposed themselves officially.

UTTARĀ - ABHIMANYU -MARRIAGE

4th May 5561 B.C.

In Greeṣma on Jyeṣṭha Vadya Eleventh day Pāṇḍavas came to light and then on Puṣya Nakṣatra[68] Purohita of Drupada set out. So that was Āṣāḍha Śuddha Dwiteeyā. After this tithi, the wedding of Uttarā and Abhimanyu took place. Many people were invited and they had attended the marriage ceremony. So it suggests that at least ten days must have elapsed in between and the wedding must have taken place on Āṣāḍha Śuddha 12th. This is a conjecture but an evidence shows it to be true. When Abhimanyu was killed in the battle his aggrieved wife Uttarā said, with grief, that they stayed together only for 6 months.[69] The war started on 16th October 5561 B.C. and on the thirteenth day Abhimanyu was killed. So the date of his death comes to 28th October and Pouṣa Śuddha 12th. Six months earlier they had married. So the day of wedding comes to Āṣāḍha Śuddha 12th or 4th May 5561 B.C. From 4th May to 28th October there are 177 days, full six Lunar months of 29.5 days each (Please note that here I have taken the corrected tithi of war as Mārgaśirṣa Amāvāsyā).

We have seen here that Āṣāḍha Śuddha 12th was 4th May 5561 BC. So the Tithi Jyeṣṭha Vadya eleventh on which Pāṇḍavas exposed

themselves, comes to 19th April 5561 B.C, Arjuna was exposed on Jyeṣṭha Vadya 8th, on 16th April 5561 BC.

THE DATE OF PÃṆḌAVA'S BANISHMENT TO FOREST.

4th September 5574 B.C.

On Jyeṣṭha Vadya 8th or 16th April, Arjuna was exposed after completing 13 lunar years. The lunar year is shorter than solar year by 10.889 days. So in 13 years, there were 141.557 days deficient. Adding these to 16th April we get 4th September as the date of exile to forest. The year was 5574 B.C. It was Kārtika Vadya 2. But if we calculate according to Bhiṣma and take 5 months and 12 nights (or 6 full days) as supernumary, we get the Tithi Kārtika Vadya 14 for transportation. Scholars from south India say that on ज्येष्ठामूले अमावास्या i.e. the new moon day when the Sun was in Jyeṣṭhā -Moola Nakṣatra, Pāṇḍavas went to forest[70]. I did not get this reference in Pune but it may be in southern editions, and it appears to be correct according to above calculations.

Let us tally this in another way. We will find out the position of the Sun on 4th September 5574 B.C. On 4th Sept. 1977, the Sun was at 138°. We have to see about 5574 B.C. So 1977 + 5574 = 7551 years ago where was the Sun ? According to the precession the Sun recedes back at the rate of 50.2 seconds per year. So in 7551 years the Sun has receded by 105.2954°. Adding 138+105= 243° was the position of the Sun which is Mula Nakṣatra. So the Southern reference as well as our calculations appear to be correct. At the most, we can say that the first Amāvāsyā of their forest life was Jyeṣṭhā Mule Amāvāsyā.

UDYOGA PARVA

When Kṛṣṇa started going for talks with Kauravas it was Kaumuda Māsa. (Udyoga 83)[71]. People have erred in taking 'Śaradante' as 'at the end of Śarad.' Actually it means "in the Śarad". "Koumuda" does not mean Kārtika, it means "of Lotuses". It is well known that in September lotuses are in blossom. So Kaumuda means September, a seasonal month in Śarad and not a lunar month.

Though Kaumuda does not mean as Kārtika, it incidently happened to be Kārtika at that time because of the mistake of taking one Adhimāsa more. Actually it was Mārgaśirṣa and Śarad Ṛtu. It is stated that on Revati Nakṣatra Kṛṣṇa departed. Revati Nakṣatra comes on

Mārgaśirṣa Śuddha 9 or 10th and it was 27th September. It is stated that when Kṛṣṇa started from Pāṇḍavas, there showered heavy rain, in Hastināpura, alongwith severe lightning, thunder, storm and darkness. This is the description of a typical Autumnal stormy postmonsoon rain of India which usually occurs at the end of September and beginning of October and well known in the modern era as the rain of Hasta or rain of Elephant and comes from the South-West winds. Vyāsa has mentioned specifically the south-west winds.[72] (वातो दक्षिणपश्चिमः)

From 27th September onwards every day some important thing happened and it is reported in the Mahābhārata.

Activities of Kṛṣṇa

On 27th Sept. Mārgaśirṣa Śuddha 10th, Kṛṣṇa started his journey towards Hastināpura for negotiations with Kauravas. In the evening he stayed at Upaplavya. Next day on Sept.28th, Mārgaśirṣa Śuddha 11 th he went ahead and halted at Vṛkasthali.[73] (86 Udyoga) On Sept. 29th, Mārgaśirṣa, Śuddha 12 he gave dinner to Brahmins (84).[74] On 30th Sept. in the afternoon he entered Hastināpura.[75,76] (90) He met Dhṛtarāṣṭra and halted at Vidura's house at night (89).[77] (Numbers in bracket show chapter of Udyoga Parva)

On 1st October Kṛṣṇa visited Kunti and then Duryodhana. He refused invitation for dinner of Duryodhana and went to Vidura (91) for rest at night[77]. That night of Śarad passed away[78] (94) and Kṛṣṇa got up on 2nd October, Mārgaśirṣa 15. He received invitation of a meeting from Duryodhana and Śakuni. When was this meeting is not clear so we assume that the very next day that meeting was held on 3rd Oct. Mārgaśirṣa Kṛṣṇa 1st. This meeting was un-successful and Duryodhana[79] left it (128). Due to Gāndhāri's efforts Duryodhana arranged another meeting[80], (129) probably on the next day on 4th Oct. Margaśirṣa Kṛṣṇa 2/3. Duryodhana broke off this meeting too. [5] (130) Duryodhana decided to arrest Kṛṣṇa. Knowing this plan Sātyaki and Hārdikya allerted their army for action (130). Third meeting was called by Dhṛtarāṣṭra (130). As there was crisis and army was summoned this third meeting might have taken place after 2-3 days on 7th October Mārgaśirṣa Vadya 5th. On this day Kṛṣṇa showed Viśvaroopa, and immediately left the meeting. (131) He went directly to Kunti. Probably he stayed at Kunti on 8th Oct., Mārgaśirṣa Vadya 6. Kunti told him the secret of Karṇa's birth.

Kṛṣṇa bid farewell to Kunti and approached Karṇa. He took Karṇa in his chariot away from Kauravas on 9th Oct., Mārgaśirṣa Vadya 7th/ 8th. The trick of Kṛṣṇa failed and it was decided to fight the War. Kṛṣṇa said, "This is the best time for war. This is a good month, grass and wood is available in plenty, crops are in hands in plenty. It is a season of flowers and fruits, there is no mud, there is neither severe heat, nor severe cold. After seven days there is Amāvāsyā, deity of which is Śakra. So it is nice for the war". (Udyog 142)[82]

Mārgaśirṣa was the middle of Śarad, so the description is correct. Bhiṣma also has described Mārgaśirṣa as the best month for battles. (Śānti 100) It was not Hemanta because there was no cold as told by Kṛṣṇa and Bhiṣma also. Hence 'Himāgame' has to be translated as "Hemanta was approaching" i.e. the time before the beginning of cold season or snowfall. That means 'before Hemanta' and not 'in Hemanta'.

On 9th October it was decided to start the war after 7 days and actually on 16th October the war started as I have shown earlier.

PARIKṢIT BORN on 28th Jan. 5560 B.C.

Abhimanyu married Uttarā on Āṣāḍha Śuddha 12th, on 4th May 5561 B.C. and was killed on Pouṣa Śuddha 12th, on 28 October 5561. B. C. At this time 6 months' pregnancy was complete according to Lunar months. Naturally nine months were completed on 28th January 5560 B.C. and Parikṣit took birth. It was Chaitra Śuddha 14th. This date tallies with other evidences. Bhiṣma expired on Māgha i.e. real Phālguna Śuddha 8th. After this on Dhṛva Nakṣatra and Dhṛva Vāra[83]. (Āśvamedhic Parva) Pāṇḍavas set out for hunting copious wealth[83] because they wanted to perform Aśvamedha Yāga. When Pāṇḍavas were on the compaign, Parkiṣit was born and when he completed one month of age[84], Pāṇḍavas returned. with wealth.

By some calculations I found that 15th January 5560 B.C. was Sunday. 15th Jan. 1985 was Tuesday. We have to see 15th Jan. 5560 B.C. That means 5560 years B.C. + 1985 A.D. = 7545. 7545 x 365.2563773 = 2755859.3 divided by 7=393694.18. 0.18 x 7 = 1.26. So we have to go 2 days behind Tuesday which is Sunday.

(Here we have not to consider the corrections or omissions done by the Europeans in the past, because "Weekdays" is the Indian tradition

since 9000 B.C. as is evident in Taittiriya Samhitā. Europeans have adjusted to the Indian system.)

It was the day of Uttarā Bhādrapadā Nakṣatra, which is known as Dhṛva Nakṣatra (Rohiṇi and 3 Uttarās are called as Dhṛva Nakṣatra) Sunday is called as Dhṛva Vāra. So Pāṇḍavas marched out on Sunday, the 15th Jan. 5560 B.C. When they were on the compaign Parikṣit took birth on 28th Jan. 5560 B.C. One month after his birth Pāṇḍavas returned on 25th Feb. 5560 B.C. It was Vaiśākha Śuddha 12th though, by the extended mistake, it is stated as 'Chaitra'. Only three days after this on Vaiśākha Pourṇimā [85] and 1st March 5560 B.C. Pāṇḍavas took 'Dikṣā of Aśvamedha' and released the Horse. (Aśva. 71/4). Arjuna accompanied this horse. He was to return after one year and then Aśvamedha was to be done.[86]

At Aśvamedha Parva 86/1,4 the news is given that Arjuna had started the return journey, from Gāndhāra.[87] A messenger gave this news to Dharmarāja and he told it to his brothers on Māgha Śuddha 12th. He further told, here, that the horse was coming back, it was Māgha Pourṇimā and only one month was left[87] (Āśwamedhic 86/7,8). The one month's time left was for arriving of the horse and not for the Yajna. Had Arjuna returned on Māgha Śuddha 12th and had there been the Yajna one month later in Phālguna, it would have been the months of December and January respectively. Please note that Bhiṣma expired on Māgha Śuddha 8th on winter solstice i.e. on 22nd December. So Māgha coincided with December and Phālguna coincided with January. So the Yajna would have taken place in Śiśira Ṛtu in January, which would have been absolutely wrong, because Yajnas were performed in the Spring, Vasanta Ṛtu i.e. between.21st February to 21st April.

Bhiṣma died on 22nd December 5561 B.C. on Māgha (Phālguna) Śuddha 8th. We have to consider Māgha Śuddha 12th i.e. 26th December. But this is of the next year. So ten days are receded and Māgha Shuddha 12th coincided with 16th December 5560 B.C. On this date the news came that Arjuna and the horse were returning after one month. Actually one month later on 15th Jan.5559 B.C., Arjuna returned with the Horse on Phālguna (Chaitra) Śuddha 12th and one month later on Chaitra (real Vaiśākha) Pourṇimā Aśvamedha was performed, on 22nd February 5559 B.C. This was the beginning of the

Vasanta Ṛtu.

Here I have shown Vaiśākha Pourṇimā as the beginning of Vasanta and previously I have said that Jyeṣṭha-Āṣāḍha composed Vasanta. So some scholars may raise eye-brows. But I request them to note that Vasanta started on Vaiśākha Pourṇimā and ended on Āṣāḍha. To clarify I give here a table.

SEASONS OF THE MAHĀBHĀRATA ERA.

Season	Ārtava or Seasonal months	Lunar months of M. B. Era.	Modern Scientific or English months
Vasanta	Madhu & Mādhava	Vais'ākha Śuddha 8- Jyeṣṭha - Āṣāḍha śu.8	21 Feb. to 21 April
Greeṣma	Śukra & Śuchi	Āshāḍha Śuddha 8- Śrāvaṇa -Bhādrapada Śu.8	21 April to 21 June
Varṣā	Nabha & Nabhasya	Bhādrapada Śuddha 8- Āśviṇa - Kārtika Śu. 8	21 June to 21 August
Śarad	Iṣa & Urja	Kārtika Ś. 8 - Mārgaśirṣa- Pouṣa Śu. 8	21 August to 21 October
Hemanta	Saha & Sahasya	Pouṣa Ś. 8 - Māgha- Phālguna Ś. - 8	21 Oct. to 21 Dec.
Śiśira	Tapa & Tapasya	Phālguna Śu. 8 - Chaitra Vaiśākha Śuddha 8	21 Dec. to 21 Feb.

Note : There is a backward shift of 10 days per year, for 3 years, when one Adhimāsa is taken.

Pāṇḍavas performed Aśvamedha Yajna on 22nd Feb. 5559 B.C. on Vaiśākha Pourṇimā. In the fifteenth year[88] from Aśvamedha Dhṛtarāṣṭra performed an Iṣṭi on Kārtiki Pourṇimā[89] and went to live in forest (Āśrama 3 and 15). This date was 18th August 5544 B.C. When Pāṇḍavas visited Gāndhāri in the forest, while talking she mentioned that she has passed 16 years[90] with grief for her dead sons. It shows that they lived in the forest for one year. So it is inferred that the meeting took place in the month of August of 5543 B.C. Pāṇḍavas stayed there for more than one month.[92] During this month Vidura died (Āśrama/ 33/ Śloka 25 to 31.) Two years later Dhṛtarāṣṭra, Gāndhāri and Kunti were burnt to death due to the fire ignited by themselves. So the year of their demise comes to 5541 B.C.

36 years [93] after coronation of Yudhiṣṭhira all the Yādavas were

massacred. So the date comes to 5525 B.C. Same is the year of death of Lord Kṛṣṇa. There is no evidence to find out the date or Tithi of Kṛṣṇa's demise.

Parikṣit was born on 28th January 5560 B.C. and he expired after 60 years. So it is evident that he expired in 5500 B.C.

DETAILS OF PRE-WAR ACTIVITIES SOLVING RIDDLES

On 9th Oct. 5561 B.C.Mārgaśirṣa Vadya 7/8th, Karṇa and Kṛṣṇa finalised to start the war seven days[82] later on Amāvāsyā day i.e. on 16th October. Then Kṛṣṇa hurriedly returned to Pāṇḍavas at Upaplavya, reported everything and went to take rest. In the evening he was called again by Pāṇḍavas to discuss[94]. (Udyog 147).

This shows that Kṛṣṇa might have returned in the afternoon. In Udyoga 151 Dharmarāja says "now this night is deepening, so Kṛṣṇa should suggest the General's name, so that after the night is over we can march out."[95] Accordingly Dhṛṣṭadyumna was appointed as the General, who ordered the army to get ready. The army marched [96] towards Kurukṣetra in the morning of 10th October or Mārgaśirṣa Vadya 9th : Pāṇḍavas camped at Hiraṇvati river at night[97]. The night was over[98]. On 11 th Oct., Mārgaśirsa Vadya 10th Pāṇḍavas divided their army in seven divisions. This was Swāti Nirayana Nakṣatra, but by the Sāyana method it was Puṣya. Balarāma came to Pāṇḍavas on this date, but disagreeing, departed for pilgrimage.[99] When Balarāma halted at Saraswati river it was Anurādhā Nakṣatra [100] (Śalya 35) and the date was 13th of October 5561 B.C. because two days or two Nakṣatras were lapsed. It appears from Śalya 35/10 that Kṛṣṇa returned to Pāṇḍavas and immediately said that it was Puṣya Nakṣatra and it was better to move. This is a riddle. Kṛṣṇa did not say it immediately on return as is evident from Udyog 147 and Śalya 35/10. Moreover the statement of Śalya Parva is from memory. Janamejaya abruptly questioned and Vaiśampāyana replied in short, so we are misguided. Details are already given in Udyoga Parva. It is evident that Pāṇḍavas prepared for war on Sāyana Puṣya[101] and Nirayana Swāti.

When Kṛṣṇa decided to fight the war and returned to Pāṇḍavas on 9th October , he reported, "Duryodhana broke off the meeting and ordered his General that it was Puṣya so they should march to

Kurukṣetra." (Udyog 153/13) Kṛṣṇa has reported Duryodhana's words but has not mentioned on which day Duryodhana talked like that. We have seen above that on 4th Oct., Mārgaśirṣa Vadya 3rd, Duryodhana broke off the meeting and planned to arrest Kṛṣṇa for which he alerted his army. This was the day of Puṣya Nakṣatra (Nirayana). It was a great crisis so Duryodhana ordered his army to march to Kurukṣetra on that Puṣya Nakṣatra.

All these events of 4th October were reported by Kṛṣṇa to Pāṇḍavas on 9th of October, Mārgaśirṣa Vadya 8th. If we do not understand this fact we get misguided.

SOME MORE RIDDLES SOLVED

Death of Bhiṣma :

The war started on the so-called Kārtika Amāvāsyā (but actually Mārgaśirṣa Amāvāsyā) as stated by Vyāsa, so the Nakṣatra was Jyeṣṭhā. The war continued for eighteen days and ended on Puṣya Nakṣatra, on Mārgaśirṣa (actually Pouṣa) Kṛṣṇa 2nd, on 3rd November 5561 B.C. Bhiṣma fought for ten days and fell on the arrow-bed on 25th October. Mārgaśirṣa Śuddha 9th. From this night onwards he lied on the arrow-bed for 58 nights and then he left his physical body, on 22nd December on the occasion of the winter solstice[50]. It was so-called Māgha Śuddha 8th. From this we can tally the days. 7 nights of Māgha + 29 nights of Pouṣa + 22 nights of Mārgaśirṣa = 58 days.

Stay at Hastināpura :

Anuśāsana 167 states. 'Dharmarāja enjoyed 50 days in Hastināpura'.[103] It is also stated that Pāṇḍavas lived outside the city for one month.'[104] Though they stayed away from the city, Hastināpura was in their possession, so the 30 days' stay outside the city is included in 50 days of enjoyment in Hastināpura. When I say that I stayed in Śrinagara for ten days, it is taken granted that out of these ten days I spent two days in Gulmarg, two days at Pahalgaon etc. In the same way, out of total 50 days Pāṇḍavas stayed out of city for 30 days. In support of my view there are reports at Śānti Parva 47,52,53,58,59, 167 that Pāṇḍavas were going into the city and out into Kurukṣetra. So the problem stands solved.

मघा विषयग: सोम: तद् दिनं : This is a riddle. Many scholars have assumed that the Moon was in Maghã Nakṣatra. But they are wrong because Vyãsa has used the word 'Maghã-Viṣaya'. The Viṣaya of Sãyana Maghã was Anurãdhã Nirayana, (see page 40.) so it is clear that the Moon was in Anurãdhã (Nirayana) Nakṣatra. After some time the Moon entered Jyeṣṭhã, at the Sun-rise.

The Coronation of Yudhiṣṭhira

16th November 5561 B.C.

The great war ended on the real Pouṣa Vadya 2, on Puṣya Nakṣatra, on 2nd November 5561 B.C. It is told that Pãṇḍavas stayed outside the city,[104] for the month, because of the impurity caused by the death of relatives. 'Mãsa Mãtram' may have two meanings. It may mean as 'for that month only', and may also mean as 'for one month'. If we take the meaning of 'one month' again there are two possibilities. One month may be from Pouṣa Vadya 2 to Mãgha Vadya 2 (2nd Nov. to 2nd December) or from Puṣya Nakṣatra to the next Puṣya Nakṣatra or in other words a span of 28 days of a Nakṣatra Mãsa i.e. upto 3Oth November.

If we take the meaning as "that month only" it means Pãṇḍavas stayed out of the city till that Pouṣa month ended. I prefer this meaning, because there is no custom found in India, anywhere to observe impurity for one full month. Manu tells. ''दशाहात् शुद्ध्यते विप्रो, द्वादशाहेन भूपति: ।'' This means a king becomes pure after 12 days. This was an ancient custom and according to that Pãṇḍavas observed impurity and stayed out of city for 12 days from Pouṣa Vadya 3rd to Pouṣa Amãvãsyã (from 3rd Nov. to 15th Nov.) and on Mãgha Śuddha 1st, on 16th November, they entered the city of Hastinãpura officially, because after 12 days the month of Pouṣa ended. Vyãsa used the tricky word to deceive Lord Gaṇapati.

There is a good support to this date of 16th November. In the first meeting of Kṛṣṇa with Bhiṣma on the arrow-bed, Kṛṣṇa said that only 56 days of his life were remaining.[50] That means the Winter Solstice of 22nd December was 56 days away. We cannot account for 56 full days, because Bhiṣma was on the arrow bed for 58 nights, and 2 days after his fall the war was going on. Kṛṣṇa and Pãṇḍavas did not meet Bhiṣma, during the war. So there is a hitch in saying '56 Dina'. Dina means a unit of time of 12 hours from sunrise to sunset.[106] So '56 Dina'

means 28 full days. 28 days before the winter solstice of 22nd Dec. comes to 25th November. So it is confirmed that the first meeting of Kṛṣṇa with Bhiṣma on the arrow-bed took place on 25th November.

Before this meeting Yudhiṣṭhira was crowned. So 16th November is the correct date of coronation of Yudhiṣṭhira. On the same day Pāṇḍavas entered the city of Hastināpura, entered the palace and got coronated, according to Śānti Parva chapters 37, 38,40.

चत्वारिंशत् अहानि अद्य द्वे च मे निःसृतस्य वै ।
पुष्येण संप्रयातोस्मि श्रवणे पुनरागतः ॥६॥

Balarāma Tour : This is a great riddle which nobody has yet dared to solve. I have a solution here. Scholars have translated it as "On Puṣya I went and on Śravaṇa I came back". This is a sentence uttered by Balarāma when he arrived on the eighteenth day of the war to see the duel between Bhima and Duryodhana. Scholars have taken Puṣya and Śravaṇa both as Nakṣatras, but they failed to notice that पुष्येण is तृतीया while श्रवणे is सप्तमी. Śravaṇe' means 'on hearing'. Balarāma had really come there on hearing the news of the Duel from Nārada[105](Śalya 54) .The real meanig of the verse is "on hearing (the news of this duel) I started and here I am meeting you with Puṣya".

संप्रयातोऽस्मि is the word derived from सं+प्र+या. प्र+या means "to go" just like गम् = to go. With the prefix 'सं' the meaning is changed. संगम means to meet. Similarly सं+प्रया also means to meet. In Geetā 2/22, the verb संयाति is used in the sense of joining a new body. Thus Balarāma had come to meet Kṛṣṇa and others on Puṣya Nakṣatra. He had started his journey on hearing the news of the duel. So this part of the riddle is solved.

Balarāma says that 42 'अह' were passed since he left. People have wrongly taken 'अह' as the full day of 24 hours. Actually अह means only the day i.e. only 15 Muhurta or I2 hours[106]. (Śānti 231). Hence 42 अहानि means 42 units of 12 hours, that means 21 अहोरात्र (full days). Balarāma started on Sāyana Puṣya or Nirayana Swāti. 21 days from Nirayana Swāti comes to Puṣya Nakṣatra. Puṣya was the 18th day of the war when Bhima finished Duryodhana. From Jyeṣṭhā to Pusya there are clear 18 days. So the riddle stands solved.

Moon-rise late at night on the 14th day of the war i.e. on Mārgaśirṣa, Śuddha 13th is described by Vyāsa (Droṇa 184).This is a riddle prepared by mixing the truth with a poetic idea. On that day the battle continued even after the sun-set. till midnight was over.There was much smoke and dust which caused marked reduction in vision. Moreover all the soldiers were tired. Hence Arjuna ordered to cease the battle. Arjuna told, "take sleep and when you become fresh again, then with the rise of the Moon, start fighting again"[19]. The battle had crossed the midnight and when after rest they started the battle again, there were six Ghatakas of night left (Droṇa 186), that means only two hours of night were left. So it is evident that the soldiers slept at 1 am and woke up at 4 am. Thus they got only three hours' sleep after a prolonged fight. That much sleep was insufficient. hence their brains were not in a position of proper thinking. With this disorientation of the brain they woke up and saw the Moon in the sky near the horizon. They could not recognise the east and the west and they thought that setting Moon as the rising Moon. The confusion of soldiers' mind is vividly described by Vyāsa and with that context he has narrated the Moon rise and prepared the puzzle.

" There is a pun in "चंद्रमसि उदिते पुनः।" चंद्रमा means the pubic mind according to Śānti 233. So rise of चंद्रमा means refreshing of the soldiers' minds.

Now I will give a table of important events of the Mahābhārata with dates and Tithis with years in Rāma Samvat assuming Śri Rāma's Samvat 1st, January 1 equivalent to Ist Jan. 7323 B.C. because I have proved Rāma's birth date as 4th Dec. 7323 B.C.

IMPORTANT DATES OF THE MAHĀBHĀRATA

Event	Date	Rāma-Samvat with Tithi
Going to forest	4th Sept. 5574 BC	Kārtika Vadya 2 or 14 1748 Rāma Samvat.
Kirmeera Killed	7th Sept. 5574 BC	1748 Rāma Samvat.
Going underground	19th May 5562 BC	Jyeṣṭha V. 2.1760
Keechaka Killed	1st April 5561BC	Jyeṣṭha śu 9.1761
Anukeechaka-Massacre	2nd April 5561 BC	Jyeṣṭha śu 10,1761
End of secret life	9th April 5561 BC	Jyeṣṭha V. 2.1761
Cows Stolen	15th April 5561 BC	Jyeṣṭha V.7. 1761
Arjuna exposed	16th April 5561 BC	Jyeṣṭha V.8.1761
All Pāṇḍavas exposed Marriage of Uttarā & Abhimanyu.	19th April 5561 BC 4th May 5561 BC	Jyeṣṭha V.11. 1761 Āṣāḍha śu 12
Kṛṣṇa set out for treaty.	27th Sept. 5561BC	Mārgaśirṣh śu 9-10
Stay at Upaplavya	27th Sept. 5561 BC	Mārgaśirṣa Śu. 10
Stay at Vṛkasthala	28th Sept. 5561 BC	Mārgaśirṣa Śu. 11
Dinner to Brahmins	29th Sept. 5561 BC	Mārgaśirṣa Śu. 12
Entry into Hastināpura	30th Sept. 5561 BC	Mārgaśirṣa Śu. 13
Kṛṣṇa meets Kunti etc.	1th Oct. 5561 BC	Mārgaśirṣa Śu. 14
Invited for meeting	2nd Oct. 5561 BC	Mārgaśirṣa Śu. 15
First meeting	3rd Oct. 5561 BC	Mārgaśirṣa V-1.
Second meeting and attempt to arrest Kṛṣṇa	4th Oct. 5561 BC	Mārgaśirṣa V-2.
Third meeting, Viśvarūpa	7th Oct. 5561 BC	Mārgaśirṣa V-5.
Stay at Kunti	8th Oct. 5561 BC	Mārgaśirṣa V-6.
Kṛṣṇa meets Karṇa. War fixed.	9th Oct. 5561 BC	Mārgaśirṣa V-8.

Kṛṣṇa returns	9th Oct. 5561 BC	Mārgaśirṣa V-8.
Pāṇḍavas preparation	10th Oct. 5561 BC	Mārgaśirṣa V-9
Balārma visit.	11th Oct. 5561 BC	Mārgaśirṣa V-10
Mahābhārata war started	16th Oct. 5561 BC	Mārgaśirṣa V-30
Bhiṣma on Arrowbed	25th Oct. 5561 BC	Pouṣa Śu. 9
Abhimanyu killed	28th Oct. 5561 BC.	Pouṣa Śu. I2, I76I R.S.
End of War	2nd Nov. 5561 BC.	Pouṣa V. 2, 1761
Yudhiṣṭhira crowned	16th Nov. 5561 BC.	Māgha Śu. 1st
Kṛṣṇa met Bhiṣma	25 Nov. 5561 BC.	Māgha Śu. 10
Bhiṣma expired	22nd Dec. 5561 BC	Phālguna Śu. 8
Pāṇḍava Campaign for wealth.	15th January 5560 BC	Chaitra Śu. I, 1762 R.S. Sunday, Uttarā Bhādrapadā.
Parikṣit born	28th Jan. 5560 BC.	Chaitra Śu. 14
Pāṇḍavas return	25th Feb. 5560 BC.	Vaiśākha Śu. 12
Aśvamedha Deekṣa.	1st March 5560 BC	Vaiśākha Śu. 15
Return of Arjuna & Horse	15th Jan . 5559 BC.	Ram Samvat 1763 Chaitra Śu. 12
Aśvamedha Yajna	22nd Feb. 5559 BC.	Vaiśākha 15
Dhṛtarāṣtra went to forest	18nd August 5544 BC.	Kārtika 15, 1778
Pāṇḍavas visited Kunti.	August 5543 BC.	Kārtika 1779.
Vidura expired	August 5543 BC.	
Death of Kunti	Sept. Oct. 5541 BC	kārtika I78 I.
Dhṛtaraṣtra & Gandhari	Sept. Oct. 5541 BC	
Yadava Massacre	5526 BC	kārtika I797.
Parikṣit died	5500 BC	Kartika 1823 Ram Samvat

IMPORTANT DATES FROM THE FOREST LIFE

We have seen that the forest life started on 4th Sept.5574 BC. On the third day Bhima killed demon Kirmira, on 7th Sept. 5574 BC. Then Pāṇḍavas went on Mahendra mountain and stayed there for 12 days. Naturally from 8th Sept. 5574 BC. to 20th Sept. Pāṇḍavas stayed on Mahendra.

Bhima notices completion of13 months[110] (Vana 35).These are lunar months and not solar months like modern calendar. By the modern calendar the date, 13th months hence, would be 4th October 5573 BC. By lunar method the Amāvāsyā recedes by 10 days every year. Hence 13 lunar months were completed on 24th Sept. 5573 B.C.

Within few days from this Arjuna went to Indra. Approximately this would be 30th Sept. 5573 B.C. After this Vana Parva 37 quotes that Pāṇḍavas entered Kāmyaka Vana.There was greenary every where because grass was grown[111]. So they sat on the green grass to discuss (Vana 52/3).The fact that they sat on the open ground on green grass, shows that rainy season was over and ground was dried up without living any mud. This is the experience in September and we have derived the month of September above. So our calculations are correct.

Four years[112] passed after this according to Vana 158. That means 5570 B.C. arrived. Amāvāsyā shifts back by 10 days per year. So in four years Amāvāsyā came 40 days back. The date of beginnlng of banishment into forest was 4th Sept. According to lunar method the Tithi would fall back by 40 days. So on 25th July 5570 B.C. Pāṇḍavas had completed four lunar years.

17 days later[113] i.e. on 12th August 5570 B.C. Pāṇḍavas went on Himavān Mountain.They stayed there for seven days[114] i.e. upto 19th August. After this, it is reported in Vana157 that,the fifth year began.[115] So 20th August might be the beginning of the 5th year. But it is to be noted that Vyāsa first mentioned that four years were complete. Then he told that about 25 days were passed and then he tells that the 5th year started. This span of 25 days must have been the deficit between the lunar and solar counting. So Pāṇḍavas left Himavān Mountain on 20th August and then on 4th September 5570 BC, the fifth year started according to solar method. Then they spent one year on Gandhamādana Moutain. (Vana164).

After this Arjuna returned, spending five years with Indra.[116] (Vana 174) We have seen that Arjuna went on 30th September 5573 BC, according to the Modern Scientific Calendar. But by lunar calculations

during these five years two Adhimāsas were born, but were not considered. Hence when Arjuna came back there was 30th July 5568 BC. After this date Pāṇḍavas went to Kāmyaka Vana again. (Vana.166)

Vana Parva176 states that Pāṇḍavas spent four years in Kubera forest and they had spent 6 years previously[117]. So in all ten years had elapsed. We have seen above that they had completed six years from 5574 to 5568 years BC according to scientific modern calendar of solar system. Amāvāsyā recedes back by10 days per year, so in these four years it had receded by 40 days, the date being 20th June 5564 BC. On this date the 11th Lunar year started.[118] (Vana176).

Later they spent one month in Badarikāśrama from 20th June to 19th July 5564 B.C. One year[120] from this date, they spent in Dwaita Vana near origin of the river Yamunā (Vana 177). So 9th July 5563 B.C. arose. It was here that Bhimsena was grasped by a Giant Boa 'Nahuṣa'. When the 12th year started, they came near Marudhanva on the bank of river Saraswati in Dwaitavana. Rainy season is described here.[121] (Vana 182).It is well known that around 9th July there is always rainy season even in the North India. As our mathematics tallies with the seasons we are correct. Vyāsa has described in A. 182 that 'Rainy season arrived concluding Greeṣma. The clouds forming at the end of Greeṣma have covered the Sun' etc. The description is of the real rainy season which comes after summer. It is also stated that after thIs Varṣā Ṛtu, Śarad appeared[122].Further he states that Kārtiki Pourṇimā of Śarad was over[123] and in the Kṛṣṇa Pakṣa they entered Kāmyaka Vana. Here Kṛṣṇa came to visit them.The scholars assume that 12 years ended here (Vana 183) (Bhāṇḍarkar 180-38)[124] , but it is not so, because it is already stated that the 12th year had started.

Every translater tells that 12 years were completed here; but I disagree with them. The reason is that after this incident there happened the famous event of the Ghoṣa Yātrā. After completion of twelve years Pāṇḍawas should have gone underground; but in Ghoṣa Yātrā incident they came forward openly, to help Kauravas. It speaks against the completion of twelve years. Moreover at Vana 259 or 245/1 (B.O.R.I.) Vyāsa states completion of 11 years[125]. Thus there is some confusion - not made by Vyāsa but by the scholars. Vana 180 (BORI) reports the meeting of Kṛṣṇa with Pāṇḍavas. Here Kṛṣṇa says "Yādavas will conquer Hastināpura immediately and then you come and occupy it whenever you want". Dharmarāja replied "According to my oath, we will complete 12 years in forest and one year underground and then only we will be in your hands" (Bhāṇḍārkar Vana 180/38)[126]. This statement

clearly shows that 12 years were not yet completed, only eleven years had been completed then.

On 20th July 5564 BC. Pāṇḍavas entered Dwaita Vana and stayed there for 1 year and 8 months[127] (Bhāṇḍārkar Vana 244/12). Out of this we have considered one year which ended on 19th July 5563 B.C. Remaining eight months, from 20th July 5563 BC to 10th March 5562 BC, were also spent in Dwaita Vana. During these eight months many important events happened.

In September 5563 BC. Kṛṣṇa and Satyabhāmā visited them. Then before the next Vasanta, during Śiśira i.e, during January-February 5562 BC, Kauravas came for Ghoṣa Yātra, and were attacked by Chitrasena Gandharwa, who was then defeated by Pāṇḍavas. Immediately after this Dharmarāja saw a dream in which deers requested him to leave Dwaita Vana. Accordingly they went to Kāmyaka Vana nearby.

After 10th March 5562 BC, when Pāṇḍavas were in Kāmyaka Vana, Karṇa started his conquest march, a campaign to conquer all the kings around. At this time Duyodhana performed Vaiṣṇava Yajna. The then tradition was to perform Yajna only during Vasanta Ṛtu, so this Yajna must have taken place before 21st April. Duśśāsana sent one messenger to invite Pāṇḍavas for that Vaiṣṇava Yajna, but Yudhiṣṭhira told him to convey the message that they could not come before the completion of the 13th year as per the oath.[128] This proves that Pāṇḍavas had not gone underground at this time and hence 12 years were not completed then. Only eleven years were completed then.

We have seen that Pāṇḍavas entered Kāmyaka Vana on 10th March 5562 BC. In Vana Parva 264 Vyāsa writes that observing the jungles crowded with plants in seasonal bloom, Pāṇḍavas enjoyed the stay.[129] (B.O.R.I, 248/ I to 3). This description suggests the spring and our date falls in the spring, so we are correct in calculating the date during March.

In the same month Jayadratha abducted Droupadi but Bhima rescued her. Then sage Mārkaṇḍeya visited them. Still later, on one day Pāṇḍavas became very much thirsty. (Vana 312) Nakula climbed on a tree and found a pond.[130] But when he went there to take water one Yakṣa asked some questions. The main point here is that they had to search for water. It suggests that water was scarce and so it must be Greeṣma Ṛtu. Naturally this was April-May 5562 BC.Yudhiṣṭhira requested the pleased Yakṣa to give one Boon (Vara) that nobody should

recognise them, because they had then completed the twelve years in forest and they had to go underground for one year[131], thence (BORI Vana 298/15).Yakṣa too said that they better spend the thirteenth year in the city of Virāṭa under disguise. (298/15)[132] This suggests that in May 5562 BC the twelve years were completed and Pāṇḍavas started underground phase.[133] B.O. R. I. Vana 299/1 to 4 tells that Pāṇḍavas sat around to consider about the 13th year because they had completed 12 years in forest and they had to go in disguise for one year.

On 20th May 5562 BC, the 13th year started, but when 6 months of it were over, one more Adhimāsa erupted. Four Adhimāsas had born at the end of 10 years and as two and a half years more passed, one more intercalary month appeared. So instead of 20th May the underground period ceased one month earlier on 20th April 5561 BC, by the Lunar system. In addition the Amāvāsyā recedes back by 10 days each year, so instead of 20th April they ended their disguise on 10th April 5561 BC. To err on safer side they allowed six days more and Arjuna came forward to fight openly on 16th April 5561 BC.

IMPORTANT DATES OF THE FOREST LIFE

Event	Date	Tithi, Ramā Samvat
Beginning of forest life	4th Sept. 5574 BC.	Kārtika Vadya 2 or 14 1748 Rāma Samvat
Kirmira Killed	7th Sept. 5574 BC	1748
Stay on Mahendra Mountain	8th to 20th Sept. 5574 BC	1748
13 Lunar months completed on	24th Sept. 5573 BC	Kārtika 1749
Arjuna went to Indra	30th Sept. 5573 BC	1749
Kāmyaka Vana-4 Lunar years Complete	25th July 5570 BC	1748 to 1752
Jatāsura Killed	25th July 5570 BC	
Himavān Mountain	12th Aug. to 19th Aug. 5570 BC	1752
Left Himavān Mount on	20th August 5570 BC	1752
Beginning of 5th Solar year	4th Sept. 5570 BC	1752
On Gandhamādana upto	4th Sept. 5569 BC.	1753
Return of Arjuna	30th July 5568 BC.	1754
4 years in Kuber Vana upto	20th June 5564 BC	1758
At Badrikāśrama one month	20th June to 19th July 5564 BC.	1758 1758 to 1759
Dwaita Vana, one year upto	9th July 5563 BC	1760
(Nahusha grasps Bhima) and 8 months	1Oth March 5562 BC	1760
Kṛṣṇa & Satyabhāmā visited	Sept. 5563th BC.	1759 Kārtika /Vadya
Ghosha Yātra & Chitrasena episode	Jan. Feb. 5562 BC.	1760 Vasanta
Karṇa's Campaign	March 5562 BC.	1760 Vasanta
Vaiṣṇava Yajna	April 5562 BC.	1760 Vasanta
Draupadi Abducted by Jayadratha	April 5562 BC.	1760 Vasanta
Markaṇḍeya meets	April 5562 BC.	1760 Greeṣma
Yakṣa Episode	May 5562 BC.	1760 Greeṣma
Completion of 12 years.	20th May 5562 BC	1760 Greeṣma
Underground Phase Started	20th May 5562 BC	1760 Greeṣma
Underground Phase ended	10th April 5561 BC	1761 Vasanta
Arjuna Exposed	16th April 5561 BC	1761 Jyeṣṭha Vadya 7
Paṇḍavas came to light	19 April 5561 BC.	1761 Jyeṣṭha Vadya 11

Thus the dates of almost sixty events could be fixed according to the modern scientific calendar which has fixed parmanently the dates of the equinoxes and the solstices. The present method of denoting the event by date, month and year according to the modern calendar was not in vogue during the time-span covered by my work; and I have therefore reversed the current method back-wards so as to be more cognisable and familiar to the modern readers. The modern calendar is based only on the Sun's movement as seen from the Earth and the seasons produced thereby, and hence it is easy for calculations. The results of the calculations can be tallied by considering the seasons recorded in the history. It is for this reason that I have laboured hard to fix the dates according to the modern calendar.

Some Western thinkers had changed some dates, by deletion or omission, in the past, but it has no effect on my dates because I have gone by reversing the modern scientific calendar and not by the English or Roman or Julian or Gregorian calendar and because the Mahābhārata is much more ancient than the changes effected by the Pope Gregory. The Pope Gregory omitted ten days during 1582 AD and took 15th October after 4th October 1582. He had to adjust the Vernal Equinox on 21st March. This Omission was not Necessary for the Indian system and not possible, too. Dates are imaginary but the Tithis are visible in the shape of the Moon. Tithis cannot be omitted. For 170 years the British empire did not accept the suggestion of Gregory. It remained stuck up to the old Julian calendar. However, the English world accepted Gregory's suggestion during 1752, when they took 14th September after 2nd September 1752, omitting 3rd to 13th dates. Omission of eleven Tithis is impossible in the Indian System, After Dwitiyā no body can take chaturdaśi, because the Moon reveals the Tithi, without fail, every day.

As far as the week-days are concerned, I am confident that the system of weekdays is invented in India in Taittiriya Samhitā period of 8357 BC. and is in use since Rāmāyaṇa. I have proved by Astromathematics that Rāma went to forest on 29th November 7306 BC which was Thursday as mentioned in Vālmiki Rāmāyaṇa. The Mahābhārata also has mentioned weekdays but are not so important. The names of the weekdays in India are consistantly based on the planets unlike the foreign names.

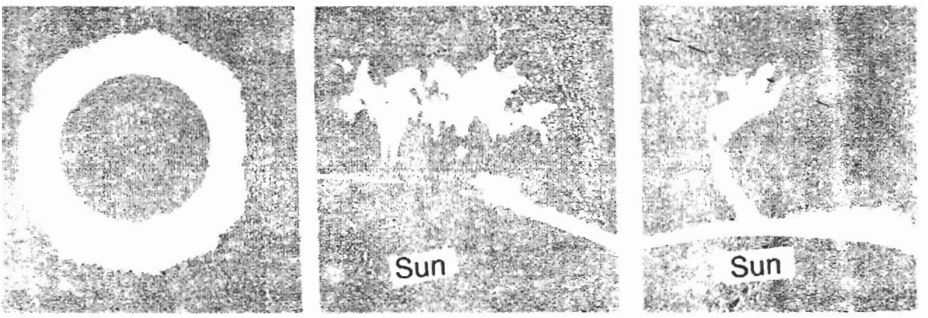
CONCLUSION

Thus I have fixed the dates of almost sixty incidents from the Mahābhārata relying on the Mathematics and Astronomy, both of which

are accurate sciences. As all the data recorded in the Mahābhārata by Vyāsa fits in well in the Astromathematical sequence from 1979 A.D. backwards, we have to believe in the Historicity of the Mahābhārata. With the same method and procedure I have fixed the dates of many events from the Rāmāyaṇa written by the sage Vālmiki. I calculated from the planetary positions of 1979 AD to fix the Mahābhārata dates and then proceeded to fix the dates of the Rāmāyaṇa. There is no discrepancy between the Rāmāyaṇa and the Mahābhārata as far as Astronomical mathematics is concerned. It proves that both the sages Vyāsa and Vālmiki have written the true histories and have recorded the planetary positions they had seen. The Mathematics has proved their reliability. All other sages also have recorded the Astronomical data at their time. I have calculated on those recorded facts and have prepared a chronology extending from Varāhamihira of 520 AD to the most ancient Richās of the Ṛgveda dated 23720 BC. All the steps of 1000 to 2000 years are found which are based on *Meteorology,* Astronomy and Mathematics. The Mahābhārata of 5561 BC and the Rāmāyaṇa of 7300 BC fits accurately and properly in this chronology. So if we go by common sense and *logic* and have scientific attitude we have to accept these dates at present, unless and until some new evidences come in view in future.

The End

ज्वलन्त्या शिखाया



Total Eclipse of the Sun. Totally eclipsed Sun throwing huge flames

How Scientific the Sage Vyāsa Was !

द्विधाभूत इव आदित्य उदये प्रत्यदृश्यत ।
ज्वलन्त्या शिखाया भूयो भानुमानुदिते दिवि ॥

says Vyāsa while describing the Solar Eclipse which occured just before the beginning of the War. All the scholars thought that the Sun divided into two parts just like an apple cut in two halves and

therefore they criticised Vyāsa. But I think that Vyāsa has recorded the Scientific Truth. Here I produce the evidence for it. Here is a photograph of the Total Eclipse of the Sun. It shows two parts of the Sun (1) a central dark disc and (2) a brilliant Corona .The Solar prominences seen at the total eclipse of the Sun are also described by Vyāsa in the words ज्वलन्त्या शिखाया भूयो

Astronomy in Colour by Mr. Peter L. Brown states on page 63 " As the Sun is completely obscured and darkness falls the Corona creates a pearly white halo which surrounds the Sun. Visible against the white lustrous background are the red prominences which look like huge red flames. Throughout the totality phase the sky remains dark and many stars and planets can be easily seen." This modern Astronomical statement supports Vyāsa's statement that seven great planets were seen.

LUNAR ECLIPSE

About the lunar eclipse Vyāsa tells that the Kārtika full Moon was without its mark and without brilliance.This pallor of the Moon was due to penumbra. Lunar eclipses are influenced by two kinds of shadows cast by the Earth. In this figure it will be noted that the darker shadow called 'Umbra' has a narrower pencil -like beam than that of the outer shadow called 'Penumbra'. When the Moon is near one of its nodes the umbra shadow of the Earth will cover its face completely, producing a total lunar eclipse (MI). Further from the node point , only part of the umbra will fall on the Moon and produce a partial eclipse (M2). Yet further away from the node,only the lighter penumbra will sweep the Moon (M3) ; beyond 10 degrees from the node point there will be no eclipse.

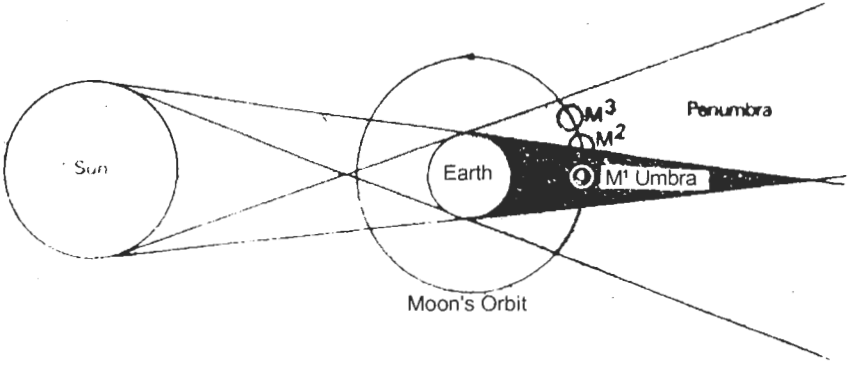
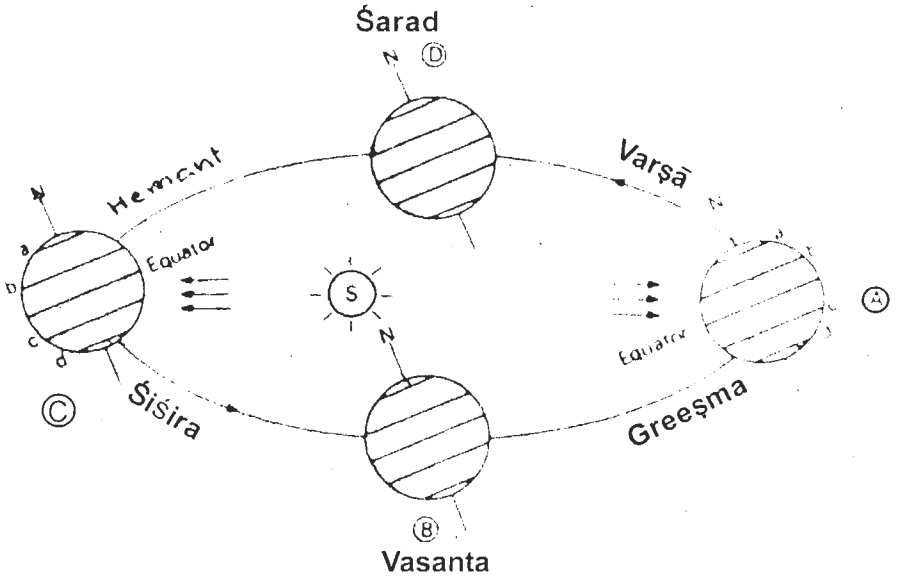


Fig. The umbra and penumbra shadows . A total eclipse of the Moon occurs at M1, a partical eclipse at M2, and a penumbral eclipse at M3.



(*b*) The seasonal path of the Sun in relation to the celestial equator. The vernal equinox (♈) occurs about 21 March, and the autumnal equinox (♎) about 21 September.

The position of the Earth during the four seasons. Owing to the eccentric nature of the Earth's orbit round the Sun, summers and winters in the southern hemisphere are more accentuated than in the northern.

A - Summer, northern hemisphere; Winter, southern hemisphere.

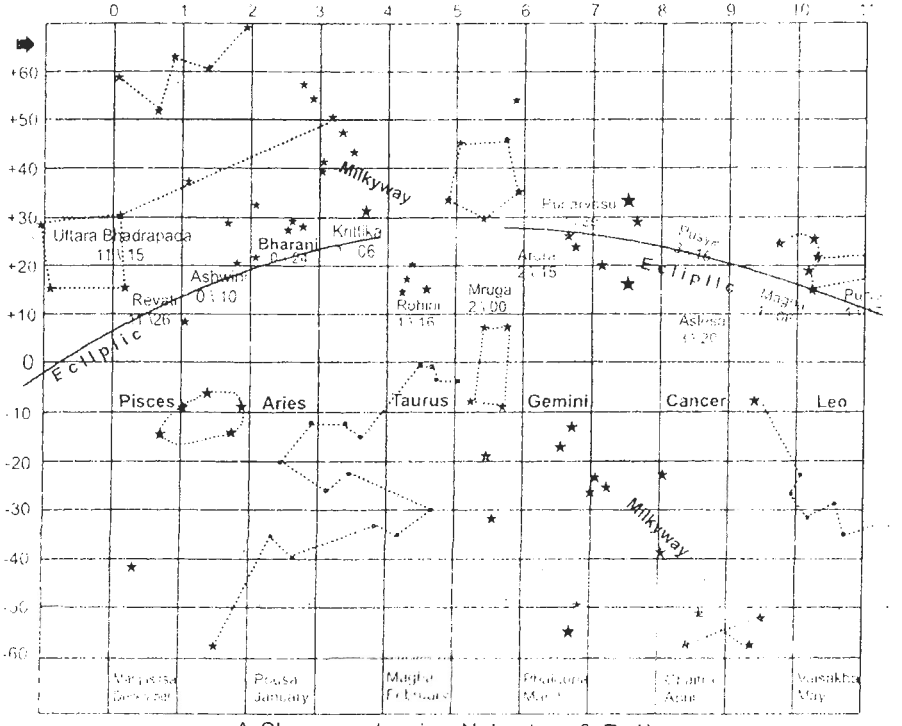
B - Spring, northern hemisphere; Autumn, Southern hemisphere.

C - Winter, northern hemisphere; Summer, southern hemisphere.

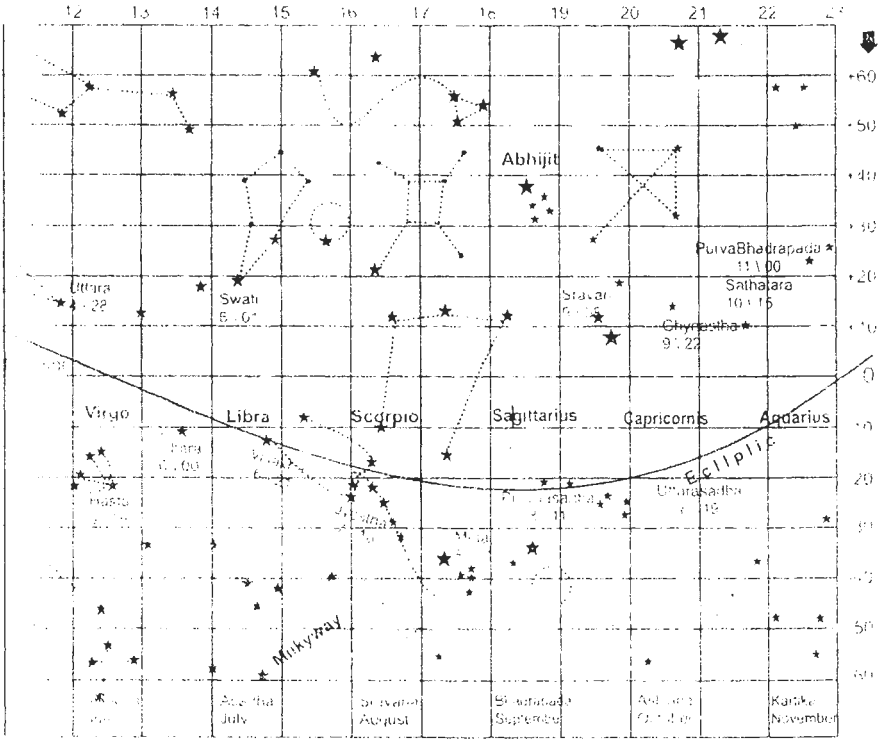
D - Autumn, northern hemisphere; Spring-southern hemiphere.

(*Key : a - Arctic Circle; b - Tropic* of *Cancer* ; *c -Tropic* of *capricorn d - Antarctic Circle.*

The Saturn



A Sky map showing Nakṣatras & Raśis



A Sky map showing Nakṣatras & Raśis

The Birth Date and the Horoscope of Lord Śri Kṛṣṇa

It is almost impossible to fix the birth date of Lord Kṛṣṇa because it is not mentioned in any of the Purāṇas or in the Mahābhārata. However, once in my Samādhi, on 29-11-2003, I got inspiration to find it out. Accordingly, I began the work and in a few days I could ascertain the date of birth of Kṛṣṇa.

In the Purāṇas it is mentioned that Kṛṣṇa was born on Śrāvaṇa Kṛṣṇa Aṣṭami according to the Amānta Māsa system and Bhādrapada Kṛṣṇa Aṣṭami by Pourṇimānta Māsa system. But it is not sufficient to cast his horoscope, which needs the year of the birth. Therefore it was essential to find out the year of his birth.

It is told in the Mahābhārata, Vana Parva 22 that while departing, Kṛṣṇa bowed humbly before Bheemasena and Yudhiṣṭhira for salutation, embraced Arjuna and blessed Nakula-Sahadeva. It shows that Kṛṣṇa was of the same age of Arjuna, younger than Bheemasena and elder than Nakula-Sahadeva. Hence I tried to find out the age of Arjuna. This job was also very difficult, because in the Mahābhārata Arjuna's age also is not clearly given anywhere.

It is reported in the Mahābhārata that Bheemasena and Duryodhana were born in the same year. Two years later Arjuna took birth from Kunti. Still two years later the twins Nakula and Sahadeva were born from Mādri. A little after the birth of the twins, their father Paṇḍu died. Mādri became 'Sati'. Kunti lived caring the kids for some time in the forest and then she came to Hastināpura with all the five Pāṇḍawas. Therefore at that time Arjuna might have been of about three years. Kṛṣṇa was of the same age.

Arjuna and others took training in Hastināpura. After completion of the training there was an examination. This might have been taken when Arjuna was of 16 years. After this test, Droṇāchārya sent Kaurawas to fight with king Drupada. Kauravas got serious defeat. Therefore Droṇāchārya sent Bheema and Arjuna, who defeated Drupada. Kaurawas were worried about the great valour of Pāṇḍawas and began playing foul tricks. They sent Pāṇḍawas to Wāraṇāwata and arranged to burn them. However, Pāṇḍawas set free due to valour of Bheemasena and fled to a forest. Pāṇḍawas stayed in Wāraṇāwata for one year. (Ādi Parva 148) So Kṛṣṇa and Arjuna were of 17 years.

Drupada was deeply aggrieved by his defeat. So he began efforts to get a son, who could defeat Droṇāchārya. He lived with Yāja Muni for one year. During the same year Pāṇḍawas were staying in Wāraṇāwata.

Yāja Muni could give Drupada a son alongwith a daughter by one unique experiment. The children were Dhṛṣtadyumna and Draupadi. When Draupadi came into puberty , Swayamwara was arranged. Draupadi might be, then, a full grown lady of at least 16 years of age. Ādi Parva 64 tells that intercourse was never done before sexual maturity. At this time Kṛṣṇa and Arjuna were 33 years old.

It is told in the Mahābhārata Ādi 186 that Kṛṣṇa had attended Draupadi's Swayamwara and he was accompanied by his valourous son namely Sāmba. As Sāmba was full of valour he might be of 16 years in age. Kṛṣṇa might have married Rukmiṇi at the age of 16, and produced a son, early, so that he could take his adult son aged 16 years for Draupadi's marriage. Kṛṣṇa and Arjuna were 33 years of age then. It was not awkward for Arjuna, aged 33 years, to marry with a girl of 16, at that ancient time. Because Pāṇḍawas were in obscure life phase after 'Jatu Gruha' episode, nobody thought of their marriage. Hence there was very late for their marriage. Only Bheema had married Hidimbā.

'Draupadi married five Pāṇḍawas in succession on successive days and she used to be a virgin every next day', states the Mahābhārata in chapter 198 of Ādi Parva. It means that she had attended puberty and used to copulate with her husband every day. Naturally she was, at least, 16 years old in marriage.

After the marriage with Draupadi, Pāṇḍawas stayed at the home of Drupada for one year. (Ādi 61) So Kṛṣṇa, Arjuna were 34 years old. Dhṛtarāṣtra invited Pāṇḍawas at Hastināpura and offered them half of the kingdom. They took possession of Khāṇḍawaprastha. They erected a new city. So at least one year might have elapsed. Then Nārada came to meet Pāṇḍawas and told them to be careful about Draupadi. Accordingly, Pāṇḍawas made a contract among themselves that if one brother looks another enjoying company of Draupadi , then he should go away in a forest for 12 years. (Mahābhārata Ādi. 212). Some years passed and on one occasion Arjuna, by some reason, saw Yudhiṣṭhira with Draupadi. According to the contract he left for forest life of 12 years. It is not mentioned exactly how many years had passed, but in Sanskṛita from three onwards there is used a plural word. Therefore we hold that after three years Arjuna went in forest. Therefore he was at the age of 38 years. (Ādi 213).Only once in Ādi 61 it is told that Arjuna went into the forest life for 13 months. However, at Ādi 212, 213, 214, 221 it is told that he went in forest for 12 years. So we accept 12 years of the forest life for Arjuna. During this period he married Chitrāngadā and produced a son. He stayed with her for 3 years. Then he went away for some

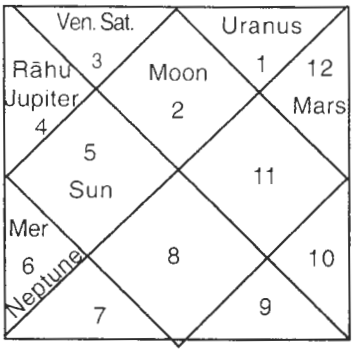
period and returned to Chitrāngadā to give his son to the father of Chitrāngadā. There after Arjuna came to Dwāraka where he lived for a long period. During this time Arjuna saw Subhadrā and fell in love. With the help of her brother Kṛṣṇa, he married Subhadrā. Arjuna was 50 years old when he married Subhadrā. Kṛṣṇa was also 50 years old. Subhadrā was in puberty. With Subhadrā, Arjuna returned to Indraprastha.

In a few days Arjuna got a son from Subhadrā. Thereafter Khāṇḍawa forest was set on fire by Kṛṣṇa and Arjuna. Arjuna helped Mayāsura out of the fire. In that obligation Mayāsura built Maya Sabhā for Pāṇḍawas, in more than 14 months. (Sabhā 3). Naturally Kṛṣṇa-Arjuna were 52 years old.

Then Yudhiṣṭhira played dice and Pāṇḍawas lost everything and had to go to a forest life of 12 years and obscure life for one year. Thus at the age of 53 Arjuna went into forest life. When Pāṇḍawas came to light Arjuna was 65 years complete. Thatiswhy he told Uttara that he was using Gāṇḍiwa Dhanu for 65 years. Actually, Arjuna had got that Gāṇḍiwa at 50 years of his age. So 50 + 65 = 115 appears to be Arjuna's age but it is wrong. When a man says that he served for 60 years and retired, it means that at 60 he retired. But if we take that he served for 60 years and had begun service at 18 years then we may take his age 18+60=78 years, which will be wrong. Similarly Arjuna was 65 when he said so.

Abhimanyu was 16 years old when he was killed in a battle. (Adi..67) Arjuna married Subhadrā at 50 and got a son. Therefore during the great war Abhimanyu was 16 years old and Arjuna 65-66 years old. Therefore Kṛṣṇa was also 65 years old during the great war.

I have already fixed the date of the beginning of the Mahābhārata war as 16 th October 5561 BC. 65 years earlier, during the year 5626 B.C. Kṛṣṇa might have taken birth on Śrāvaṇa Vadya Aṣṭami. I have shown that the places of the various planets at the onset of the war are told by Vyāsa in the Mahābhārata and mathematics shows the positions correct on 16th October 5561 BC. From those positions I calculated backwards and found that during Śrāvaṇa 5626 BC, the Saturn was at 64 degrees, Rahu at 93^0, Jupiter at 100^0, Mars at 337^0, Venus at 82.13^0, Uranus at 15^0, Neptune at 178^0, Pluto 296^0. Kṛṣṇa was born at midnight on Śrāvaṇa Vadya 8th, so that the Lagna was Vṛṣabha, where the Moon resided. Ascendant was Taurus. This horoscope explains the life of Kṛṣṇa precisely.



Horoscope of
Śri Kṛṣṇa
23-24 May 5626 B.C.

On 16th Octber 5561 BC it was Mārgaśirṣa Amāvāsyā, on Uttarā Āṣādhā. It was not on Jyeṣṭhā, as is assumed. I need not go in details of this discussion, readers may refer to previous pages. From this if we calculate we find that on Śrāvaṇa Kṛṣṇa 8th, it was 23rd May during 5626 BC. One may question about the validity of the month of May relying on the description of the Bhāgawata that after the birth of Kṛṣṇa, his father Vasudeva took him to Gokula, when he had to face torrential rains and flood of the river Yamunā. Harivanśa is an appendix of the Mahābhārata and is composed much earlier than the Bhāgawata. Harivanśa writes that when Vasudeva carried Kṛṣṇa to Gokula, he could easily cross the river Yamunā, there was no flood. In Gokula dried cowdung was spread all over, trees were being fallen and cut, to be used as fuel in the rainy season. So it was clearly a Summer at the time of Kṛṣṇa's birth. Our date of 23rd May comes in the Summer. So we are correct. Let us tally. On 23 May 2003 the Sun was at 37.5 degrees. We have to see the Sun of 23 May 5626 BC i.e. 7629 years ago. The Sun recedes by 1 degree in 72 years, so in 7629 years it has receded by 105.72 degrees Adding to it present 37.5^0, we get 143.22° i.e.Purvā Nakṣatra in Leo.

Yudhiṣṭhira was coronated on 16 November 5561 BC, 12 days after the war ended. After 36 years from the coronation of Yudhiṣṭhira, Kṛṣṇa ended his life.(Mousal Parva 1 and 3). Therefore the year of demise of Kṛṣṇa comes to 5525 BC. He was 102 years old then. This is reflected in his horoscope which shows the Saturn in the second house having its full sight on the 8th house of death. The master of the 8th house is Jupiter which is in the 8^{th} house from the 8th house. So he got long life and the death was some what obscure. Kṛṣṇa died due to a wound on his leg by an arrow. The Mars in the 11 th house shows this injury of the leg. The Jupiter, who is governing the house of death, is accompanied by *Rāhu* therefore a lower cast man became an agent to afflict a wound on the leg of Kṛṣṇa, causing death.

How Did I Derive the Date from Tithi ?

I have proved previously that on 16th October 5561 BC there was Amāvāsyā which took place when the Sun was in Uttarā Aṣāḍhā Nakṣatra. We have to consider 5626 BC. On 16th October 1999 the Sun was at 178.66 degrees. We have to go 5626 BC + 1999 AD = 7625 years ago. Due to the precession of equinoxes the Sun recedes one degree in 72 years. Therefore during 7625 years it must have receded by 105.9^0 degrees. The Sun of l6 Oct.1999 was at 178.66^0 after recedence by 105.9. Therefore adding the two we get 284.5 degrees as the place where the Sun was on 16 Oct. October 5626 BC. This place comes in Makara Rāṣi. Therefore the Lunar month was Pouṣa. The sun was at 284.5^0 so that the full Moon must have been as 284^0-180^0=104^0, which is Puṣya Nakṣatra. Hence it was Pouṣa Māsa. We have to find out Śrāvaṇa Kṛṣṇa 8th Tithi. From Pouṣa to Śrāvaṇa there are five months. Therefore from October we have to go five months backwards. Naturally it shows the month of May.

Usually, on Śrāvaṇa Kṛṣṇa 8th day the Sun resides near about 136 degrees. The Sun on 16 Oct.5626 BC as seen above was at 284.5°. So deducting 136^0 from 284.5^0 we get 148.5 degrees by which the Sun had gone forwards from Kṛṣṇa's birth. The Sun goes one degree forwards each day. So we have to deduct 148 days from 16 October. It comes to 23-24 May 5626 BC. This is a rough estimate.

Let us tally this. On 23 May 2003 the Sun was at 37.5^0 We have to see the Sun of 23 May 5626 BC. It means we have to find the Sun's place 2003 + 5626 = 7629 years ago. The Sun recedes due to the precession of equinoxes by one degree in 72 years. With this rate the Sun has receded by 105.72° in 7629 years. Hence 37.5 + 105.72 = 143.22° is the place of the Sun in Purvā Nakṣatra, in Leo or Simha Rāśi. Thus our calculations appear correct.

I have proved in this book previously that the war started on Mārgaśirṣa Amāvāsyā with the Sun in Uttarā Āṣāḍhā, at 270^0. We have to go 65 years behind. The Solar year consists of 365.256 days while the Lunar year consists of 354.367 days. Thus there is a deficiency of 10.889 days in the Lunar year. Therefore any Amāvāsyā comes 10.889 days earlier each next year. We are looking in the past, so that the Amāvāsyā would be 10.889 days later. In 65 years the Amavasya would be 10.889 x 65 = 707.787 days later. Deducting 354.367 days of one lunar year from it we get 353.4 days. It shows that one day is deficient

for completing a year. It shows that the Amāvāsyā took place one day earlier on 15 October 5626 BC.

Where did that Amāvāsyā took place ? While going in the past the Amāvāsyā comes 10.889 days later each year, which means it appears 10.889 degrees later. During October 5561 BC the Amāvāsyā had happened at Uttarā Āṣāḍhā Nakṣatra at 270°. We have to go back by 65 years. So 65 x10.889= 347. 78° ahead from the original 270°, would be the place of Amāvāsyā. It comes to 617°. Deducting 360° of one cycle we get 257° as the place of Amāvāsyā. This is Purvā Aṣāḍhā Nakṣtāra. Therefore the lunar month was Mārgaśirṣa. We have to see the Śrāvaṇa Māsa. So we have to go back by 4 months. Each Lunar month consists of 29.53058 days. Multiplying by 4 we get 118.12°. Deducting 118° from 257°, we get 139°, where the Sun was at Śrāvaṇa Amāvāsyā. We have to see Śrāvaṇa Kṛṣṇa 8th. It means we have to see the position of 7 Tithis earlier. One Tithi is complete when the Moon goes 12° ahead of the Sun. In 7 Tithis the Moon might have been 12 x 7 = 84° behind of the Sun. Therefore deducting 84 from 139 we get 55° as the position of the Moon. But during those 7 days the Sun had traveled 7° which we should subtract from 55°. 55 minus 7 comes to 48° as the place of the Moon. It comes in Rohiṇi Nakṣatra.

Thus the Sun was at 132° in Maghā Nakṣatra, while the Moon was in Rohiṇi Nakṣatra at 48°, at the time of Kṛṣṇa's birth, on Śrāvaṇa Kṛṣṇa 8th or 23-24 May 5626 BC.

The End

DATES FROM THE RĀMĀYAṆA

For the details see The scientific Dating of the Rāmāyaṇa & the Vedas.

Incident	Date in BC era	Tithi
Rāma's Birth	4th December 7323BC	Chaitra Śuddha 9th
Bharata Born	5th December 7323BC	Chaitra Śuddha 10th
Lakṣmaṇa/Śatrughna born	6th Dec. 7323BC	Chaitra Śuddha 11th
Viśvāmitra demands Rāma	10th March 7307BC	Śrāvaṇa Śuddha 5th
Tāṭakā killed	13th March 7307 BC	Śrāvaṇa Śuddha 8th
Siddhāśrama Entry	14th March 7307 BC	Śrāvaṇa Śuddha 9th
Viśvāmitra's Yajna begins	15th March 7307 BC	Śrāvaṇa Śuddha 10th
Yajna ends	20th March 7307 BC	Śrāvaṇa Kṛṣṇa 1
Rāma meets Ahilyā	25th March 7307 BC	Śrāvaṇa Kṛṣṇa 6
Breaks the Bow	26th March 7307 BC	Śrāvaṇa Kṛṣṇa 7
End of Janaka Yajna	5th April 7307 BC	Bhādrapada Śuddha 1
Rāma Marries Seetā	7th April 7307 BC	Bhādrapada Śuddha 3
Rāma Goes to forest	29th November7306BC	Chaitra Śuddha 9
on Thursday	Thursday	
Daśaratha Dies	5th December 7306 BC	Chaitra Śuddha 15
Seetā Kidnapped	December 7293 BC	Hemanta Ṛtu
Hanumān enters Lankā	1st Sept. 7292 BC	Pouṣa Śuddha 14
Hanumān meets Seetā and		
Burns Lankā	2nd Sept.7292 BC	Pouṣa Śuddha 15
Hanumān returns at dawn	3rd Sept. 7292 BC	Pouṣa Kṛṣṇa 1
Rāma leaves Kiṣkindhā	2nd Oct. 7292 BC	Māgha Kṛṣṇa 1

Incident	**Date in BC era**	**Tithi**
Rāma at south sea shore	22nd Oct. 7292 BC	Phālguna Śuddha 5
Setu built	26 to 30 Oct. 7292 BC	Phālguna Śuddha 9-13
Army Crosses	31st Oct. 7292 BC	Phālguna Śuddha 14
War started-	3rd Nov. 7292 BC	Phālguna Śuddha 3
Dhumrākṣa Vajradanṣtra,		
& Akampana killed	4th Nov. 7292 BC	Phālguna Śuddha 4
Prahasta killed	5th Nov. 7292 BC	Phālguna Śuddha 5
Rāvaṇa enters the field		
& Lakṣmaṇa faints	6th Nov. 7292 BC	Phālguna Kṛṣṇa 6
Kumbhakarṇa killed	7th Nov. 7292 BC	Phālguna Kṛṣṇa 7
Triśirā, Devāntaka,Mahodara		
& Narāntaka killed	8th Nov. 7292 BC	Phālguna Kṛṣṇa 8
Atikāya killed	9th Nov. 7292 BC	Phālguna Kṛṣṇa 9
Indrajit comes, knocks		
Rāma-Lakṣmaṇa down	10th Nov. 7292 BC	Phālguna Kṛṣṇa 10
Sky war by Indrajit,		
Rāma's retreat	11th Nov. 7292 BC	Phālguna Kṛṣṇa 11
Indrajit killed	12th Nov. 7292 BC	Phālguna Kṛṣṇa 12
Rāvaṇa killed	15th Nov. 7292 BC	Phālguna Amāvāsyā
Rāma at Bhāradwāja Āśrama	5th Dec. 7292 BC	Chaitra Vadya 5
Rāma Enters Ayodhya	6th Dec. 7292 BC	Chaitra Vadya 6

ANCIENT INDIAN CHRONOLOGY

Source :	Statement	Years in B.C.
Ṛigved 1-161-13 4-57-5	Rains on Mṛga Nakṣatra	23720
Taittiriya Samhitā 7-4-8 and Brāhmaṇa 1-1-2	Vasanta at Phālguna Pourṇimā	23720
Mahābhārata	Summer Solstice on Rohiṇi	22760
Ṛgveda & T.S.	Rainy Season on Kṛttikā	21800
Mahābhārata	Vernal Equinox on Dhaniṣṭha	20000
Ṛigved & T.S.	Rainy Season on Bharaṇi	20840
Vālmiki Rāmāyaṇa	Demonic Star Moola-Vernal Equinox	17000
V. Rāmāyaṇa	Aikṣwāku Star Viśākhā -Vernal Equinox. Great Deluge of Manu	15000
Mahābhārata	Fall of Abhijit (star Vega)	13000
Tait. Samhitā	Rainy season on Purvāṣāḍhā	12200
Taittiriya Samhitā	Rainy Season on Moola	11240
Ṛgveda 3-57-2	Rainy Season from Jyeṣṭhā	10000
Ṛgveda 1-164-19	Indra-Jyeṣṭhā-Summer Solstice Soma-Mṛga-Winter Solstice	10280 to 9360
Taittiriya Brāhmaṇā	Winter Solstice on Kṛttikā Summer Solstice on Anurādhā	8357
Tattiriya Samhitā	Rainy Season from Mitra to Varuṇa	8400
Vālmiki Rāmāyaṇa	Summer Solstice on Āśvini Pourṇimā	7300
Vālmiki Rāmāyaṇa	Rāma's Horoscope	7323
Praśnopaniṣad	15th Desendent of Rāma	5940
Mahābhārata War	Planetary Positions	5561
Iśopaniṣad	Third generation from Vyāsa	5480
Hari Vanśa	Summer during Śrāvaṇa	4000
Suśruta Samhitā (First Edition)	Bhādrapada+Āśvina-Varṣā Ṛtu	4000

Muṇḍakopaniṣad	Before Kali Yuga	before 3101
Śatapatha Brāhmaṇa	Kṛttikā at exact east	3000
Kauṣitaki Brāhmaṇa	Rainy season from Śrāvaṇa	2320
Matsya Purāṇa	Rainy season from Śrāvaṇa	2320
Suśruta Samhitā (Second Edition)	Māgha begins on 22 December	2000
Maitrāyaṇi Upaniṣad	Summer Solstice at Sarpādya	1909
Viṣṇu Purāṇa	Vernal Equinox at Kṛttikā Head	1652
Śrimad Bhāgawata	Vernal Equinox at Meṣa, Autumnal equinox at Tulā Rāśi	1600
Vedānga Jyotiṣa	Winter Solstice at Dhaniṣṭhā	1640
Garga	Summer Solstice at Sarpānta	1640
Parāśara	Summer Solstice at Sarpārdha	1159
Kouṭilya	Vernal Equinox in Chaitra Summer Solstice in Āṣāḍha	350
Bhaviṣyottara Purāṇa & Kālidāsa.	Rainy Season from Āṣāḍha	100 AD
Varāhamihira	Summer Solstice at 90^0	520 AD

Table of the positions of the Nakṣatras and their main stars

I have repeatedly used the names of the Nakṣatras in this essay. For the benefit of the readers, I am giving here the span of all the 27 Nakṣatras in degrees and minutes from the zero degrees. The position of the main star in the Nakṣatra is given in the next column. For my calculations I have used these positions.

Span of Nakṣatra	Main star	Name of Nakṣatra	Deity	European Name
13° 20'	14° 6'	Aśvini	Aśvinau	αβ Arietis
26° 40'	28° 20'	Bharani	Yama	41 Arietis
40° 0'	40° 7'	Kṛttikā	Agni	Alcyone
53° 20'	49° 55'	Rohini	Brahmā Prajāpati	Aldebaran
66° 40'	63° 50'	Mṛga	Soma	Orion
80° 20'	68° 53'	Ārdrā	Śiva Rudra	Betelguese
93° 20'	93° 22'	Punarvasu	Aditi	Pollux
106° 40'	108° 51'	Puṣya	Bṛhaspati	δ Cancri
120° 0'	113° 46'	Āśleṣā	Sarpa	Hydrae
133° 20'	129° 58'	Maghā	Pitṛ	Regulus
146° 40'	143° 32'	Pūrvā Phalguni	Bhaga	Leonis
160° 0'	151° 45'	Uttarā Phalguni	Aryamā	Denebola
173° 20'	173° 35'	Hasta	Savitṛ	Corvi
186° 40'	183° 58'	Chitrā	Tvaṣṭā	Spica
200° 0'	184° 22'	Swāti	Vāyu	Arcturus
213° 20'	211° 8'	Viśākhā	Indrāgni	Libra
226° 40'	222° 42'	Anurādhā	Mitra	Scorpii
240° 0'	229° 54'	Jyeṣṭhā	Indra	Antares
253° 20'	243° 0'	Mūla	Nirti	Scorpii
266° 40'	254° 42'	Pūrvāṣāḍhā	Āpa	Sagitarii
280° 0'	262° 47'	Uttarāṣāḍhā	Viśvedevā	Sagitarii
293° 20'	281° 53'	Śravaṇa	Viṣṇu	Altair
306° 40'	297° 31'	Dhaniṣṭhā	Vasu	Delphini
320° 0'	321° 42'	Śatatārakā	Varuṇa	Aquarii
333° 20'	334° 40'	Pūrvā Bhādrapadā	Ajaekapāda	Pegasi
346° 40'	354° 26'	Uttarā Bhādrapada	Ahirbudhnya	Pegasi
360° 0'	360° 0'	Revati	Pūṣā	Z Piscium

For dating the ancient incidents the Equinoxes. the Solstices and Naksatras are very useful. Seasons depend on them. The Equinoxes always recede backwards on the Naksatra path at the rate of 960 years per Nakṣatra. Accordingly, I have prepared a table for easy recognition.

Winter Solstice at 22nd December	Vernal Equinox at 21st March	Date	Summer Solstice at 22nd June
Mūla	Uttarā Bhādrapadā	1999 A.D.	Mṛga
Pūrvāṣāḍhā	Revati	1240 A.D.	Ārdrā
Uttarāṣāḍhā	Aśvini	280 A.D.	Punarvasu
Śravaṇa	Bharaṇi	680 B.C. Pāṇini	Puṣya
Dhaniṣṭhā	Kṛttikā	1640 B.C. Vedānga Jyotisa	Āśleṣā
Śatatārakā	Rohiṇi	2600 B.C.	Maghā
Pūrvā Bhādrapadā	Mṛga	3560 B.C.	Pūrvā Phalguni
Uttarā Bhādrapadā	Ārdrā	4520 B.C. T.Brāhmaṇa	Uttarā Phalguni
Revati	Punarvasu	5480 B.C. Mahābhārata	Hasta
Aśvini	Puṣya	6440 B.C. Rāmāyaṇa	Chitrā
Bharaṇi	Āśleṣā	7400 B.C.	Svāti
Kṛttikā	Maghā	8360 B.C. T. Samhitā	Viśākhā
Rohiṇi	Pūrvā Phalguni	9320 B.C.	Anurādhā
Mṛga	Uttarā Phalguni	10280 B.C.	Jyeṣṭhā
Ārdrā	Hasta	11240 B.C.	Mūla
Punarvasu	Chitrā	12200 B.C.	Pūrvāṣāḍhā
Puṣya	Svāti	13160 B.C. Skanda - Indra	Uttarāṣāḍhā
Āśleṣā	Viśākhā	14120 B.C. Manu - Ikṣvāku	Śravaṇa
Maghā	Anurādhā	15080 B.C.	Dhaniṣṭhā
Pūrvā Phalguni	Jyeṣṭhā	16040 B.C.	Śatatārakā
Uttarā Phalguni	Mūla	17000 B.C. Bali	Pūrvā Bhādrapadā
Hasta	Pūrvāṣāḍhā	17960 B.C.	Uttarā Bhādrapadā
Chitrā	Uttarāṣāḍhā	18920 B.C.	Revati
Svāti	Śravaṇa	19880 B.C.	Aśvini
Viśākhā	Dhaniṣṭhā	20840 B.C. Rgveda/Brahmā	Āpabharaṇi
Anurādhā	Śatatārakā	21800 B.C. Rgveda	Kṛttikā
Jyeṣṭhā	Pūrvā Bhādrapadā	22760 B.C.	Rohiṇi
Mūla	Uttarā Bhādrapadā	23720 B.C. Rgveda	Mṛga

संदर्भ

श्रीमद्भागवत माहात्म्य अ.१	१)	परीक्षिते कथां वक्तुं सभायां संस्थिते शुके ॥१३॥
भागवत स्कंध १ अ ३		स तु संश्रावयामास महाराज परीक्षितम् ॥४२॥
भागवत स्कंध १	२)	इति भारतमाख्यानं कृपया मुनिना कृतम् ॥२५॥
अध्याय ४		एवं प्रवृत्तस्य सदा भूतानां श्रेयसि द्विजाः।
		सर्वात्मकेनापि यदा नातुष्यद्हृदयं ततः ॥२६॥
		भारतव्यपदेशेन ह्याम्नायार्थश्च दर्शितः ॥२९॥
भागवत स्कंध १	३)	कृतवान् भारतं यत्स्वं सर्वार्थं परिबृंहितम् ॥३॥
अध्याय ५		
भागवत स्कंध १	४)	तस्मिन् स्व आश्रमे व्यासो बदरीषण्डमंडिते ॥३॥
अध्याय ७		स संहितां भागवतीं कृत्वानुक्रम्य चात्मजम् ।
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महाभारत आदिपर्व	५)	अंतरे चैव संप्राप्ते कलिद्वापरयोरभूत ॥
अ.२		समन्तपंचके युद्धं कुरुपाण्डव सैन्ययोः ॥१३॥
महाभारत वन १४९	६)	एतत् कलियुगं नाम अचिरात् यत्प्रवर्तते ॥३९॥
महाभारत शल्य पर्व ६०	७)	प्राप्तं कलियुगं विद्धि प्रतिज्ञा पांडवस्य च ॥२५॥
महाभारत सभा अ-५३	८)	अन्धेनैव युगं नद्धं विपर्यस्तं नराधिप ।
B.O.R.I. सभा ४९-२४		कनीयांसो विवर्धन्ते ज्येष्ठां हीयन्ति भारत ॥२४॥
		(नद्धं युगं - द्वापरयुगं)
श्रीमद् भागवत	९)	तवेमे तनयास्तात जनमेजयपूर्वकाः।
स्कंध ९ अ.२२		श्रुतसेनो भीमसेन उग्रसेनश्च वीर्यवान् ॥३५॥
		तस्यं पुत्रः शतानीको याज्ञवल्क्यात् त्रयीं पठन्।
		अस्त्रज्ञानं क्रियाज्ञानं शौनकात् परमेष्यति ॥३८॥
		सहस्रानीकः तत्पुत्रः
		दण्डपाणिर्निमिस्तस्य क्षेमको भविता नृपः ।
		ब्रह्मक्षत्रस्य वै प्रोक्तो वंशो देवर्षिसत्कृत :॥४४॥
		क्षेमकं प्राप्य राजानं संस्थां प्राप्स्यति वै कलौ ।
		अथ मागध राजानो भवितारो वदामि ते ॥४५॥
श्रीमद्भागवत	१०)	भविता सहदेवस्य मार्जारिर्यत्श्रुतश्रवाः ॥४६॥
स्कंध ९ अ.२२		सुनीथः सत्यजिदथ विश्वजिद् यद् रिपुंजयः।
		बार्हद्रथाश्च भूपाला भाव्याः साहस्रवत्सरम् ॥४९॥
भागवत	११)	कस्य वंशो ऽ भवत् पृथ्व्यामेतदाचक्ष्व मे मुने ॥१॥
स्कंध १२ अ.१		योऽन्त्यः पुरंजयो नाम भाव्यो बार्हद्रथो नृपः।
		तस्यामात्यस्तु शुनको हत्वा स्वामनमात्मजम् ॥२॥
		प्रद्योतसंज्ञं राजानं कर्ता यत् पालकः सुतः ॥३॥
		नन्दिवर्धनस्तत्पुत्रः पंच प्रद्योतना इमे ।

अष्टत्रिंशोत्तरशतं भोक्ष्यन्ति पृथिवीं नृपा: ॥४॥

भागवत स्कंध १२ अ.२ १२) सप्तर्षीणां तु यौ पूर्वौ दृश्यते उदितौ दिवि ।
तयोरस्तु मध्ये नक्षत्रं दृश्यते यत् समं निशि ॥२७॥
तेनैत ऋषयो युक्ता स्तिष्ठन्ति अब्दशतं नृणाम् ।
ते त्वदीये द्विजा:काले अधुना चाश्रिता: मघा: ॥२८॥
विष्णोर्भगवतो भानु: कृष्णाख्यो ऽ सौ दिवं गत: ।
तदाविशत् कलिर्लोकं पापे यद् रमते जन: ॥२९॥
यावद् स पादपद्माभ्यां स्पृशन्नास्ते रमापति: ।
तावत् कलिर्वै पृथिवीं पराक्रान्तु न चाकशत् ॥३०॥
यदा देवर्षय: सप्त मघासु विचरन्ति हि ।
तदा प्रवृत्तस्तु कलिर्द्वादशाब्दशतात्मक:॥३१॥
यदा मघाभ्यो यास्यन्ति पूर्वाषाढां महर्षय:।
तदा नन्दात् प्रभृत्येषकलिर्वृद्धिं गमिष्यति ॥३॥
यस्मिन् कृष्णो दिवं यातस्तस्मिन्नेव तदाहनि ।
प्रतिपन्नं कलियुगमिति प्राहु: पुराविद: ॥३३॥

महाभारत आदि पर्व अ.१ B.O.R.I. १३) जनमेजयस्य राजर्षे: सर्पसत्रे महात्मन:।
समीपे पार्थिवेन्द्रस्य सम्यक्पारिक्षितस्य च ॥८॥
कृष्णद्वैपायनप्रोक्ता: सुपुण्या विविधा: कथा:।
कथिताश्चापि विधिवद्या वैशंपायनेन वै ॥९॥
श्रुत्वाहं ता विचित्रार्था महाभारतसंश्रिता:।
बहूनि संपरिक्रम्य तीर्थान्यायतनानि च ॥१०॥

महाभारत आदि अ. ४० १४) ततो नृपे तक्षकतेजसा हते प्रयुज्य सर्वा: परलोक सत्क्रिया:।
शुचिर्द्विजो राजपुरोहितस्तदा तथैव ते तस्य नृपस्य मंत्रिण: ॥५॥
नृपं शिशु तस्य सुतं प्रचक्रिरे समेत्य सर्वे पुरवासिनो जना:।
नृपं यमाहुस्तममित्रघातिनं कुरुप्रवीरं जनमेजय जना: ॥६॥

महाभारत आदि पर्व अ. ४५ १५) यदपृच्छत्तदा राजा मंत्रिणो जनमेजय:।
पितु: स्वर्गगतिं तन्मे विस्तरेण पुनर्वद ॥१॥
आख्यातवन्तस्ते सर्वे निधनं तत्परिक्षित: ॥२॥
परिक्षीणेषु कुरुषु उत्तरायामजायत ।
परिक्षिदभवत्तेन सौभद्रस्यात्मजो बलो ॥१३॥

महाभारत आदि पर्व अध्याय ७१ १६) अतिनक्षत्रवंशांश्च क्रुद्धो नक्षत्रसंपदा ।
प्रतिश्रवणपूर्वाणि नक्षत्राणि चकार य: ॥३४॥

महाभारत अश्वमेघ अ.४४ १७) श्रवणादीनि ऋक्षाणि ऋतव: शिशिरादय: ॥२॥

महाभारत अनुशासन B.O.R.I. अ. ६९ १८) ददृशुस्ते महाकायं कृकलासमवस्थितम् ।

पर्व अ.६९ तस्य चोद्धरणे यत्नमकुर्वंस्ते सहस्रश: ॥१४॥

प्रग्रहैश्चर्मपट्टेश्च तं बध्वा पर्वतोपमम्
नाशक्नुवन्समुद्धर्तुं ततो जग्मुर्जनार्दनम् ॥५॥

हरिवंश भविष्य पर्व अध्याय १

१९) परिक्षितस्य काश्यायां द्वौ पुत्रौ संबभूवतुः ।
चंद्रापीडस्य नृपतिः सूर्यापीडश्च मोक्षवित् ॥३॥
चंद्रापीडस्य पुत्राणां शतमुत्तमधन्विनाम्
जनमेजय इत्येवं क्षात्रं भुवि परिश्रुतम् ॥४॥
तेषा श्रेष्ठस्तु राजा ऽऽ सीत्पुरे वारणसाह्वये ।
सत्यकर्णो महाबाहुर्यज्वा विपुलदक्षिणः ॥५॥
सत्यकर्णस्य दायादः श्वेतकर्णः प्रतापवान् ।
अपुत्रः स तु धर्मात्मा प्रविवेश तपोवनम् ॥६॥
अजश्यामौ तु पार्श्वौ तावुभावपि समाहितौ
तथैव तु समारुढौ अजपार्श्वस्ततोऽ भवत् ॥१३॥
स एष पौरवो वंशः पांडवानां प्रतिष्ठितः ॥१७॥

महाभारत भीष्म अ.२

२०) अलक्ष्यः प्रभयाहीनः पौर्णमासीं च कार्तिकीम् ॥२३॥
रोहिणीं पीडयन्नेष स्थितो राजन् शनैश्वरः ॥३२॥

महाभारत भीष्म अ.३

२१) अभीक्ष्णं कंपते भूमिरर्कं राहुस्तथाग्रसत् ।
श्वेतो ग्रहस्तथा चित्रां समतिक्रम्य तिष्ठति ॥११॥
धूमकेतुः महाघोरः पुष्यमाक्रम्य तिष्ठति ॥१२॥
मघास्वङ्गारको वक्रः श्रवणे च बृहस्पतिः ॥१३॥
भग नक्षत्रमाक्रम्य सूर्यपुत्रेण पीडयते ।
शुक्रः प्रोष्ठपदे पूर्वे समारुह्य विरोचते
उत्तरे तु परिक्रम्य सहितः प्रत्युदीक्ष्यते ॥१४॥

नालकंठ चतुर्धर टीका भीष्म ३। १५

२२) परिघाख्य उपग्रहः तेन सहितः ।

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२३) श्यामो ग्रहः प्रज्वलितः सधूमः इव पावकः ।
ऐन्द्रं तेजस्वि नक्षत्रं ज्येष्ठामाक्रम्य तिष्ठति ॥१५॥
चित्रास्वात्यन्तरे चैवाधिष्ठितः परुषो ग्रहः ॥१६॥
वक्रानुवक्रं कृत्वा च श्रवणं पावकप्रभः ।
ब्रह्मराशिं समावृत्य लोहितांगो व्यवस्थितः ॥१७॥
संवत्सरस्थायिनौ च ग्रहौ प्रज्वलितावुभौ।
विशाखयोः समीपस्थौ बृहस्पतिशनैश्वरौ ॥२५॥
कृत्रिकासु ग्रहस्तीव्रो नक्षत्रे प्रथमे ज्वलन् ।
वपूंष्यपहरन्भासा धूमकेतुरिवस्थितः ॥२६॥
त्रिषु पूर्वेषु सर्वेषु नक्षत्रेषु विशांपते ।
बुधः सम्पतते ऽ भीक्ष्णं जनयन्सुमहद्भयम् ॥२७॥
चतुर्दशीं पंचदशीं भूतपूर्वां च षोडशीम् ।
इमां तु नाभिजानामि अमावास्यां त्रयोदशीम् ॥२८॥

चंद्रसूर्यावुभौ ग्रस्तावेकमासे त्रयोदशीम् ।
अपर्वणि ग्रहावेतौ प्रजाः संक्षपयिष्यत ॥२९॥
मांसवर्षं पुनस्तीव्रमासीत्कृष्ण चतुर्दशीम् ।

महाभारत २४) प्राजापत्यं हि नक्षत्रं ग्रहस्तीक्ष्णो महाद्युतिः।
उद्योग पर्व अ.१४१ शनैश्चरः पीडयति पीडयन्प्राणिनोऽधिकम् ॥७॥
B.O.R.I. कृत्वा चाङ्गारको वक्रं ज्येष्ठायां मधुसूदन ।
अनुराधां प्रार्थयते मैत्रं संशमयन्निव ॥८॥
नूनं महद्भयं कृष्ण कुरुणां समुपस्थितम् ।
विशेषेण हि वार्ष्णेय चित्रां पीडयते ग्रहः ॥९॥
सोमस्य लक्ष्म व्यावृत्तं राहुरर्कमुपेष्यति ॥१०॥

महाभारत (चित्रशाळा) २५) चित्रा ग्रहो महापाताख्यो ज्योतिः शास्त्रप्रसिद्धः।
नीलकंठ टीका उद्योग १४३ । १० तेन राकारस्य वेधाद्राजज़ातीयानां क्षयो भवितेति भावः ।

महाभारत २६) द्विधाभूत इवाऽदित्य उदये प्रत्यदृश्यत ।
भीष्म अ. १७ ज्वलन्त्या शिखाया भूयो भानुमानुदिते दिवि ॥३॥

महाभारत भीष्म १९ २७) निष्प्रभो ऽभ्युदियात्सूर्यः सघोषो भूश्चचाल ह ॥३९॥

महाभारत शांति पर्व १०० २८) चैत्र्यां वा मार्गशीर्ष्यां वा सेनायोगः प्रशस्यते ।
अ. १०१ पक्वसस्या हि पृथिवी भवत्यम्बुमती तथा ॥९॥
नैवातिशीतो नात्युष्णः कालो भवति भारत ।
तस्मात्तदा योजयेत परेषां व्यसनेषु वा।
एतेषु योगाः सेनायाः प्रशस्ताः परबाधने ॥१०॥

महाभारत २९) वेदानां सामवेदोऽस्मि... ॥२२॥
गीता विभूति योग अश्वत्थः सर्ववृक्षाणां... ।२६
अ.१० नराणां च नराधिपम् ॥२७॥
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बृहत्साम तथा साम्नां गायत्री छन्दसामहम् ।
मासानां मार्गशीर्षो ऽहं ऋतूनां कुसुमाकरः ॥३५॥
पांडवांना धनंजयः ॥३७॥

महाभारत भीष्म १७ ३०) दीप्यमानाश्च संपेतुः दिवि सप्तमहाग्रहाः ॥२॥

कर्ण पर्व ३७ ३१) निःसरंतो व्यदृशन्त सूर्यात् सप्तमहाग्रहाः ॥४॥
कर्ण २६ सातवळेकर निश्चरन्तो व्यदृशन्त सूर्यात्सप्त महाग्रहाः ॥३४॥

अनुशासन पर्व ३२) उषित्वा शर्वरीः श्रीमान्पंचाशन्नगरोत्तमे ।
मभा. १५३ समयं कौरवाग्र्यस्य सस्मार पुरुषर्षभः॥
स निर्ययौ गजपुराद्याजकैः परिवारितः ।
दृष्टवा निवृत्तमादित्यं प्रवृत्तं चोत्तरायणम् ॥६॥
दिष्ट्या प्राप्तो ऽसि कौन्तेय सहामात्यो युधिष्ठिर ।
परिवृत्तो हि भगवान्सहस्रांशुर्दिवाकरः ॥२६॥

अष्टपंचाशतं रात्र्य: शयानस्याद्य मे गता: ।
शरेषु निशिताग्रेषु यथा वर्षशतं तथा ॥२७॥
माघो ऽ यं समनुप्राप्तो मास: पुण्यो युधिष्ठिर ।
त्रिभागशेष: पक्षोऽयं शुक्लो भवितुमर्हति ॥२८॥

महाभारत विराट पर्व ३३) पंचमे पंचमे वर्षे द्वौ मासावुपजायत: ॥३॥
अ. ५२
एषामभ्यधिका मासा: पंच च द्वादश क्षपा: ।
त्रयोदशानां वर्षाणामिति मे वर्तते मति: ॥४॥

महाभारत आरण्यक पर्व ३४) विपरीतश्च लोकोऽयं भविष्यत्यधरोत्तर:।
अ. १८८
एडूकान्पूजयिष्यन्ति वर्जयिष्यन्ति देवता:।
B.O.R.I.
शूद्रा: परिचरिष्यन्ति न द्विजान्युगसंक्षये ॥६४॥
आश्रमेषु महर्षीणां ब्राह्मणावसथेषु च ।
देवस्थानेषु चैत्येषु नागानामालयेषु च ॥६५॥
एडूकचिन्हा पृथिवी न देवगृहभूषिता ।
भविष्यति युगे क्षीणे तद्युगान्तस्य लक्षणम् ॥६६॥

महाभारत आरण्यक पर्व ३५) अस्मिनकलियुगेऽप्यस्ति पुन: कौतुहलं मम।
१८८ B.O.R.I.
समाकुलेषु धर्मेषु किं न शेषं भविष्यति ॥५॥
किंवीर्या मानवास्तत्र किमाहारविहारिण: ।
किमायुष: किंवसना भविष्यन्ति युगक्षये ॥६॥

महाभारत भीष्म पर्व ३६) अहं च कीर्तिमेतेषां कुरुणां भरर्षभ ।
अ.२ B.O.R.I.
पांडवानां च सर्वेषां प्रथयिष्यामि मा शुच: ॥१३॥

महाभारत भीष्मपर्व ३७) मांसवर्षं पुनस्तीव्रमासीत्कृष्ण चतुर्दशीम् ॥३१॥
अ.३ B.O.R.I.
अर्धरात्रे महाघोरमतृप्यंस्तत्र राक्षसा: ॥३१॥
अद्य चैव निशां व्युष्टामुदय भानुराहत: ॥३३॥

महाभारत भीष्म ३८) मघाविषयग: सोमस्तद्दिनं प्रत्यपद्यत ।
अ. १७
दीप्यमानाश्च सम्पेतुर्दिवि सप्त महाग्रहा:॥२॥
३९) द्विधाभूत इवाऽदित्य उदये प्रत्युदृश्यत ।
ज्वलन्त्या शिखाया भूया भानुमानुदिते दिवि ॥३॥

महाभारत द्रोणपर्व ४०) तेऽपीडयन्भीमसेनं क्रुद्धा: सप्तमहारथा: ।
अ. १३७
प्रजासंहरणे राजन् सोमं सप्त महाग्रहा: ॥२२॥
B.O.R.I. 112
प्रजासंहरणे राजन्सोमं सप्त ग्रहा इव ॥२२॥

श्रीमद्भागवत स्कंध १ ४१) व्यदधात् यज्ञसन्तत्यै वेदमेकं चतुर्विधम् ।।१९॥
अ. ४
ऋग्यजु: सामाथर्वाख्यो वेदाश्चत्वार उद्धृता: ॥२०॥
तत्र ऋग्वेदधर: पैल: सामगो जैमिनि: कवि: ।
वैशम्पायन एवैको निष्णातो यजुषामुत ॥२१॥

महाभारत उद्योग पर्व १४२ ४२) सप्तमाद्यापि दिवसादमावास्या भविष्यति ।
B.O.R.I. १४०
संग्रामं योजयेत्तत्र तां ह्याहु: शक्रदेवताम् ॥१८॥

महाभारत कर्ण पर्व९४ ४३) हते कर्णे सरितो न प्रसस्रु:

जगाम चास्तं सविता दिवाकर: ।
ग्रहश्च तिर्यग् ज्वलनार्कवर्ण:
सोमस्य पुत्रोऽभ्युदियाय तिर्यक् ॥४९॥

सातवळेकर B.O.R.I. ६८ हते स्म कर्णे सरितो न स्रवन्ति
जगाम चास्तं कलुषो दिवाकर: ।
ग्रहश्च तिर्यग् ज्वलितार्कवर्णो
यमस्य पुत्रोऽ भ्युदियाय राजन् ॥४७॥

महाभारत कर्ण ९४ ४३) नभ: पफालेव ननाद चोर्वी
ववुश्च वाता: परुषा: सुघोरा: ।
दिशो बभूवुर्ज्वलिता: सधूमा
महार्णवा: सस्वनुश्चुक्षुभुश्च ॥५०॥
सकानाश्चाद्रिचयाश्च कम्पिरे
प्रविव्यथुर्भूतगणाश्च सर्वे ।
बृहस्पति: संपरिवार्य रोहिणी
बभूव चंद्रार्कसमो विशांपते ॥५१॥
हते तु कर्णे विदिशोऽपि जज्वलु:
तमोवृताद्यौर्विचचाल भूमि: ॥५२॥

आदि पर्व अ. १ महाभारत ४४) लेखको भारतस्यास्य भव त्वं गणनायक ।
मयैव प्रोच्यमानस्य मनसा कल्पितस्य च ॥७७॥
श्रुत्वैतत् प्राह विघ्नेशो यदि मे लेखनी क्षणम् ।
लिखितो नावतिष्ठेत तदा स्यां लेखको ह्यहम् ॥७८
व्यासोऽप्युवाच तं देवमबुद्ध्वा मा लिख क्वचित् ।
ओमित्युक्त्वा गणेशोऽपि बभूव किल लेखक: ।७९।
ग्रंथग्रंथि तदा चक्रे मुनिर्गूढं कुतुहलात् ।
यस्मिन् प्रतिजया प्राह मुनिर्द्वैपायनस्त्विदम् ॥८०॥
अष्टौ श्लोकसहस्राणि अष्टौ श्लोकशतानि च ।
अहं वेद्मि शुको वेत्ति संजयो वेत्ति वा न वा ॥८१

हरिवंश विष्णू पर्व अ. ५ ४५) करीषाकीर्णवसुधं कटच्छन्नकुटीमठम् ॥२४॥
करीषं शुष्क गोमयचूर्णम् ।

शांति अ. १५ ४६) सूक्ष्मयोनीनि भूतानि तर्कगम्यानि कानिचित् ।
पक्ष्मणोऽपि निपातेन येषां स्यात् स्कन्धपर्यय: ॥२६

४७) गते वर्षद्वये चैव पंचपक्षे दिनद्वये ।
दिवसस्याष्टमे भागे पतत्येकोऽधिमासक: ॥४५॥

उद्योग ८१ ४८) ततो व्यपेते तमसि सूर्ये विमल उद्गते ।
B.O.R.I. मैत्रे मुहूर्ते संप्राप्ते मृद्वर्चिषि दिवाकरे ॥६
कौमुदे मासिक रेवत्यां शरदन्ते हिमागमे ।
स्फीतसस्य सुखे काले कल्प: सत्त्ववतां वर: ॥७

शांति ४७	४९)	शृणुष्वावहितो राजन् शुचिर्भूत्वा समाहित:। भीष्मस्य कुरुशार्दूल देहोत्सर्गं महात्मन: ॥२॥ निवृत्तमात्रे त्वयने उत्तरे वै दिवाकरे । समावेशयदात्मानमात्मन्येव समाहित: ॥३॥ शुल्कपक्षस्य चाष्टम्यां माघमासस्य पार्थिव । प्राजापत्ये च नक्षत्रे मध्यं प्राप्ते दिवाकरे ॥६४॥
शांति ५१ महाभारत	५०)	पंचाशतं षट् च कुरुप्रवीर शेषं दिनानां तव जीवितस्य ।
आश्रमवासिक	५१)	कलिं दुर्योधनं विद्धि शकुनिं द्वापरं तथा ।
अध्याय ३९		दु:शसनादीन् विद्धि त्वं राक्षसान् शुभदर्शने ॥१०॥
शांति ३०८	५२)	तदा प्रकृतिमानेष भवत्यव्यक्तलोचन: । बुध्यते च परां बुद्धिं विमलाममलां यदा ॥१०॥ निर्गुण: प्रकृतिं वेद गुणयुक्तामचेतनाम् । तत: केवलधर्मासौ भवत्यव्यक्त दर्शनात् ॥१२॥
आरण्यक २५	५३)	तच्छालतालाम्रमधूकनीपकदंब सर्जार्जुनकर्णिकारै:।
B.O.R.I.		तपात्यये पुष्पधरैरुपेतं महावनं राष्ट्रपतिर्ददर्श ॥१७॥
आरण्यक १७९	५४)	तेषां पुण्यतमा रात्रि: पर्वसंधौ स्म शारदी ।
B.O.R.I.		तत्रैव वसतामासीत्कार्तिकी जनमेजय ॥१६॥
आरण्यक १८०	५५)	यथाप्रतिज्ञं विहृतश्च काल: सर्वा: समा द्वादश निर्जनेषु ।
महाभारत		अज्ञातचर्यां विधिवत्समाप्य भगवद्गता: केशव पांडवेया: ।३८
आरण्यक ३६	५६)	अस्माभिरुषिता: सम्यग्वने मासास्त्रयोदश: ॥३१॥
आरण्यक २६	५७)	इष्टीश्च पित्र्याणि तथाग्रियाणि महावने वसतां पांडवानाम्
विराट अ. ५	५८)	यत्र चापश्यत स वै तिरो वर्षाणि वर्षति । तत्र तानि दृढै: पाशै: सुगाढं पर्यबन्धत ॥२६॥
विराट अ. २०	५९)	मा दीर्घं क्षम कालं त्वं मासमध्यर्ध्यं संमितम् ।
B.O.R.I.		पूर्णे त्रयोदशे वर्षे राज्ञो राज्ञी भविष्यसि ॥१३॥
विराट २३	६०)	त्रयोदशाह मात्रं मे राजा क्षमतु भामिनी । २७
विराट २९	६१)	आदत्त गा: सुशर्माथ घर्मपक्षस्य सप्तमीम् ॥२७
विराट २१	६२)	बाहुयुद्धं तयोरासीत्क्रुद्धयोर्नररिंसहयो: । वसंते वाशिताहेतोर्बलवद् गजयोरिव ॥४९॥
विराट २९	६३)	अपरं दिवसं सर्वे राजन्संभूय कौरवा: ।
B.O.R.I.		अष्टम्यां तान्यगृहणन्त गोकुलानि सहस्रश: ॥२८॥
विराट	६४)	तमसाभिप्लुते लोके रजसा चैव भारत ।
अ. ३२		व्यतिष्ठन्च मुहूर्तं तु व्यूढानीका: प्रहारिण: ॥१॥
B.O.R.I.		ततोऽन्धकारं प्रणुदन्नुदतिष्ठत चन्द्रमा:। कुर्वाणो विमलां रात्रिं नन्दयन्क्षत्रियान्युधि ॥२॥
विराट ४२	६५)	अदेशिका महारण्ये ग्रीष्मे शत्रुवशं गता ॥२२॥
विराट ३२	६६)	ते गत्वा केवलां रात्रिमथ सूर्योदयं प्रति ।

		विराटस्य पुराभ्याशे दूता जयमघोषयन् ॥५०॥
विराट ६५	६७)	ततस्तृतीये दिवसे भ्रातर: पंच पांडवा: ।१॥
उद्योग ६	६८)	स भवान्पुष्ययोगेन मुहूर्तेन जयेन च ।
		कौरवेयान्प्रयात्वाशु कौन्तेयस्यार्थ सिद्धये ॥१७॥
स्त्री पर्व २०	६९)	एतावानिह संवासो विहितस्ते मया सह।
B.O.R.I.		षण्मासान्सप्तमे मासि त्वं वीर निधनं गत: ॥२६॥
सभा पर्व अ. ३६	७०)	ज्येष्ठामूले अमावास्यां मृगाजिन समावृतो ।
Age of Bharat war page 211		रैरवाजिन संवीतो नव नीताक्त देहवान् ॥४६॥
महाभारत उद्योग	७१)	कौमुदे मासि रेवत्यां शरदन्ते हिमागमे ।
८१ B.O.R.I.		स्फीतसस्यसुखे काले कल्प: सत्त्ववतां वर: ॥७॥
उद्योग ८२	७२)	अनभ्रेऽशनिनिर्घोष: सविद्युत्समजायत ।
		अन्यगेवं च पर्जन्य: प्रावर्षद्विघने भृशम् ॥५॥
		उदपानाश्च कुंभाश्च प्रार्सिचन् शतशो जलम् ॥७॥
		तम: संवृतमप्यासीत्सर्वं जगदिदं तदा ।८।
		प्रामश्नाद्धास्तिपुरं वातो दक्षिणपश्चिम:।
		आरुजन्गणशो वृक्षान्परुषो भीमनिस्वन: ॥१०॥
महाभारत उद्योग ८४	७३)	वृकस्थले निवसति स च प्रातरिहेष्यति ॥१॥
उद्योग ८२	७४)	सुमृष्टं भोजयित्वा च ब्राह्मणान् तत्र केशव: ॥२९
उद्योग ८७	७५)	प्रातरुत्थाय कृष्णस्तु कृतवान्सर्वमाह्निकम् ॥
		ब्राह्मणैरभ्यनुज्ञात: प्रययौ नगरं प्रति ॥१॥
उद्योग ८८	७६)	अथोपगम्य विदुरमपराह्णे जनार्दन: ॥१॥
उद्योग ८९	७७)	निवेशाय ययौ वेश्म विदुरस्य महात्मन: ॥३४॥
उद्योग ९२	७८)	शिवा नक्षत्रसंपन्ना सा व्यतीताय शर्वरी ।१।
उद्योग १२६	७९)	सभायामुत्थितं क्रुद्धं प्रस्थितं भ्रातृभि: सह।
		दुर्योधनमभिप्रेक्ष्य भीष्म: शांतनवोऽब्रवीत् ॥२८॥
उद्योग १२७	८०)	मातुश्च वचनात्क्षत्ता सभां प्रावेशयत्पुन: ॥१६॥
उद्योग १२८	८१)	तत्तु वाक्यमनाइत्य सोऽर्थवन्मातृभाषितम्।
		पुन: प्रतस्थे ..... ॥१॥
		तत: सभाया निर्गम्य मंत्रयामास कौरव: ॥२॥
उद्योग १४०	८२)	सौम्योऽयं वर्तते मास: सुप्रापयवसेन्धन ।१६।
B.O.R.I.		पक्वौषधिवनस्फीत: फलवानल्पमक्षिक:।
		निष्पंको रसवत्तोयो नात्युष्ण शिशिर: सुख: ॥१७॥
		सप्तमाद्यापि दिवसादमावास्या भविष्यति ।
		संग्रामं योजयेत्तत्र तां ह्याहु: शक्रदेवताम् ॥१८॥
आश्वमेधिक ६२	८३)	कृत्वा तु पांडवा: सर्वे रत्नाहरणनिश्चयम्।
B.O.R.I.		सेनामाज्ञापयामासु: नक्षत्रेऽहनि च ध्रुवे ॥१७॥
आश्वमेधिक६९	८४)	मासजातस्तु ते वीर पिता भवति भारत ।

अथाजग्मु: सुबहुलं रत्नमादाय पांडवा: ॥ १२॥

अश्वमेध ७१ ८५) चैत्र्यां हि पौर्णमास्यां च तव दीक्षा भविष्यति ।४।

अश्वमेध ७५ ८६) आगच्छेथा महाराज परा चैत्रीमुपस्थिताम्
तदाश्वमेधो भविता धर्मराजस्य धीमत: ॥२५॥

अश्वमेध ८६ ८७) न्यवर्तत ततो वाजी येन मागाह्वयं पुरम् ॥१॥
तं निवृतं तु शुश्राव चारणैव युधिष्ठिर: ॥२॥
एतस्मिन्नेव काले तु द्वादशीं माघपाक्षिकीम् ।
इष्टं गृहित्वा नक्षत्रं धर्मराजो युधिष्ठिर: ॥४॥
समानाय्य महातेजा: सर्वान्भ्रातृन्महामना: ॥५॥
आयाति भीमसेनासौ सहाश्वेन तवानुज ।
यथा मे पुरूषा: प्राहुर्ये धनंजयसारिण: ॥७॥

अश्वमेघ ८६ ८७) उपस्थितश्च कालोऽयमभितो वर्तते हय: ।
B.O.R.I. माघी च पौर्णिमासीयं मास: शेषो वृकोदर ॥८॥

आश्रमावासिक, B.O.R.I. ८८) चक्रुस्तेनाभ्युज्ञाता वर्षाणि दश पंच च ॥६॥

आश्रम २१ ८९) कार्तिक्यां कारयित्वेष्टिं ब्राह्मणैवैदपारगै: ॥२॥
वधूपरिवृत्तो राजा निर्ययौ भवनात्तत: ॥३॥

आश्रम ३७ ९०) षोडशेमानि वर्षाणि गतानि मुनिपुंगव ।
अस्य राज्ञो हतान्पुत्रान् शोचतो न शमो विभो ॥४॥

आश्रम ४५ ९१) द्विवर्षोपनिवृत्तेषु पांडवेषु यदृच्छया
देवर्षि: नारदो राजन्नाजगाम युधिष्ठिरम् ॥१॥
गांधारी व महाभागा जननी व पृथा तव ।
दावाग्निना समायुक्ते स च राजा पिता तव ॥३१॥

आश्रम ३६ ९२) मासमेकं विजन्हुस्ते ससैन्यान्त:पुरा वने ॥७॥
आश्रम ४४ मास: समाधिको ह्येषामतीतो वसतां वने ॥११॥

मौसल अ १ ९३) षट्त्रिंशे त्वथ संप्राप्ते वर्षे कौरवनंदन ॥१॥
मौसल अ ३ मेने प्राप्तं स षट्त्रिंशं वर्षं वै केशिसूदन ॥१८॥

उद्योग १४५ ९४) आगम्य हस्तिनपुरादुपप्लव्यमरिन्दम:।
B.O.R.I. पांडवानां यथावृतं केशव: सर्वमुक्तवान् ॥१॥
संध्यामुपास्य...आनाय्य कृष्णं पुनर्मन्त्रममन्त्रयन् ॥४॥

उद्योग १४९ ९५) ब्रवीतु वदतां श्रेष्ठो निशा समतिवर्तते ॥३६॥
तत: सेनापतिं कृत्वा कृष्णस्य वशवर्तिनम् ।
रात्रिशेषे व्यतिक्रान्ते प्रयास्यामो रणाजिरम् ॥३७॥

उद्योग १४९ ९६) प्रहृष्टा दंशिता योधा: परानीकविदारणा :।
तेषां मध्ये ययौ राजा कुंती पुत्रो युधिष्ठिर: ॥५२॥

उद्योग १४९ ९७) आसाद्य सरितं पुण्यां कुरूक्षेत्रे हिरण्वतीम् ॥७३॥

खानयामास परिखां केशवस्तत्र भारत ॥७४॥

उद्योग १५१ ९८) पांडवेया महाराज तां रात्रिं सुखमावसन् ॥२७॥

उद्योग १५२ व्युषितायां रजन्यां तु राजा दुर्योधनस्ततः ॥१॥

उद्योग १५४ ९९) प्राविशद् भवनं राज्ञः पांडवस्थ हलायुध्दः ॥१५॥
तीर्थयात्रां ययौ रामो निवर्स्य मधुसूदन ॥३४॥

शल्य ३४ १००) तीर्थयात्रां हलधरः सरस्वत्यां महायशः ।
मैत्रे नक्षत्र योगे स्म सहितः सर्वयादवौ ॥२॥

शल्य ३४ १०१) अनवाप्य शमं तत्र कृष्णः पुरुषसत्तमः।

B.O.R.I. आगच्छत महाबाहुरुपप्लव्यं जनाधिप ॥७॥
ततः प्रत्यागतः कृष्णो धार्तराष्ट्र विसर्जितः ।
अक्रियायां नरव्याघ्र पांडवानिदमब्रवीत् ॥८॥
न कुर्वन्ति वचो महां कुरवः कालचोदिताः ।
निर्गच्छध्वं पांडवेयाः पुष्येण सहिता मया ॥९॥
रौहिणेये गते शूरे पुष्येण मधुसूदन ॥१४॥

उद्योग १४८ १०२) आज्ञपयश्च राज्ञस्तान्पार्थिवान्दुष्टचेतसः।
प्रयाध्वं वै कुरुक्षेत्रं पुष्योऽद्येति पुनः पुनः ॥३॥

अनुशासन १५३ १०३) उषित्वा शर्वरीः श्रीमान्पंचाशन्नगरोत्तमे ॥५॥

शांति अ १ नीलकंठ १०४) शौचं निवर्तयिष्यन्तो मासमात्रं बहिः पुरात् ॥२॥

शल्य ५३ १०५) भविष्यति च तत्सद्यस्तयो राम सुदारुणम् ॥३०॥

B.O.R.I. यदि कौतुहलं तेऽस्ति व्रज माधव मा चिरम् ॥
पश्य युद्धं महाघोरं शिष्ययोर्यदि मन्यसे ॥३१॥

शांति अ. २२४ १०६) त्रिंशन्मुहूर्तश्च भवेदहश्च रात्रिश्च संख्या मुनिभिर्प्रणीता ।
मासः स्मृतो रात्र्यहनी च त्रिंशत् संवत्सरो द्वादशमास उक्तः ॥१३॥

द्रोण १५९ १०७) त्रिमाया रजनी चैषा घोररूपा भयानका ।
सहस्त्रयाम प्रतिमा बभूव प्राणहारिणी ॥
श्रान्तो भवन्तो निद्रान्धाः सर्व एव सवाहनाः ।
तमसा चावृते सैन्ये रजसा बहुलेन च ॥२॥
ते यूयं यदि मन्यध्वमुपारमत सैनिकाः ।
निमीलयत चात्रैव रणभूमौ मुहूर्तकम् ॥२४॥
ततो विनिद्रा विश्रान्तश्चन्द्रमस्युदिते पुनः।
संसाधयिष्यथान्योन्यं स्वर्गाय कुरुपांडवाः ॥२५॥

द्रोण १६१ १०८) त्रिभागमात्रशेषायां रात्र्यां युद्धमवर्तत ॥१॥

आरण्यक १२ १०९) इतः प्रयाता राजेन्द्र पांडवा द्यूतनिर्जिताः।

B.O.R.I. जग्मुः त्रिभिः अहोरात्रैः काम्यक नाम तद् वनम् ॥३॥

आरण्य ३६ ११०) अस्माभिरुषिताः सम्यग्वने मासास्त्रयोदश ॥३१॥

आरण्यक ४९ १११) ततः कदाचित् एकान्ते विविक्त इव शाद्वले ।
दुःखार्ता भरतश्रेष्ठा निषेदुः सह कृष्णया ॥३॥

आरण्यक १५५	११२) समाश्चतस्रोऽभिगता: शेवेन चरतां वने ।।३।।
आरण्यक १५५	११३) प्रस्थं हिमवत पुण्यं चयो सप्तदशेऽहनि ।।१५।।
B.O.R.I. १५५	११४) पूजिताश्चावसंस्तत्र सप्तरात्रमरिन्दमा: ।।१९।।
आरण्यक १५७	११५) तथा निवसतां तेषां पंचमं वर्षमभ्यगात् ।।९।।
आरण्यक १७१	११६) एवमिन्द्रस्य भवने षट् वर्षाणि भारत ।
	उषितानि मया राजन्स्मरता द्यूतजं कलिम् ।।९।।
११६	तथा तेषां वसतां काम्यके... पंचैव वर्षाणि तदा व्यतीयुरधीयतां
B.O.R.I. 47	जपतां जुह्वतां च ।।१२।। आरण्यक ५०
आरण्यक १७३	११७) समेत्य पार्थेन यथैकरात्रमूषु: समास्तत्र तदा चतस्र: ।
B.O.R.I.	पूर्वांश्च षट् ता दश पांडवानां शिवा बभूवुर्वसतां वनेषु ।।५।।
आरण्यक १७३	११८) एकादशं वर्षमिदं वसाम: सुयोधनेनात्तसुखा: सुखार्हा: ।।८।।
आरण्यक १७४	११९) विहृत्य मासं सुखिनो बदर्यां किरातराज्ञो विषयं सुबाहो : ।।११।।
आरण्यक १७४	१२०) संवत्सरं तत्र वने विजह्रु: ।।१७।।
आरण्यक १७९	१२१) निराघान्तकर: काल: सर्वभूतसुखावह: ।
	तत्रैव वसतां तेषां प्रावृट् समभिपद्यत ।।१।।
	तथा बहुविधाकारा प्रावृण्मेघानुनादिता ।
	अभ्यतीता शिवा तेषां चरतां मरुधन्वसु ।।९।।
आरण्यक १७९	१२२) क्रौचहंसगणाकीर्णा शरत् प्राणिहिताभवत् ।।१०।।
	तेषां पुण्यतमा रात्रि: पर्वसंधौ स्म शारदी ।
आरण्यक १७९	१२३) तत्रैव वसतामासीतकार्तिकी जनमेजय ।।१६।।
	तमिस्राभ्युदये तस्मिन्धौम्येन सह पांडवा: ।
	सूतै: पौरोगवैश्चैव काम्यकं प्रययुर्वनम् ।।१८।।
आरण्यक १८०	१२४) यथाप्रतिज्ञं विहृतश्च काल: सर्वा: समा द्वादश निर्जनेषु ।।३८।।
आरण्यक २४५	१२५) वने निवसतां तेषां पाण्डवानां महात्मनाम् ।
B.O.R.I.	वर्षाण्येकादशातीयु: कृच्छ्रेण भरर्षभ ।।१।।
आरण्यक १८०	१२६) यथाप्रतिज्ञं विहृतश्च काल: सर्वा: समा द्वादश निर्जनेषु ।
	अज्ञातचर्या विधिवत्समाप्य भगवद्गता: केशव पांडवेया: ।।३८।।
आरण्यक २४४	१२७) सप्तमासं हि नो वर्षं यदेतत्पर्युज्महे ।।१२।।
आरण्यक २४२	१२८) समय: परिपाल्यो नो यावद् वर्षं त्रयोदशम् ।।१२।।
आरण्यक २४८	१२९) प्रेक्षमाणा बहुविधान्वनोद्देशान्समन्तत: ।
	यथर्तुकालरम्याश्च वनराजी: सुपुष्पिता: ।।२।।
आरण्यक २९६	१३०) आरुह्य वृक्षं माद्रेय निरीक्षस्व दिशोदश ।।५।।
B.O.R.I.	पानीयमन्तिके पश्य वृक्षान्वाप्युदकाश्रयान् ।
	इमे हि भ्रातर: श्रान्तास्तव तात पिपासिता: ।।१६।।
आरण्यक २९८	१३१) वर्षाणि द्वादशारण्ये त्रयोदशमुपस्थितम् ।
B.O.R.I.	तत्र नो नाभिजानीयुर्वसतो ह्यनुजा: क्वचित्।। १५।।
आरण्यक २९८	१३२) वर्ष त्रयोदशं च इदं मत्प्रसादात्कुरुद्वहा: ।

विराटनगरे गूढा अविज्ञानाश्चरिष्यथ ॥१८॥

आरण्यक २९९ १३३) उषि[illegible]श्च वने कृच्छ्रम् यत्र द्वादश वत्सरान्
अज्ञातवासमभयं शेषं वर्षं त्रयोदशम् ॥४॥

वराहमिहिर १३४) रोहि[illegible]शकटमर्कनन्दनो यदि भिनत्ति रुधिरोथवा शशी ।
बृहत्संहिता ३४ किं [illegible]यामि यदि नष्टसागरे जगदशेषमुपयाति संशयम् ॥३५॥
ग्रहलाघव ११-१२ भौम[illegible]र्योः शकटभिदा युगान्तरे स्यात् ।
गणेशदैवज्ञ

चष्मा Magnifying Lens १३५) सूक्ष्मत्वे सर्व वस्तूनां स्थूलत्वं च उपनेत्रतः ।
अपरोक्षानुभूति-शंकराचार्य तद्वत् आत्मनि देहत्वं पश्यति अज्ञानयोगतः ॥८१॥
ज्ञानेश्वरी अ १३ भिंग Lens १३६) कां [illegible]नारी दीपु ठेविला, बाहेरी फांके ॥१८२॥
ऋग्वेद ६-३२-५ १३७) सरस्[illegible]ण शवसा तक्तो अत्यैरप इन्द्रो दक्षिणतस्तुराषाट् ।
वाल्मीकी रामायण १३८) तत[illegible] प्रावृडनुप्राप्ता मम कामवर्धिनी ॥१४॥
अयोध्या सर्ग ६३ उप[illegible]स्य हि रसान् भौमांस्तप्त्वा च जगदंशुभिः ।
परे[illegible]चरितां भीमां रविराविशते दिशम् ॥१५॥

ऋग्वेद १-१६१-९३ १३९) सुषु[illegible]वांस ऋभवस्तदपृच्छतागोह्य क इदं नो अबूबुधत् ।
श्वानं बस्तो बोधयितारमब्रवीत्संवत्सर इदमद्या व्यख्यत ॥

तैत्तिरीय ब्राह्मण १४०) कृत्तिकाः प्रथमं विशाखे उत्तमं तानि देव नक्षत्राणि
१-५-२-६, ७ अनुराधा प्रथमं। आपरभरणीरुत्तमं । तानि यमनक्षत्राणि ॥
यानि देव नक्षत्राणि तानि दक्षिणेन परियंति ॥
यानि यमनक्षत्राणि तानि उत्तरेण ॥

तैत्तिरीय ब्राह्मण १४१) अंब्रायै स्वाहा दुलायै स्वाहा ।
३-१-४ नितन्यै स्वाहा अभ्रयंत्यै स्वाहा ।
नक्षत्रेष्टी कृत्तिकेष्टी मेघयंत्यै स्वाहा वर्षयंत्यै स्वाहा । चुपुणिकायै स्वाहा ॥
तै.ब्रा. ३-५-७-१ १४२) अग्निर्मूर्धा दिवः ककुत् । पतिः पृथिव्या अयम्।
अपांरेतांसिजिन्वति । दिविमूर्धानंदधिषे सुवर्षाम् ॥
ओः कृत्तिकाः ॥ तै.ब्रा. १-५-१

ऋग्वेद १०-९८-७ १४३) यं वापिः शन्तनवे पुरोहिता होत्राय वृतः कृपयन्नदोधेत् ।
तै.ब्रा. ३-१-४-५ १४४) ऋक्षा वा इयमलोमकाऽसीत् । ततो वा
इयमोषधीभिर्वनस्पतिभिः सलोभका प्रजायता।

समाप्त

Dr. P. V. Vartak has
Authored and published the following **books in Marathi**

[1]Swayambhu showing Bheema as the hero of the Mahabharata, establishing the dates of 60 incidents from the epic and showing how far science was advanced then around 5561 years before Christ.
[2] Vastava Ramayana narrating true history of Rama, fixing dates of almost 50 incidents with the help of Astronomical mathematics.
[3] The Scientific Explanation of the Upanishads, two volumes,
[4] The Scientific Explanation of the Patanjala Yoga
[5] The Scientific Explanation of the Geeta.
[6] Brahmarshichi Smaranayatra - an Autobiography,in which are recorded the experiences of 48 years in the practice of Yoga.
[7] Punarjanma i.e. Rebirth.
[8] Jesus Christ was a Hindu Tamil Brahmin.
[9] Bajirao the Great – a T.V.serial or Cine script.
[10] Veer Savarkar – Geeta Personified.
[11] Veer Hanuman.

Four books are being written in Marathi, on the science from the Rigveda, Lord Shri Krishna, Draupadi, the Faith and the blind faith.

Vastava Ramayana is translated into Kannad language and published, in Bangalore. Swayambhu is translated in Hindi and is with the NAG publishers, Delhi, for publication.

English Books :
[12] The Scientific knowledge in the Vedas [published by Hinduja Foundation, Delhi,through the NAG publishers, Delhi.]
[13] The Scientific dating of the Mahabharata War.
[14] The Scientific dating of the Ramayana and the Vedas.

Both these books are published by the Veda Vidnyana Mandala, Pune.
[15]Scientific Knowledge in the Upanishads and Geeta is handed over to Hinduja Foundation, Delhi for publication.
[16] Jesus the Christ was a Hindu, published by the Vedic Science, Delhi.

A List of some **Research Papers** presented by **Dr. P. V. Vartak** at various conferences :

1] Knowledge of Chromosomes {Gunavidhi} in Ancient India.
2] Embryology in Ancient India [study of human embryo from the conception.]
3] Human and animal Clones from ancient India.[Rigveda and Puranas]
4] Test tube babies from ancient India. In vitro development of human beings.
5] Parthenogenetic Births of Pandavas.
6] Aeroplanes from Ramayana, Vedas and Samarangana Sootradhara.
7] Dates fixed of the Ramayana, Puranas, Vedas, Patanjali etc.
8] Vedic concept of the genesis of the Universe compared to the modern scientific concept.
9] Upanishadic concept about the genesis of the Universe.
10] Scientific knowledge in the Vedas, Upanishads, Ramayana, Mahabharata, Patanjala Yoga, Geeta, Puranas etc.
11] Shiva-linga is a symbol of science { D.N.A., Atom, Universe.}
12] Rebirth theory - How scientific it is.
13] Brahmastra similar to atomic weapon. Other ancient 'Astras' were scientific.
14] Ancient Indian measurement of the velocity of light is same as the modern.
15] Bheema is the Hero of the epic Mahabharata.
16] exposed pre-Ramayana history of India.
17] Ancient Indian Space-Travel, effecting elongation of Life.
18] Antarctica and America were known to ancient Indians of Ramayana era.
19] Proved all the steps of thousand years from the Vedas 23720 BC to Varahmihira of 520 AD.
20] Astronomy in India, since the Vedas.
21] Time-measuring-science of ancient India computing astronomy and Meteorology.
22] Force of Gravitation in the Vedas, Prashnopanishad, and Shankaracharya.
23] Seven Energy bands in the Mundakopanishad and Tachyons.
24] Panch-Kosha theory is scientific.
25] Fall of Abhijit Nakshatra [star Vega] recorded in the Mahabharata was a fact of 12000 years BC.
26] Signs of zodiac from the Rigveda. And many other topics.

The Veda Vidnyana Mandala is an institute established in Pune, in May 1976, at Vartak Ashrama, 497 Shaniwar Peth, Pune, 411030.The eminent personalities like Wrangler G. L. Chandratreya, Shri. M. B. Pant, Dr. N. R. Apte, Dr. R. P. Thatte etc helped Dr. P.V. Vartak establish the Mandala. Wrangler Mahajani, Wrangler Vishnupant Naralikar, Barrister Appasaheb Pant, Dr. Shankaran, Dr. Bhalba Kelkar, etc were the great personalities who attended the inauguration of the Mandala.

Later the great personalities like the ex Prime Minister Shri Narasinha Rao became the patron of the Veda Vidnyana Mandala, Pune. Other great personalities like the Chief of Army Staff, General G. G. Bewoor, the Chief of the Naval Staff Admiral B. S. Soman, attended some seminars held by the Mandala.

Some distinguished supporters of the Veda Vidnyana Mandala are Prof. Kawathekar, Indore, Prof. Venkatachelam,Ujjain University, Prof. Gangadharan,Chennai, Shri. G. G. Joshi, Nagpur, Shri. M. S. Parakhe, Shri. B.G.Shirke, Dr. V.G.Bhide, Dr. P.C. Shejawalkar, Dr. S.V.Bokil, etc

The Veda Vidnyana Mandala holds weekly lecture meetings every Saturday at Vartak Ashrama. Every year on the first Saturday and Sunday, the Mandala holds annual seminars on various topics and invites important personalities to preside over the seminar. The topics selected so far were : The Vedas, Spiritual Science, Ancient Indian science, Cosmology, Technology, Biology, Meteorology, Armaments in ancient India, the Ramayana, the Mahabharata,the Upanishads, Geeta, Yoga Shastra, Dnyaneshwari, the Upavedas, Puranas, Shad Darshana, the Smrutis, the Kautileeya Arthashastra, Yugapurusha Shri Krishna, etc.

Many eminent scholars presided over these seminars, such as : Pandit Lakshman Shastri Joshi, Miss Vatsala, a scientist of NASA, Dr. Pisharoti, Dr.Mainkar, Dr. Venkatachelam, American scholars from ISCON,Dr.Ghatge,Dr.Phondke, Dr. Sukhatme, Dr.S.V.Sohoni, Shri. Khurshid Alam Khan, a central minister, Dr.V.G.Bhide, Shri.P.V.Narasinha Rao, chief of Army Staff General G.G.Bewoor, chief of Naval Staff Admiral B.S.Soman, Prof.Akoalkar V.V., Prof. Harshe, P.N.Joshi, Navalgundkar, Dr. Gopal Krishna, Shri Navalmal Firodia, Dr.H.V.Inamdar, V.D.Karad, Dr.Dharmadhikari, Brig.Deokar, Dr.CSR Prabhu, Pandit S.G.Shevde,Dr.P.Nageshwar Rao, etc.

The End