Shri Shivaji Education Society Amravati's
Science College, Nagpur
Department of Physics

Report on

The Lecture Series on Indian Astronomy

(IKS-BIK2T02)

Duration – 1st to 8th April 2025

Report on
The Lecture Series on Indian Astronomy

(Prescribed for B.Sc. Part-I – Sem-II under the category IKS-BIK2TO2)

Day - 1

Date: 1 st April 2025,
Time: 4:00 PM – 6:0 PM
Guest Speaker: Hon'ble Prof. Krishna Kumar Pandey,
(Dean, Faculty of Ancient Indian Sciences and Humanities, KKSU, Ramtek)
Topic: UNIT I – Astronomy in Prehistoric Era, Astrology in Vedic Era, Vedang Jyotish

The Department of Physics successfully organized the Inaugural Program of the Lecture Series on Indian Astronomy, which is part of the B.Sc. Part-I, Semester-II curriculum under the Indian Knowledge System (IKS) category IKS-BIK2TO2.

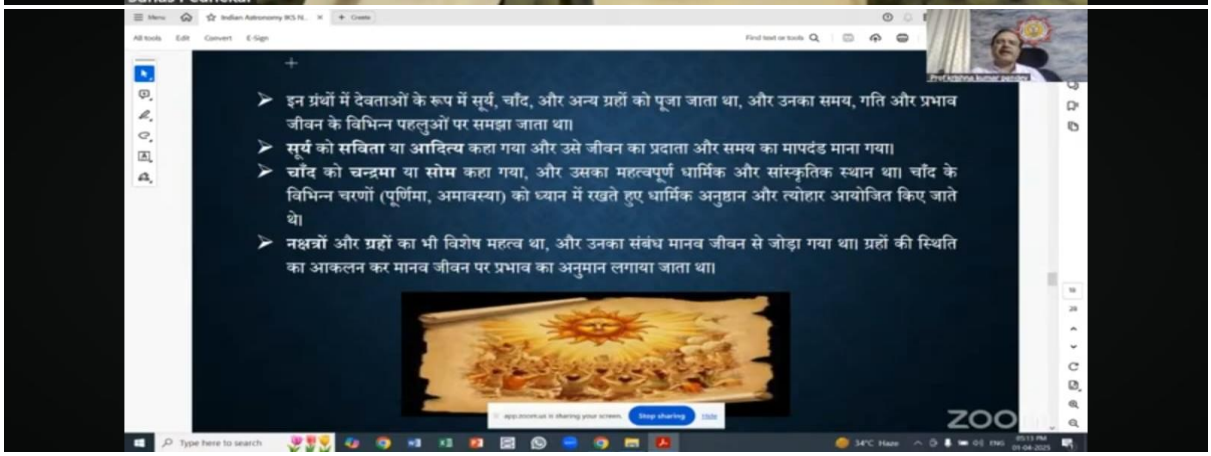
The program commenced at 4:00 PM with the address by the Chief Guest, Hon. Prof. Suhas Pednekar, Former Vice-Chancellor of Mumbai University and Akhil Bhartiya Kalyankari Adhyaksh, Bhartiya Shikshan Mandal. His address highlighted the significance of Indian Astronomy and the need to integrate traditional knowledge with modern education.

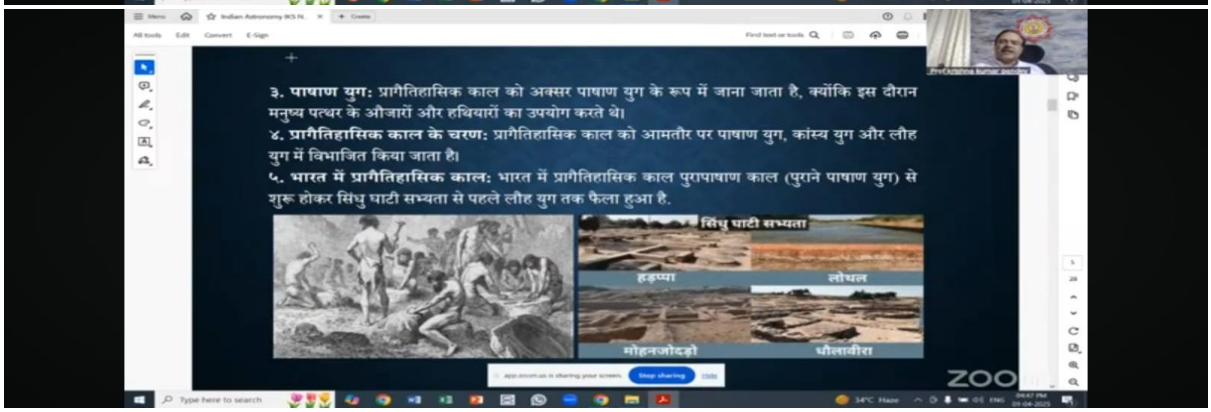
Following the chief guest's address, several dignitaries delivered their brief remarks: Dr. Priya Wanjari, Principal, Dr. Omraj Deshmukh, Principal, SSESA'S Science College, Nagpur, Dr. D. V. Naik, Principal, Dr. Debashis S. Bhowmick, Principal, Dr. Dinkar Mrathe, Dr. Parag Joshi, Hon'ble Suresh Ji Deo, Secretary, Dharampeth Educational Society,

A Vote of Thanks was presented by Dr. Neehal Raza from 4:26 to 4:30 PM, expressing gratitude to all the dignitaries, organizers, and participants. The guest speaker, **Prof. Krishna Kumar Pandey,** was introduced between 4:30 and 4:32 PM, setting the stage for the highlight of the event. From 4:32 to 6:00 PM, **Prof. Krishna Kumar Pandey,** delivered an enlightening and engaging talk on Indian Astronomy, drawing connections between ancient Indian astronomical practices and their relevance to contemporary science education. The lecture was well-received by students and faculty alike, enriching their understanding of India's rich astronomical heritage. The inaugural session of the Lecture Series on Indian Astronomy marked a successful beginning to an academic initiative aimed at blending traditional wisdom with modern scientific education.


Principal Dharampeth M. P. Deo Memorial Science College, Nagpur
zoom


Suhas Pednekar
zoom


➢ इन ग्रंथों में देवताओं के रूप में सूर्य, चाँद, और अन्य ग्रहों को पूजा जाता था, और उनका समय, गति और प्रभाव जीवन के विभिन्न पहलुओं पर समझा जाता था।
➢ सूर्य को सविता या आदित्य कहा गया और उसे जीवन का प्रदाता और समय का मापदंड माना गया।
➢ चाँद को चन्द्रमा या सोम कहा गया, और उसका महत्वपूर्ण धार्मिक और सांस्कृतिक स्थान था। चाँद के विभिन्न चरणों (पूर्णिमा, अमावस्या) को ध्यान में रखते हुए धार्मिक अनुष्ठान और त्योहार आयोजित किए जाते थे।
➢ नक्षत्रों और ग्रहों का भी विशेष महत्व था, और उनका संबंध मानव जीवन से जोड़ा गया था। ग्रहों की स्थिति का आकलन कर मानव जीवन पर प्रभाव का अनुमान लगाया जाता था।
Stop sharing
zoo


३. पाषाण युग: प्रागैतिहासिक काल को अक्सर पाषाण युग के रूप में जाना जाता है, क्योंकि इस दौरान मनुष्य पत्थर के औजारों और हथियारों का उपयोग करते थे।
४. प्रागैतिहासिक काल के चरण: प्रागैतिहासिक काल को आमतौर पर पाषाण युग, कांस्य युग और लौह युग में विभाजित किया जाता है।
५. भारत में प्रागैतिहासिक काल: भारत में प्रागैतिहासिक काल पुरापाषाण काल (पुराने पाषाण युग) से शुरू होकर सिंधु घाटी सभ्यता से पहले लौह युग तक फैला हुआ है.
सिंधु घाटी सभ्यता
हड़प्पा
लोथल
मोहनजोदड़ो
धौलावीरा
Stop sharing
zoo

Report on
The Lecture Series on Indian Astronomy (IKS-BIK2T02)
Day -2

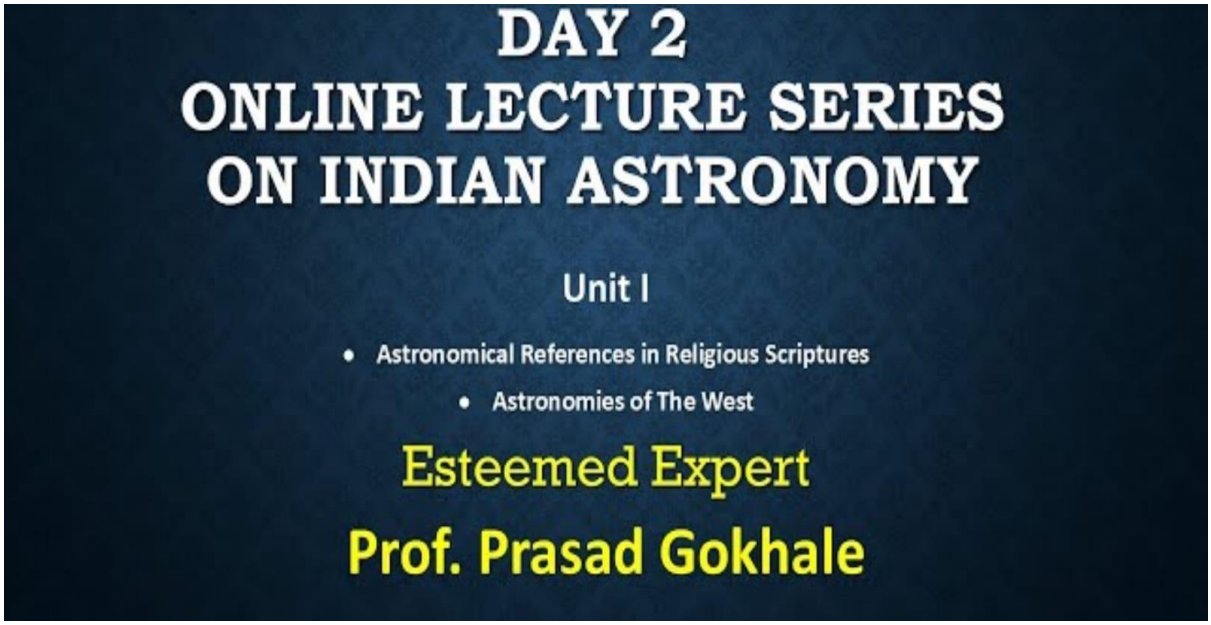
Date: 02/04/2025,
Time: 4:30 PM – 6:00 PM
Guest Speaker: Prof. Prasad Gokhale,
(Professor at Kavikulguru Kalidas Sanskrit University, Ramtek.)
Topic: UNIT – I Astronomical References in Religious Scriptures and Sanskrit Letrature

As a part of the academic enrichment and curriculum enhancement activities, J. M. Patel Arts, Commerce & Science College, Bhandara, organized a guest lecture on **2nd February 2025**. The lecture focused on **"UNIT I: Astronomical References in Religious Scriptures and Sanskrit Literature,"** which forms a key component of Sanskrit and Jyotish studies.

The session was graced by **Prof. Prasad Gokhale**, a distinguished scholar and Professor in the Department of Vedang Jyotish at **Kavikulaguru Kalidas Sanskrit University (KKSU), Ramtek**. Prof. Gokhale brought his deep expertise and years of research in the field of traditional Indian astronomy and scriptural studies to the session.

The event was convened by the faculty of **J. M. Patel Arts, Commerce & Science College**, with enthusiastic participation from both students and scholars interested in the confluence of astronomy, religion, and Sanskrit literature.

This session significantly contributed to the academic understanding of students pursuing Sanskrit and allied studies, bridging traditional wisdom with contemporary learning.



Convener:
Faculty, J. M. Patel Arts, Commerce & Science College, Bhandara

Report on
The Lecture Series on Indian Astronomy (IKS-BIK2T02)
Day - 3

Date: 03/04/2025,
Time: 4:30 PM – 6:30 PM
Guest Speaker: Dr. Upendra Bhargav,
(Associate Professor, at Maharshi Panini Sanskrit University, Ujjain.)
Topic: UNIT III - Aryabhatta, Panch Siddhantas of Vaharimihira, Surya Siddhanta, Varahmihira to Bhaskar Acharya-II

The **Lecture Series on Indian Astronomy** (IKS-BIK2T02) is an enlightening academic initiative aimed at exploring and preserving the rich legacy of Indian astronomical knowledge. This series, organized by a consortium of educational institutions, has been a platform for students, researchers, and academics to delve into India's vast contributions to the field of astronomy. The event on **April 8, 2025**, marked the culmination of this 8 days' workshop journey, focusing on key areas of traditional Indian astronomy. The session was held under the esteemed patronage of **Shri Shivaji Education Society, Amravati's Science College**, Congress Nagar, Nagpur, and in association with **Bhartiya Shikshan Mandal** and **Kavikulguru Kalidas Sanskrit University, Ramtek**.

Workshop Overview:

The *Lecture Series on Indian Astronomy* (IKS-BIK2T02) was held from April 1 to April 8, 2025, and aimed at exploring the rich legacy of Indian astronomical science. The event on Day 3, April 3, 2025, specifically focused on *Unit II*, which highlighted important contributions to Indian astronomy by legendary scholars such as Aryabhatta, Varahamihira, and Bhaskaracharya II. This session was conducted in collaboration with **Bhartiya Shikshan Mandal** and the **Department of Vedang Jyotishi, Kavikulguru Kalidas Sanskrit University, Ramtek**.

The session, took place in a virtual format, was aimed at offering a platform for students, faculty members, and enthusiasts of Indian astronomy to engage in academic discussions and enrich their knowledge about the ancient astronomical systems of India.

Purpose of the Lecture Series:

The purpose of the *Lecture Series on Indian Astronomy* was to deepen the understanding of Indian knowledge systems, particularly in the field of astronomy. The event sought to honor the contributions of India's greatest astronomers and their works, which have not only shaped ancient astronomical thought but also influenced modern scientific theories and practices. The series aimed at exploring Indian astronomical heritage and highlighting the importance of these contributions in the context of contemporary science.

Inaugural Session:

The event began with the **Welcome Address** delivered by **Dr. Gajanan L. Jadhav**, Assistant Professor at Science College, Nagpur. Dr. Jadhav paid tribute to **Dr. Panjabrao alias Bhausaheb Deshmukh**, a visionary leader and the founder-president of Shri Shivaji Education

Society, whose immense contributions to the field of education and social development continue to inspire generations.

Dr. Jadhav also extended a warm welcome to the **distinguished dignitaries**, including the esteemed **patron**, **chief organizers**, and the **IQAC coordinators** from various participating colleges, such as:

- Dharampeth M. P. Deo Memorial Science College, Nagpur
- J. M. Patel Arts, Commerce & Science College, Bhandara
- Dr. M. K. Umathe College, Nagpur
- Santaji Mahavidyalaya, Nagpur
- College of Multidisciplinary Studies, Nagpur

He emphasized the importance of this lecture series and the collaboration between **Bhartiya Shikshan Mandal** and **Kavikulguru Kalidas Sanskrit University**, which made this event possible. Dr. Jadhav pointed out how the event aims to enrich our knowledge of Indian astronomy and its ongoing influence on the modern scientific community.

Key Lecture Topic: Unit II of the Lecture Series

The focal points of **Day 3's lecture** was based on **Unit II** of the lecture series, which covered:

1. **Aryabhatta's Contributions:**

   The first part of the lecture focused on **Aryabhatta**, one of India's most renowned astronomers and mathematicians. Dr. Bhargav highlighted Aryabhatta's revolutionary contributions, such as the **heliocentric model**, which proposed that the Earth rotates on its axis. He also discussed Aryabhatta's work on **pi** and the **movement of planets**, which laid the foundation for later astronomical advancements.

2. **Panch Siddhantika of Varahamihira:**

   The **Panch Siddhantika**, or *Five Astronomical Systems*, was explored next. Dr. Bhargav explained how **Varahamihira** integrated previous astronomical knowledge and developed a system that was ahead of its time. His work remains influential in Indian astronomy and played a significant role in the development of the field.

3. **Surya Siddhanta:**

   The **Surya Siddhanta**, one of the oldest and most important texts in Indian astronomy, was examined. Dr. Bhargav detailed the text's **astronomical** and **mathematical insights**, explaining how it served as a guide for generations of astronomers.

4. **Transition from Varahamihira to Bhaskaracharya II:**

   The lecture also covered the intellectual evolution from **Varahamihira** to **Bhaskaracharya II** (Bhaskara II). Bhaskara II's work on **planetary motions** and his formulation of the **sine function** in trigonometry was discussed as one of the milestones in the progression of Indian astronomical thought.

Guest Speaker: Dr. Upendra Bhargav

The distinguished guest speaker for the session was **Dr. Upendra Bhargav**, Associate Professor at **Maharshi Panini Sanskrit University, Ujjain**. Dr. Bhargav is widely recognized for his expertise in **Sanskrit**, **Vedic studies**, and **ancient Indian sciences**. Dr. Bhargav's scholarship is rooted in the promotion of **interdisciplinary research** and **cultural exchange**, making him a key figure in the modern interpretation of ancient Indian knowledge systems.

The **Vote of Thanks** was delivered by **Dr. Gajanan L. Jadhav**, who expressed his profound gratitude to **Dr. Upendra Bhargav** for his engaging lecture. He also acknowledged the invaluable support of the **patrons**, **chief organizers**, and **IQAC coordinators**. Special thanks were given to **Bhartiya Shikshan Mandal** and the **Department of Vedang Jyotishi**, **Kavikulguru Kalidas Sanskrit University**, Ramtek, for their collaboration in organizing the lecture series.

Dr. Jadhav also extended his thanks to all **students**, **faculty members**, and **participants**, emphasizing their active engagement and contribution to the success of the event. He concluded by acknowledging the **organizing team's efforts**, which made this session a resounding success.

The third day of the **Lecture Series on Indian Astronomy** proved to be an enlightening session that explored some of the most influential contributions to Indian astronomy. **Dr. Upendra Bhargav's** in-depth discussion on Aryabhatta, Varahamihira, the Surya Siddhanta, and Bhaskara II provided a deep insight into the evolution of astronomical knowledge in India. The session helped foster a greater appreciation for the rich heritage of Indian astronomical thought and its ongoing relevance in modern scientific research.

The event's success can be attributed to the collaborative efforts of all involved, and it set the stage for future academic engagements that further explore the integration of ancient Indian knowledge systems with contemporary research.


Day 3 of Lecture Series on Indian Astronomy by Dr. Upendra Bhargav, MPSU , Ujjain
4:11 / 1:18:30
Activate Windows
Go to Settings to activate Windows.


dr upendra bhargava
Activate Windows
Go to Settings to activate Windows.

Report on
The Lecture Series on Indian Astronomy (IKS-BIK2T02)
Day - 4

Date: 04/04/2025,
Time: 4:00 PM – 6:30 PM
Guest Speaker: Hon'ble Prof. Krishna Kumar Pandey,
(Dean, Faculty of Ancient Indian Sciences and Humanities, KKSU, Ramtek)
Topic: UNIT III – Siddhant Shiromani of Bhaskar Acharya-II, Bhaskar Acharya -II

The fourth day of the *Lecture Series on Indian Astronomy (IKS-BIK2T02)* was held on 04th April 2025 at Santaji Mahavidyalaya, Nagpur. The session commenced at 4:00 PM and concluded at 6:30 PM. The event witnessed the gracious presence of **Prof. Krishna Kumar Pandey**, a renowned scholar and the Dean of the Faculty of Ancient Indian Sciences and Humanities at KKSU, Ramtek.

Highlights of the Session:

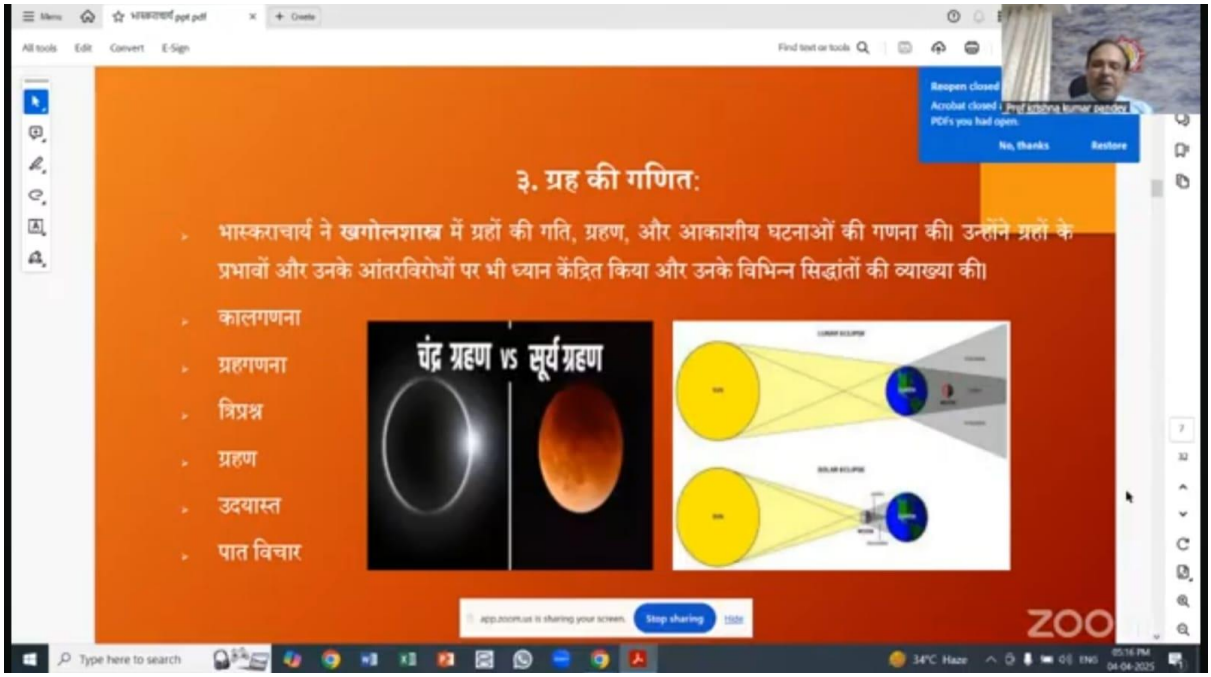
The focus of the lecture was on **Unit II: Siddhanta Shiromani**, a monumental astronomical treatise authored by the legendary Indian mathematician and astronomer **Bhaskaracharya II**. Prof. Pandey provided deep insights into the various sections of the text, elaborating on its four major parts — *Lilavati*, *Bijaganita*, *Grahaganita*, and *Goladhyaya*.

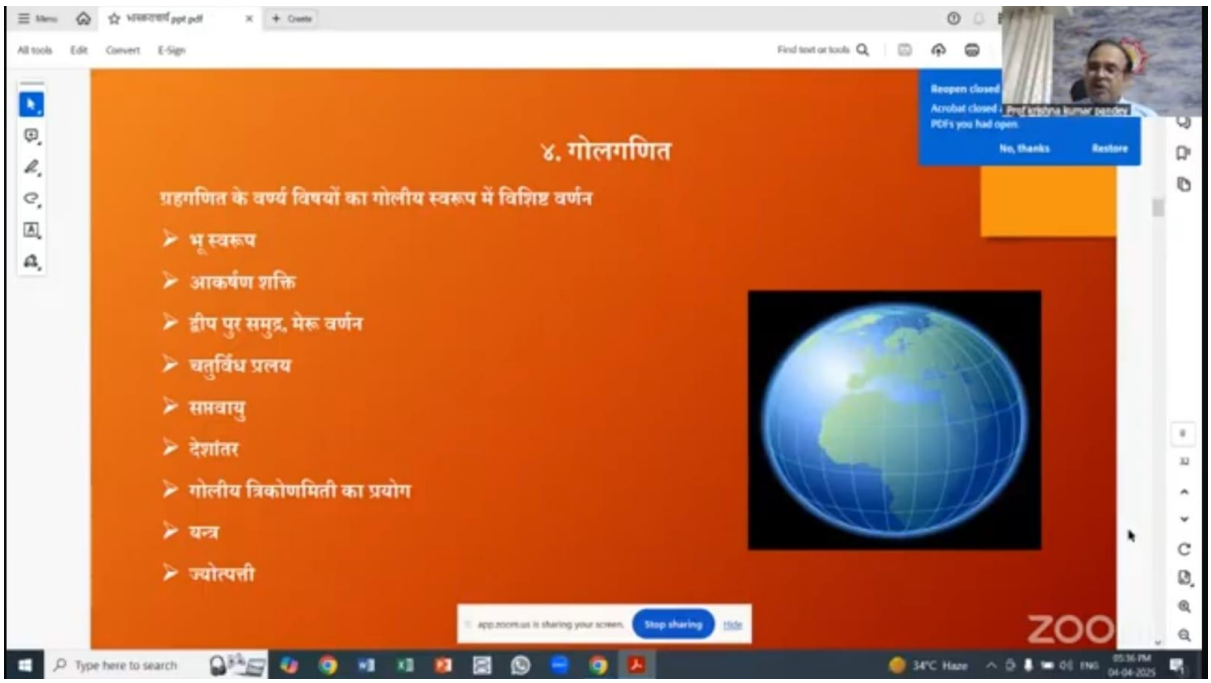
Key takeaways from the lecture included:

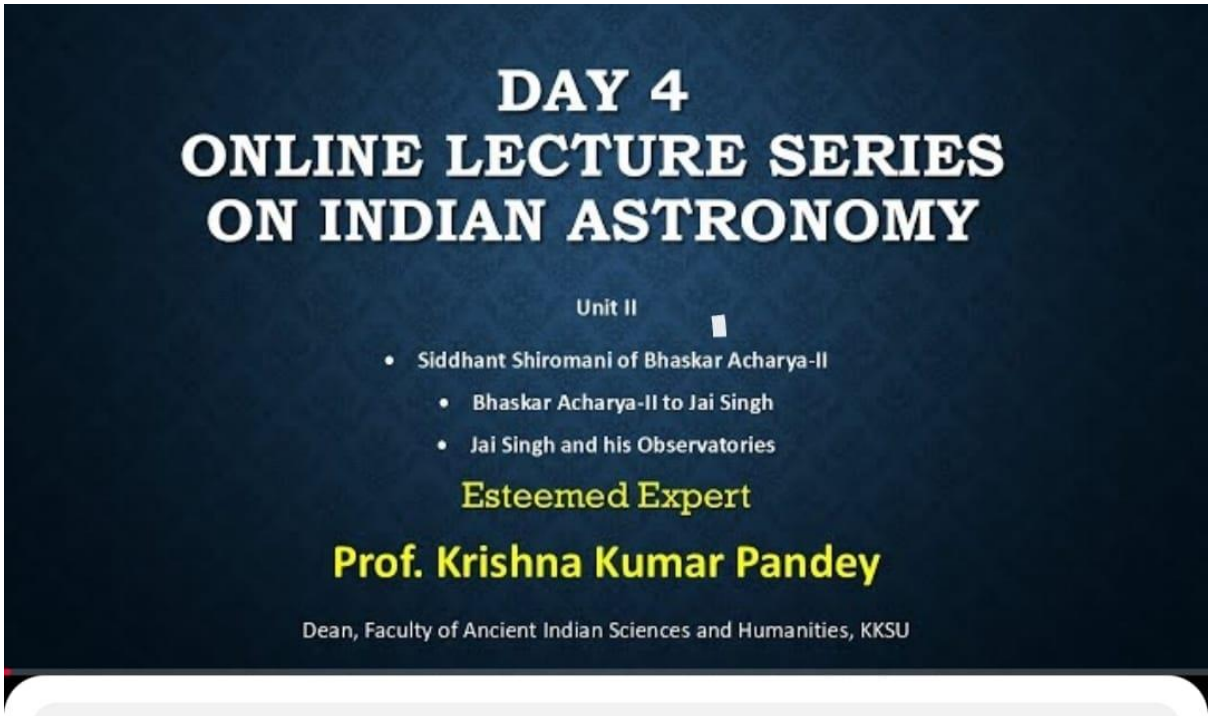
- A historical overview of **Bhaskaracharya II**, highlighting his contributions to astronomy and mathematics in 12th-century India.
- Detailed discussions on the astronomical methods used in *Siddhanta Shiromani*, particularly in tracking planetary positions, eclipses, and time calculations.
- The mathematical brilliance in *Lilavati* and *Bijaganita*, showcasing Bhaskaracharya's contributions to algebra and arithmetic.
- The relevance of Bhaskaracharya's works in contemporary scientific and mathematical studies.
- Interactive discussions that encouraged student and faculty engagement with the core principles of Indian knowledge systems.

The lecture was intellectually enriching and provided a profound understanding of ancient Indian astronomy through the lens of Bhaskaracharya's *Siddhanta Shiromani*. Prof. Pandey's articulate and insightful presentation captivated the audience, sparking a renewed interest in the scientific heritage of India. The day concluded with a vote of thanks and an interactive Q&A session, leaving the participants with a deeper appreciation for India's astronomical legacy.

Convener of the Day: Santaji Mahavidyalaya, Nagpur


३. ग्रह की गणित:
भास्कराचार्य ने खगोलशास्त्र में ग्रहों की गति, ग्रहण, और आकाशीय घटनाओं की गणना की। उन्होंने ग्रहों के प्रभावों और उनके आंतरविरोधों पर भी ध्यान केंद्रित किया और उनके विभिन्न सिद्धांतों की व्याख्या की।
कालगणना
ग्रहगणना
त्रिप्रश्न
ग्रहण
उदयास्त
पात विचार
चंद्र ग्रहण vs सूर्य ग्रहण
Stop sharing
Hide
ZOO


४. गोलगणित
ग्रहगणित के वर्ण्य विषयों का गोलीय स्वरूप में विशिष्ट वर्णन
भू स्वरूप
आकर्षण शक्ति
द्वीप पुर समुद्र, मेरू वर्णन
चतुर्विध प्रलय
सप्तवायु
देशांतर
गोलीय त्रिकोणमिती का प्रयोग
यन्त्र
ज्योत्पत्ती
Stop sharing
Hide
ZOO



Day 4 of Lecture Series on Indian Astronomy by Prof. Krishna Kumar Pa...

660 views

Report on
The Lecture Series on Indian Astronomy (IKS-BIK2T02)
Day - 5

Date: 05/04/2025,
Time: 4:00 PM – 6:30 PM
Guest Speaker: Shri Anvesh Devalapalli,
(Research Scholar, Dept. of Vedang Jyotishi, Kavikulguru Kalidas Sanskrit University, Ramtek.)
Topic: UNIT III – Interaction with the Astronomies of the world, Modern Era Astronomy

---

The fifth session of the ongoing *Lecture Series on Indian Astronomy (IKS-BIK2T02)* was successfully held on **05th April 2025** at **Dr. M. K. Umathe College, Nagpur**, from 4:00 PM to 6:30 PM. The session was graced by **Shri Anvesh Devalapalli**, an emerging scholar from the Department of Vedang Jyotishi, KKSU, Ramtek.

The focus of the lecture was on the **interaction between Indian astronomy and global astronomical traditions**, as well as the developments in **modern era astronomy**. Shri Devalapalli offered a comparative overview of ancient Indian astronomical concepts with those of other civilizations, such as Greek, Babylonian, and Islamic astronomy.

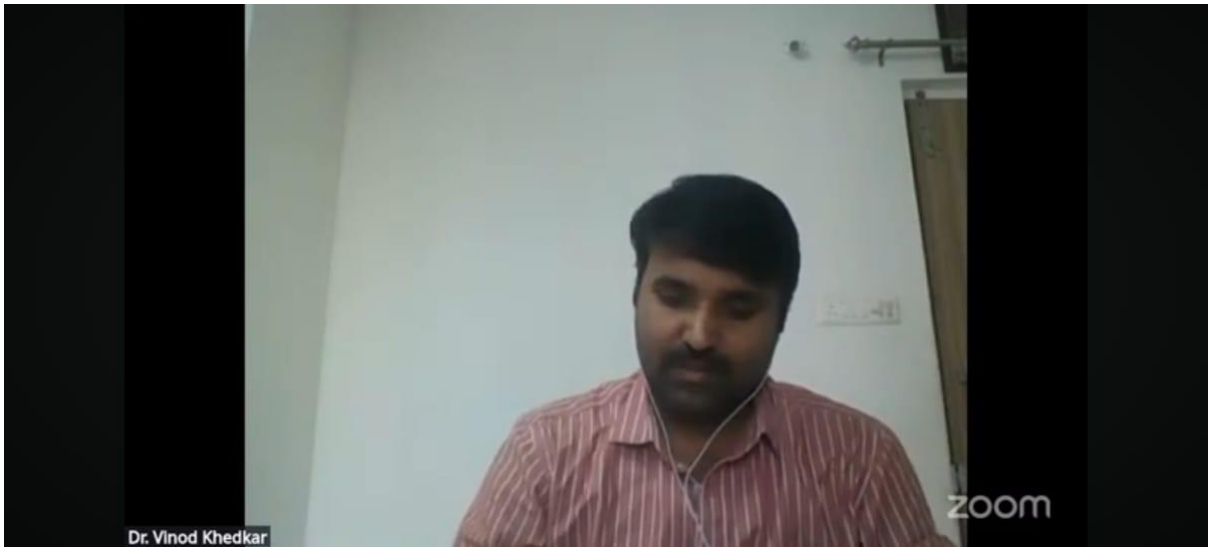
Key points discussed during the session included:

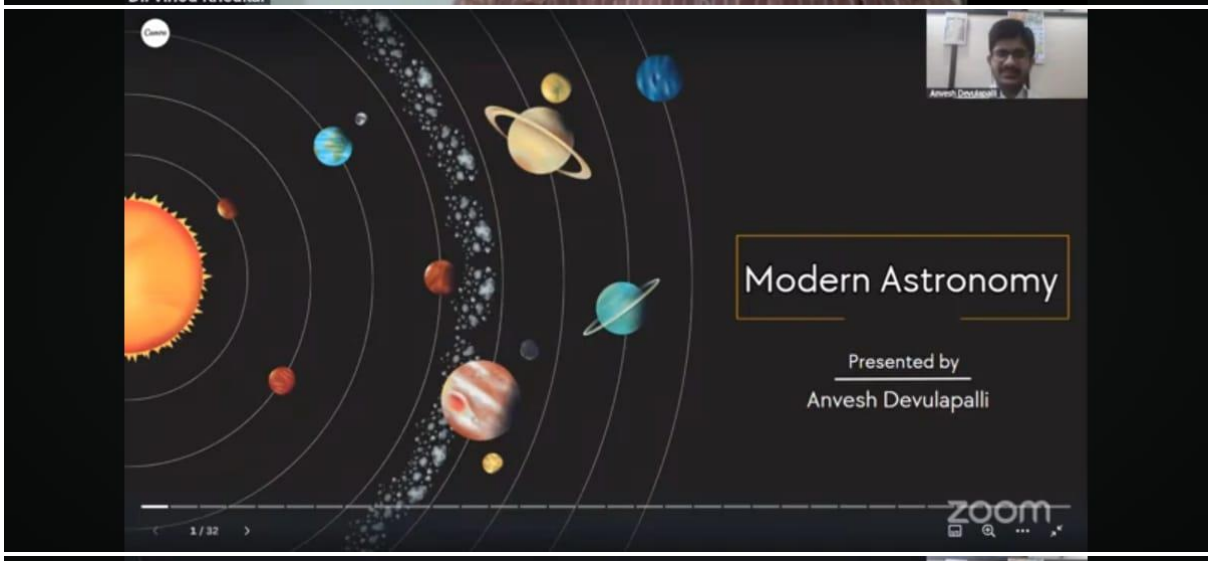
- The evolution of astronomical thought in India and its connections with global scientific traditions.
- Contributions of Indian astronomers like Aryabhata, Varahamihira, and Bhaskaracharya, and how their ideas resonated or contrasted with global counterparts.
- The transition from classical Indian astronomy to modern scientific astronomy.
- How ancient astronomical insights remain relevant and are being re-evaluated in the context of modern research.
- The importance of integrating traditional knowledge systems with modern scientific frameworks.

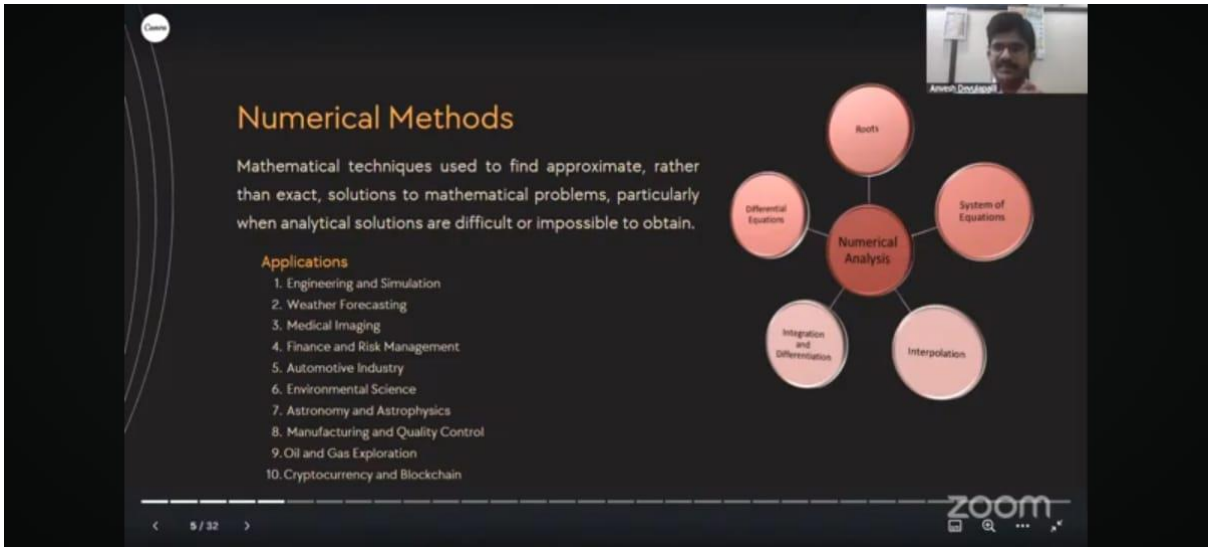
The session was interactive, with the audience actively engaging in thoughtful dialogue with the speaker. Shri Devalapalli encouraged students to explore interdisciplinary research, bridging traditional Indian wisdom and contemporary scientific methods.

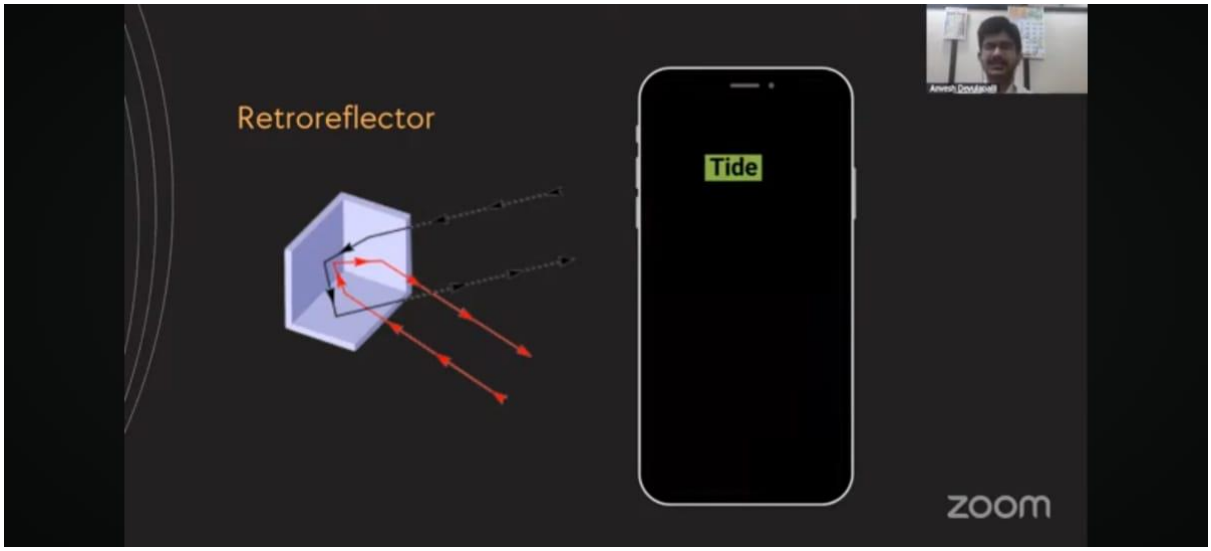
The lecture proved to be enlightening and thought-provoking, providing a comprehensive understanding of the global context of Indian astronomy and its transformation into modern astronomical practices. The event not only deepened the participants' appreciation for India's scientific heritage but also emphasized the relevance of cross-cultural academic exchange. The session concluded with a formal vote of thanks and expressions of gratitude toward the speaker and organizers.

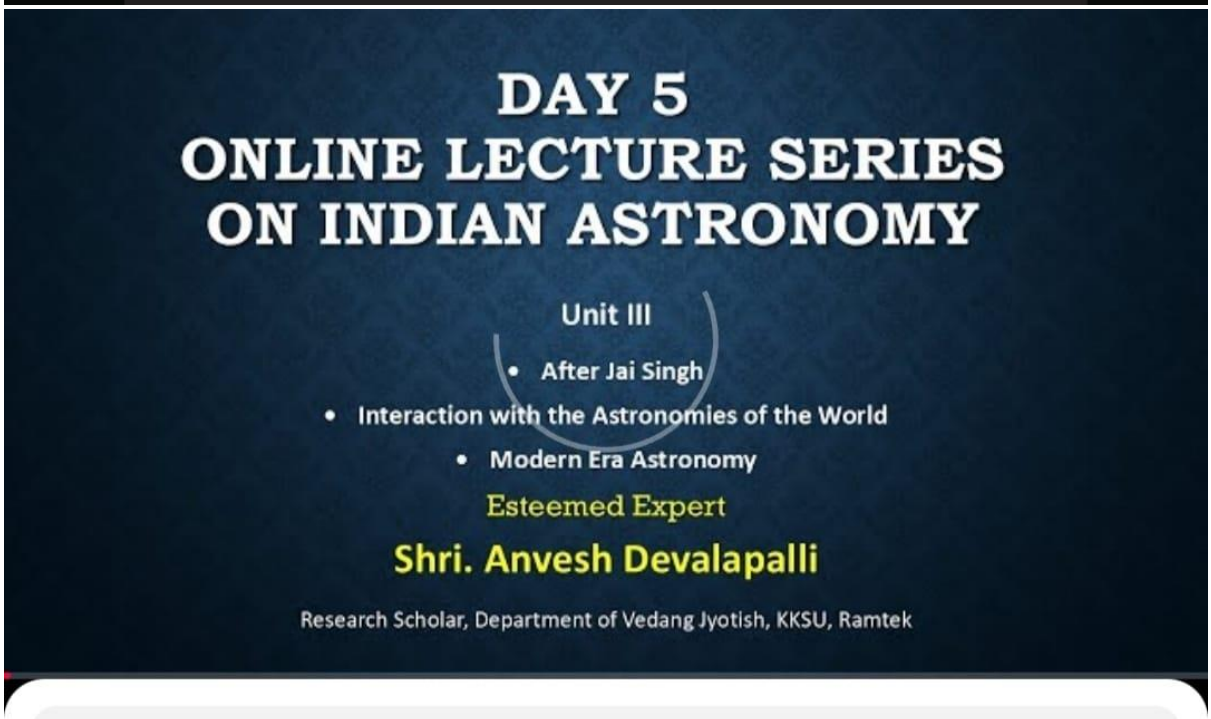
Convener of the Day: Dr. M. K. Umathe College, Nagpur


Dr. Vinod Khedkar
zoom


Modern Astronomy
Presented by
Anvesh Devulapalli
1 / 32
zoom


Numerical Methods
Mathematical techniques used to find approximate, rather than exact, solutions to mathematical problems, particularly when analytical solutions are difficult or impossible to obtain.
Applications
1. Engineering and Simulation
2. Weather Forecasting
3. Medical Imaging
4. Finance and Risk Management
5. Automotive Industry
6. Environmental Science
7. Astronomy and Astrophysics
8. Manufacturing and Quality Control
9. Oil and Gas Exploration
10. Cryptocurrency and Blockchain
Roots
Differential Equations
System of Equations
Numerical Analysis
Integration and Differentiation
Interpolation
5 / 32
zoom





Day 5 of Lecture Series on Indian Astronomy, by Shri. Anvesh Devalapal...

424 views

Report on
The Lecture Series on Indian Astronomy (IKS-BIK2T02)
Day - 6

Date: 06/04/2025,
Time: 4:30 PM – 6:00 PM
Guest Speaker: Dr. Rajat Gautam,
(Assistant Professor, Central Sanskrit University, Devprayag Campus, Uttarakhand.)
Topic: UNIT III – Our Universe, Cosmology

The sixth session of the *Lecture Series on Indian Astronomy (IKS-BIK2T02)* was held on **06th April 2025** from **4:30 PM to 6:00 PM**. The guest speaker for the day was **Dr. Rajat Gautam**, Assistant Professor at Central Sanskrit University, Devprayag Campus, Uttarakhand. His extensive expertise in ancient Indian cosmology brought depth and clarity to the day's theme: **"Our Universe – Cosmology"**, as part of **Unit III** of the series.

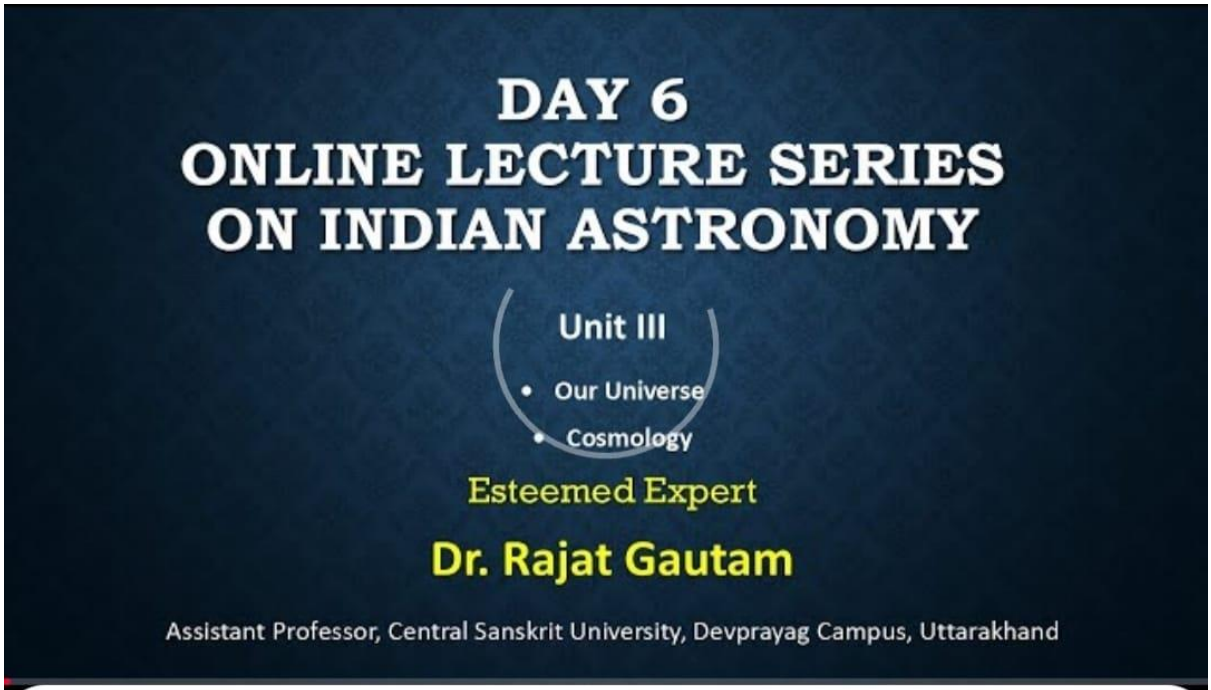
Dr. Gautam delivered an insightful lecture focusing on the cosmological concepts found in Indian knowledge systems, particularly from Vedic, Puranic, and classical Sanskrit texts.

Key areas covered included:

- Traditional Indian perspectives on the origin and structure of the universe.
- The concept of *Brahmanda* (cosmic egg), *lokas* (worlds), and the cyclic nature of time.
- Comparison between ancient Indian cosmology and modern scientific cosmological theories.
- Philosophical underpinnings of cosmological ideas in texts such as the *Rigveda*, *Puranas*, and *Vedanga Jyotisha*.
- Reflections on how these ideas shaped early Indian astronomical thought and their influence on later developments.

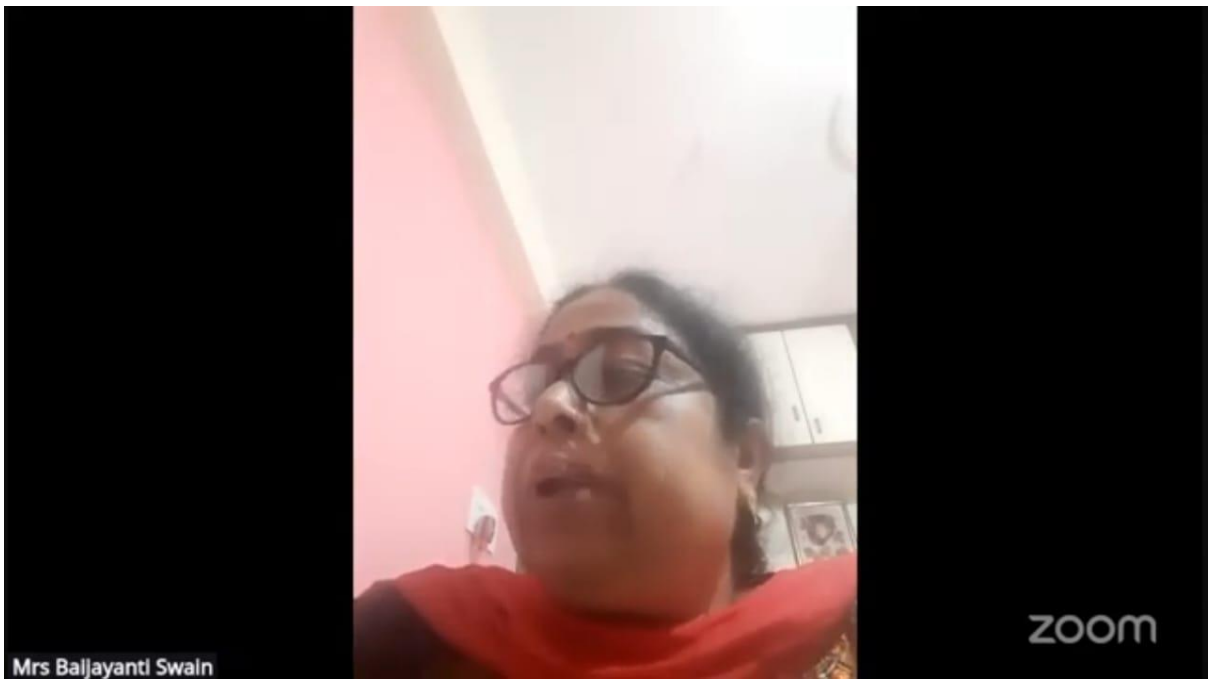
Dr. Gautam's presentation was engaging and was followed by a dynamic Q&A session, where participants explored connections between cosmological theories and contemporary space science.

The session offered a rich exploration of ancient Indian cosmological wisdom, sparking interest among students and faculty alike. Dr. Gautam's scholarly yet accessible delivery made complex ideas approachable, encouraging further inquiry into the synthesis of science and philosophy in Indian astronomy. The day concluded with a warm vote of thanks and an acknowledgment of the speaker's valuable contribution.



Day 6 of Lecture Series on Indian Astronomy, by Dr. Rajat Gautam San...

390 views



ऋग्वेद में विश्ववर्णन

- "नतं विदधाय इमा जना नान्यदुष्माकमन्तं बभूव नीहारेण प्रावृता जल्प्या चाप्सुत्वप उक्थशां सश्चरन्ति"। (10.82.07)
- "अजस्य नाभा वध्येकमर्पितं यस्मिन् विश्वानि भुवनानि तस्थुः।" (10.82.06)
- "In that vast gaseous cloud, in that nebula , which once floated in the death-cold realm of speech, there were the elements of all that is. All that is, all that ever will be came from the gas."

(macmillan)

- सहस्रशीर्षा पुरुषः.....

Role of Jyotisha

- "कर्मार्जितं पूर्वभवे सदादि यत्तस्य पंक्तिं समभिव्यनक्ति।"
- Connection of planets to human being.
- Moon and others palnets example

Mr. James Hopewood Jeans

- The age of the earth is about 200 million years
- The condition of the creatures on the earth has been around for 300 million years.
- According to Mr. Jeans, the condition of human beings is on the earth for about three lakh years.
- The origin of the present world is not random or sudden. It has emerged as a result of a sequence. No object or creature can arise suddenly on this. According to James Jeans, the great scientist of the 20th century, the age of this earth is about two hundred crore years.
- This estimate of them matches with the calculation of Panchang karas of India. In almost every Panchang, the past years of creation are described. That is, the number of years passed from the beginning of creation till the present year is given in the Panchang. The number given by the Panchangkaras is not based on imagination and speculation. There are fixed principles for this. It is particularly important to note here that this calculation of almanacs is being verified by the new western scientists.

Report on
The Lecture Series on Indian Astronomy (IKS-BIK2T02)
Day - 7

Date: 07/04/2025,
Time: 4:30 PM – 6:00 PM
Guest Speaker: Dr. Pranav Muley,
Topic: *Unit IV – Observational Instruments of Indian Astronomy, Jai Singh and His Observatories*

The **Lecture Series on Indian Astronomy (IKS-BIK2T02)** is an enlightening academic initiative dedicated to exploring, preserving, and disseminating the profound legacy of Indian astronomical heritage. This 8-day lecture series, jointly organized by **Shri Shivaji Education Society, Amravati's Science College, Congress Nagar, Nagpur**, in collaboration with **Bhartiya Shikshan Mandal** and **Kavikulguru Kalidas Sanskrit University, Ramtek**, provided a platform for scholars, students, and enthusiasts to immerse themselves in the historical and scientific dimensions of Indian astronomy.

On **Day 7**, dated **07 April 2025**, the session was conducted from **4:30 PM to 6:00 PM** and featured a compelling lecture by the distinguished guest speaker **Dr. Pranav Muley**. The topic of discussion, *"Unit IV – Observational Instruments of Indian Astronomy, Jai Singh and His Observatories"*, focused on the rich tradition of astronomical instrumentation in India, with particular emphasis on the innovative contributions of **Maharaja Jai Singh II**.

Dr. Muley provided deep insights into the scientific brilliance of Jai Singh, who established five major observatories—known as *Jantar Mantars*—located in Delhi, Jaipur, Ujjain, Mathura, and Varanasi. These observatories stand as testaments to the empirical rigor and architectural ingenuity of Indian astronomers in the 18th century. The lecture examined the large-scale instruments designed by Jai Singh for naked-eye observations and accurate celestial measurements, including the **Samrat Yantra**, **Jai Prakash Yantra**, and **Ram Yantra**.

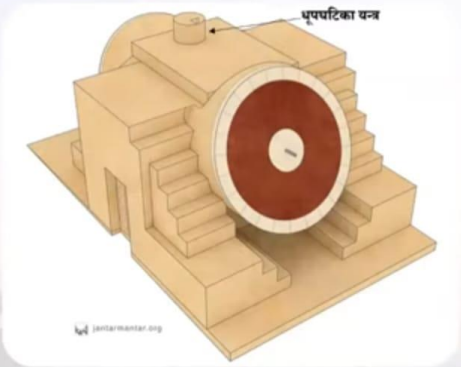
The session also highlighted the synthesis of traditional Indian astronomical practices with influences from Islamic and European astronomical techniques, showcasing how Jai Singh's work represented a forward-thinking fusion of science, mathematics, and architectural precision.

Participants engaged actively with the speaker, gaining a comprehensive understanding of how ancient Indian observational instruments were not only technologically advanced but also deeply rooted in a cultural and philosophical worldview that revered the cosmos.

सवाई राजा जयसिंह (II)

- जन्म ०३/११/१६८६
- १३ वीं वयोवस्था में आमेर राज्य के गद्दी का स्विकार (ई.सन् १६९९)
- खगोलज्ञ, ज्योतिर्विद, ज्योतिर्पिण्डों को जानने की जिज्ञासा, जयपुर नगरी निर्माणकर्ता, महान् राजा
- बहादुरी और बुद्धिमत्ता से प्रभावित होकर राजा औरंगजेब द्वारा 'सवाई' की उपाधि प्राप्त
- राजा जयसिंह से पूर्व वेधयन्त्र परंपरा
- वेधयन्त्र निर्माण में सबसे मेहत्त्वपूर्ण योगदान (अभ्यास, सर्वे, शोधकार्य(लिखित, मौखिक, प्रत्यक्ष update), आविष्कार, साधना आदि)
- तत् काल में प्रचलित वेधज्ञान समस्या का निरीक्षण (युरोपियन, ग्रीक, मुगल, हिन्दु, ख्रिश्चन आदि)

नाडीवलय यन्त्र



- इस यन्त्र के द्वारा नतोन्नत काल, स्वदेशीय उदय, घटिका, घंटे, मिनट्स् और षड्वर्ग (लग्न, होरा, द्रेष्काण, नवांश, द्वादशांश एवं त्रिंशांश) ज्ञात होंगे।

सम्राट यन्त्र तथा काल ज्ञान

- लघु-बृहत् सम्राट् यन्त्र
- त्रिज्या
- जितना बडा, उतनी सूक्षता
  - जयपुर बृहत् सम्राट् यन्त्र - २ से. तक का समय ज्ञान
- समय ज्ञान (AM, PM)
- मध्याह्न में छाया
- ध्रुव विचार (दक्षिणोत्तर अक्षांशों के अनुसार)
- ध्रुव ज्ञान
- क्रान्ति ज्ञान (वेध तथा दक्षिणोत्तर क्रान्ति विचार)

वेध (*Observation*)

- सृष्ट्युत्पत्ति (खगोलीय प्रश्न)
- अज्ञानपूर्ण कथाएँ (सूर्योदय, चन्द्रकला, आकाशीय आकृतियाँ, ग्रहण(कोलम्बस+टापू), धूमकेतु आदि)
- ज्योतिष – ग्रह-नक्षत्राणि तानि अधिकृत्य रचितं शास्त्रं ज्यौतिषम् (वेद, वेदांग, त्रिस्कंध)
- दृष्टिवेध (अस्थिर) – अन्तर्दृष्टिवेध(यमनियमासनप्राणायामादि), बहिर्दृष्टिवेध
- यन्त्रवेध (स्थिर) - यन्त्रसहित दृष्टिवेध
- वेधशाला
- स्पष्ट वेध की आवश्यकता - ''यात्रा विवाहोत्सवजातकादौ खेटैः स्फुटैरेव फलस्फुटत्वम्'' सिद्धान्त शिरोमणी (भास्कराचार्य)
- वेधकाल (सूर्योदय, मध्यरात्रि)

Report on
The Lecture Series on Indian Astronomy (IKS-BIK2T02)
Day - 8

Date: 08/04/2025,
Time: 4:00 PM – 6:30 PM
Guest Speaker: Dr. Ambalika Shriniwas Sethiya,
(Associate Professor at Kavikulguru Kalidas Sanskrit University, Ramtek.)
Topic: *UNIT IV Panchag, Horoscope and Astrology, Astronomical Siddhantas, Karnas and Koshtkas*

The **Lecture Series on Indian Astronomy** (IKS-BIK2T02) is an enlightening academic initiative aimed at exploring and preserving the rich legacy of Indian astronomical knowledge. This series, organized by a consortium of educational institutions, has been a platform for students, researchers, and academics to delve into India's vast contributions to the field of astronomy. The event on **April 8, 2025**, marked the culmination of this 8 days' workshop journey, focusing on key areas of traditional Indian astronomy. The session was held under the esteemed patronage of **Shri Shivaji Education Society, Amravati's Science College**, Congress Nagar, Nagpur, and in association with **Bhartiya Shikshan Mandal** and **Kavikulguru Kalidas Sanskrit University, Ramtek**.

Valedictory Function Address:

Hon'ble Dr. Omraj Deshmukh (Principal, SSESA'S Science College, Nagpur)

Hon'ble Dr. Omraj Deshmukh sir's inaugural address served as an inspiring and motivating start to the Lecture Series on Indian Astronomy. His words highlighted the importance of preserving India's ancient scientific knowledge and the critical role of educational events like this in engaging the academic community in meaningful discussions about the past and future of Indian Astronomy.

The address also emphasized the legacy of Dr. Panjabrao Deshmukh, whose vision for education continues to shape institutions like Shri Shivaji Education Society. Dr. Deshmukh's call for active engagement and knowledge sharing set the tone for a series of sessions aimed at deepening participants' understanding of Indian astronomical wisdom and encouraging interdisciplinary collaboration. The inaugural address was an essential part of a broader effort to foster a greater appreciation for India's intellectual heritage, particularly in the fields of astronomy, astrology, and ancient sciences.

The event commenced with a **Welcome Address** by **Dr. Gajanan L. Jadhav**, Assistant Professor at **Shri Shivaji Education Society's Science College**, Nagpur. Dr. Jadhav began by paying tribute to **Dr. Panjabrao alias Bhausaheb Deshmukh**, the first Agriculture Minister of India, a member of the Constitution Committee, and the founder-president of Shri Shivaji Education Society. His contributions to education and the development of Indian society were celebrated, setting a tone of reverence for the historical and academic significance of the event.

Dr. Jadhav extended a warm welcome to the distinguished guests, including the **Hon'ble Principals** and **IQAC Coordinators** from the participating colleges, such as:

- Dharampeth M. P. Deo Memorial Science College, Nagpur
- J. M. Patel Arts, Commerce & Science College, Bhandara
- Dr. M. K. Umathe College, Nagpur
- Santaji Mahavidyalaya, Nagpur
- College of Multidisciplinary Studies, Nagpur

He highlighted the focus of Day 8 of the series on Indian Astronomy, organized under the **Indian Knowledge Systems (IKS)** category. Dr. Jadhav mentioned that the day's session would delve into important topics, including **Panchaang, Horoscope, and Astrology**, **Astronomical Siddhantas**, and **Karnas and Koshtakas**, shedding light on India's ancient astronomical wisdom.

Following the opening remarks, **Dr. Gajanan Jadhav** introduced the esteemed **Guest Speaker**, **Dr. Ambalika Shriniwas Sethiya**, an Associate Professor at **Kavikulguru Kalidas Sanskrit University**, Ramtek. Dr. Sethiya is a renowned scholar in the fields of **Vedang Jyotish**, **Sanskrit**, **Vedic studies**, and **ancient Indian sciences**. Her academic credentials are impressive, with degrees in **B.Com.**, **B.A.**, **M.A. (Gold Medal)**, **M.Phil.**, and **Ph.D. in Vedang Jyotish**. Additionally, Dr. Sethiya holds diplomas in **Vastushastra**, **Agam**, **Manuscriptology**, and **Environmental Studies**, showcasing her diverse expertise in ancient knowledge systems.

Dr. Sethiya's lecture focused on the significance of **Indian Astronomy** in traditional knowledge systems, particularly how elements like **horoscopes**, **Panchaang**, and **Siddhantas** are intricately tied to cultural practices and celestial observations in Indian society.

Content of the Lecture:

The lecture on **Day 8** of the series was divided into three major topics:

1. **Panchaang, Horoscope, and Astrology:**
    - Dr. Sethiya provided an in-depth explanation of the **Panchaang**, a traditional Indian calendar that marks auspicious times for various activities. She explained the concept of **horoscopes** in the Indian context, detailing the connection between planetary movements, astrology, and their influence on human life.
    - She also discussed the role of astrology in guiding decisions and practices in everyday life, highlighting how ancient astronomers used astronomical calculations to predict cosmic events and their earthly implications.
2. **Astronomical Siddhantas:**
    - The lecture covered the **Siddhantas**, which are ancient Indian astronomical texts that outline methods for calculating planetary positions and celestial events. Dr. Sethiya explained the various **astronomical systems** that evolved over centuries in India, such as the **Surya Siddhanta** and **Panch Siddhantika** by Varahamihira. These texts have had a lasting influence on Indian astronomy and continue to serve as foundational references for astronomical study.
3. **Karnas and Koshtakas:**
    - Dr. Sethiya elaborated on the concepts of **Karnas** and **Koshtakas**, which are ancient methods used to divide the sky and map the celestial sphere. These systems were used to predict time intervals and celestial events, which are essential components of Indian

astronomical practices. She explained how these techniques are integrated with traditional astrological practices to guide rituals and cultural activities.

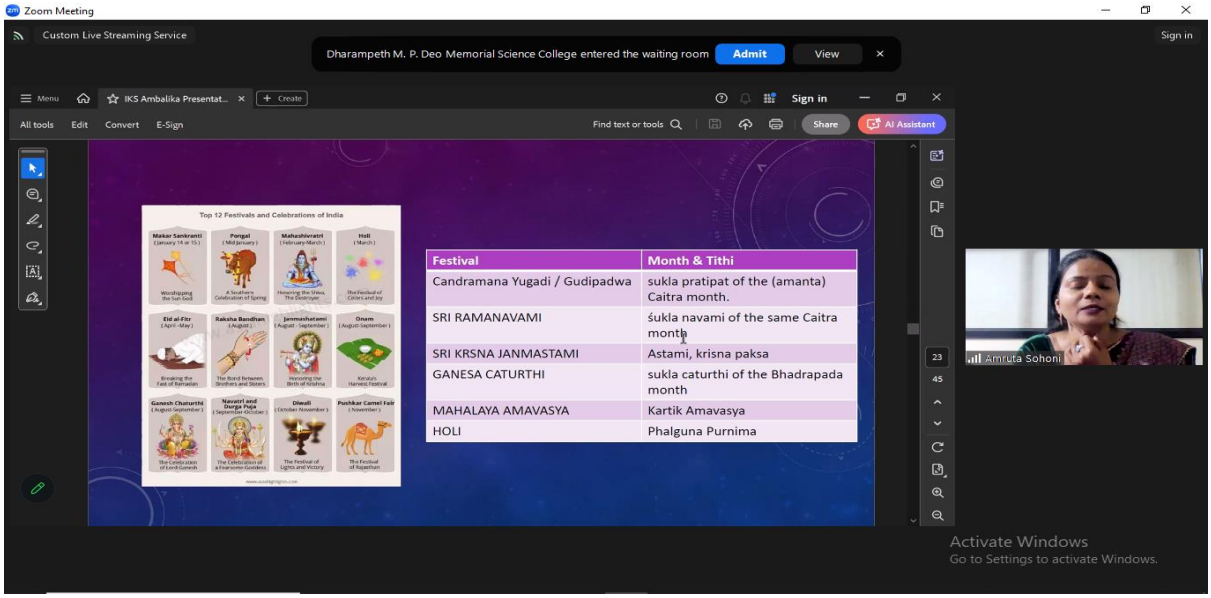
The session concluded with a **Vote of Thanks** delivered by **Dr. Gajanan Jadhav**. He expressed his deep appreciation for Dr. Sethiya's insightful lecture, noting how her expertise had brought new perspectives on the integration of **astronomy** and **astrology** in ancient India. Dr. Jadhav acknowledged Dr. Sethiya's invaluable contributions to the field and her role in promoting interdisciplinary research and cultural exchange.

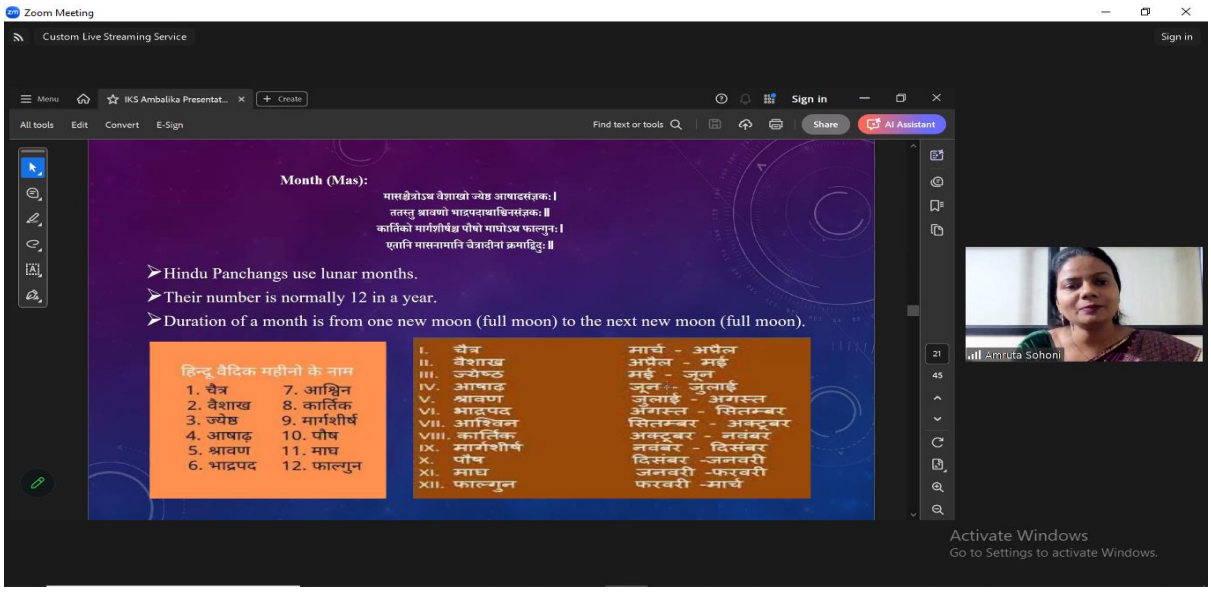
Dr. Jadhav also thanked the **Hon'ble Principals** of the participating colleges, the **IQAC Coordinators**, and all other dignitaries for their support. He extended heartfelt gratitude to **Bhartiya Shikshan Mandal** and the **Department of Vedang Jyotishi, Kavikulguru Kalidas Sanskrit University**, for their collaboration in organizing this successful event. He thanked all the **attendees and participants**, whose engagement made the event memorable and meaningful.

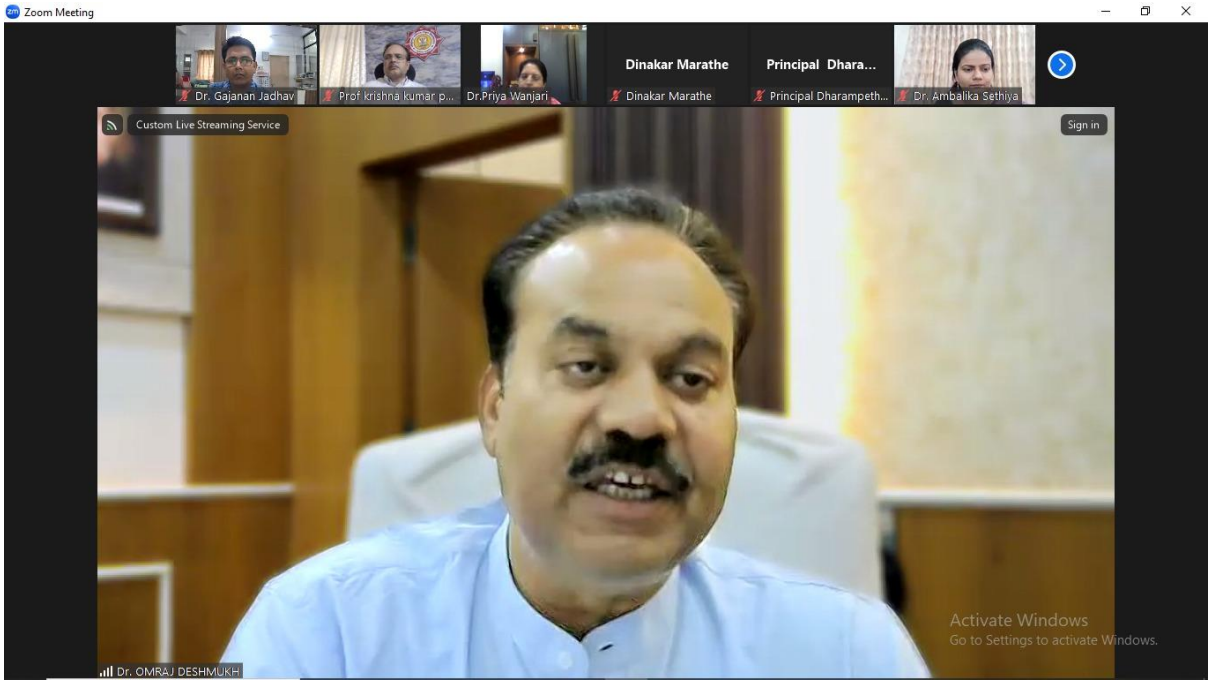
The **Lecture Series on Indian Astronomy (IKS-BIK2T02)** successfully concluded with a comprehensive and thought-provoking session on **April 8, 2025**. The topics presented, such as **Panchaang**, **Horoscope**, **Astronomical Siddhantas**, and **Karnas and Koshtakas**, provided an in-depth understanding of ancient Indian astronomical practices and their cultural significance. The participation of esteemed scholars like **Dr. Ambalika Shriniwas Sethiya** and the collaborative efforts of all involved institutions ensured that the lecture series was both academically enriching and culturally insightful.

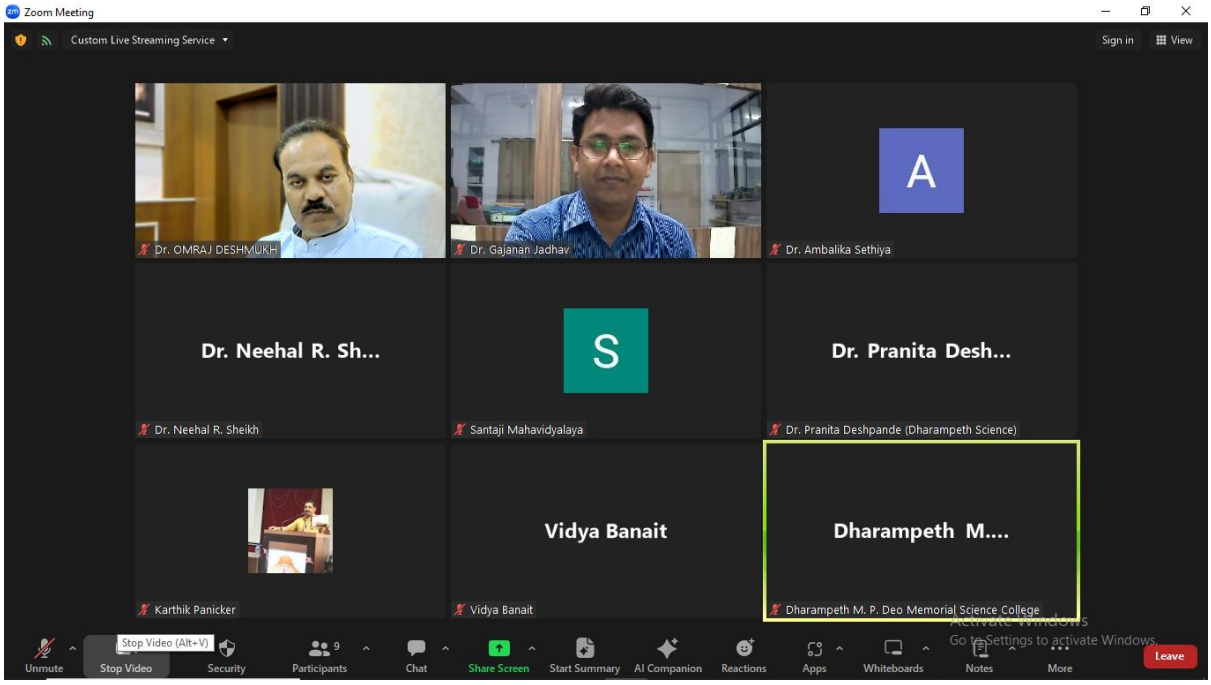
The event encouraged interdisciplinary research and the exploration of India's heritage. This lecture series marked a significant milestone in promoting Indian Astronomy, and it is hoped that such academic endeavors will continue to flourish in the future.

Glimpses of Guest Lecture:






Zoom Meeting
Dr. Gajanan Jadhav
Prof krishna kumar p...
Dr.Priya Wanjari
Dinakar Marathe
Dinakar Marathe
Principal Dhara...
Principal Dharampeth...
Dr. Ambalika Sethiya
Custom Live Streaming Service
Sign in
Dr. OMRAJ DESHMUKH
Activate Windows
Go to Settings to activate Windows.


Zoom Meeting
Custom Live Streaming Service
Sign in
View
Dr. OMRAJ DESHMUKH
Dr. Gajanan Jadhav
A
Dr. Ambalika Sethiya
Dr. Neehal R. Sh...
Dr. Neehal R. Sheikh
S
Santaji Mahavidyalaya
Dr. Pranita Desh...
Dr. Pranita Deshpande (Dharampeth Science)
Karthik Panicker
Vidya Banait
Vidya Banait
Dharampeth M....
Dharampeth M. P. Deo Memorial Science College
Activate Windows
Go to Settings to activate Windows.
Unmute
Stop Video (Alt+V)
Stop Video
Security
Participants
9
Chat
Share Screen
Start Summary
AI Companion
Reactions
Apps
Whiteboards
Notes
More
Leave

LECTURE SERIES ON INDIAN ASTRONOMY

(PRESCRIBED FOR B.Sc PART-1 - SEM-II)
(UNDER THE CATEGORY IKS-BIK2T02)

Jointly organised by Internal Quality Assurance Cells of	*In association with*
Dharampeth Education Society 's DHARAMPETH M. P. DEO MEMORIAL SCIENCE COLLEGE, NAGPUR	*BHARTIYA SHIKSHAN MANDAL*
Gondia Education Society 's J. M. PATEL ARTS, COMMERCE & SCIENCE COLLEGE, BHANDARA	*And*
Satimata Shikshan Sanstha 's DR. M. K. UMATHE COLLEGE, NAGPUR	*DEPARTMENT OF VEDANG JYOTISH KAVIKULGURU KALIDAS SANSKRIT UNIVERSITY, RAMTEK*
Shri Santaji Shikshan Vikas Sanstha's SANTAJI MAHAVIDYALAYA, NAGPUR	
Saibaba Lokseva Sanstha's COLLEGE OF MULTIDISCIPLINARY STUDIES, NAGPUR	
Shri Shivaji Education Society, Amravati"s SCIENCE COLLEGE, NAGPUR	

Duration – 1st to 8th April,2025

Time – 4:30 p.m. to 6:00 p.m.

LIVE STREAMING ON YouTube

https://youtube.com/live/SQJzs4QioyU?feature=share

PATRONS

					
Adv. Ulhas Aurangabadkar	**Smt. Varsha Patel**	**Smt. Mandatai Umathe**	**Shri. Dinesh Wanjari**	**Adv. Omkar Umathe**	**Shri. Harshvardhan P. Deshmukh**
Hon'ble President	Hon'ble President	Hon'ble President	Hon'ble President	Hon'ble President	Hon'ble President
Dharampeth Education Society, Nagpur	*Gondia Education Society, Gondia*	*Satimata Shikshan Sanstha, Nagpur*	*Shri Santaji Shikshan Vikas Sanstha, Nagpur*	*Saibaba Lokseva Sanstha, Nagpur*	*Shri Shivaji Education Society, Amravati*

			
Shri. Suresh Deo	**Shri. Rajendra Jain**	**Shri. Kishorebhau Umathe**	**Shri. Yash Wanjari**
Hon'ble Secretary	Hon'ble Secretary	Hon'ble Secretary	Hon'ble Joint Secretary
Dharampeth Education Society & President, CDC Nagpur	*Gondia Education Society, Gondia*	*Satimata Shikshan Sanstha, Nagpur & Saibaba Lokseva Sanstha, Nagpur*	*Shri Santaji Shikshan Vikas Sanstha, Nagpur*

CHIEF ORGANISERS

							
DR. A. V. PESHWE	**DR. SHRIDHAR SHARMA**	**DR. D. V. NAIK**	**DR. PRIYA WANJARI**	**DR. DEBASHIS S. BHOWMICK**	**DR. OMRAJ S. DESHMUKH**	**DR. RAJESH SINGRU**	**DR. DINKAR MARATHE**
Principal	**Officiating Principal**	**Principal**	**Principal**	**Principal**	**Principal**	**Principal**	**Head, Dept of Vedang Jyotish**
Dharampeth M. P. Deo Memorial Science College, Nagpur	*J. M. Patel Arts, Commerce & Science College, Bhandara*	*Dr. M. K. Umathe College, Nagpur*	*Santaji Mahavidyalaya, Nagpur*	*College Of Multidisciplinary Studies, Nagpur*	*Shri Shivaji Education Society, Amravati's Science College, Nagpur*	*Bhartiya Shikshan Mandal Vidarbha Prant Mahamatri*	*Kavikulguru Kalidas Sanskrit University, Ramtek*

IQAC COORDINATORS

DR. NITIN GAIKWAD	DR. KARTHIK PANICKER	DR. APURBA PAL	DR. NEEHAL SHEIKH	DR. BAIJAYANTI SWAIN	DR. GAJANAN JADHAV	PROF. PARAG JOSHI
Dharampeth M. P. Deo Memorial Science College, Nagpur	*J. M. Patel Arts, Commerce & Science College, Bhandara*	*Dr. M. K. Umathe College, Nagpur*	*Santaji Mahavidyalaya, Nagpur*	*College Of Multidisciplinary Studies, Nagpur*	*Shri Shivaji Education Society, Amravati's Science College, Nagpur*	*Kavikulguru Kalidas Sanskrit University, Ramtek*

PROGRAM SCHEDULE

DATE	TIME	CONTENT	SPEAKER	CONVENER OF THE DAY
1/4/2025	4.30 – 6.00 pm	**Unit I** • Astronomy in Prehistoric Era • Astronomy in Vedic Era • Vedang Jyotish	**Prof. Krishna Kumar Pandey** *Dean, Faculty of ancient Indian Sciences & Humanities , KKSU Ramtek* *9324151155*	***Dharampeth M. P. Deo Memorial Science College, Nagpur***
2/4/2025	4.30 – 6.00 pm	**Unit I** • Astronomical References in Religious Scriptures and Sanskrit Literature	**Prof. Prasad Gokhale** *Professor, Department of Vedang Jyotish, KKSU, Ramtek* *9665300979*	***J. M. Patel Arts, Commerce & Science College, Bhandara***
3/4/2025	4.30 – 6.00 pm	**Unit II** • Aryabhatta • Panch Siddhantika of Varahamihira • Surya Siddhanta • Varahamihira to Bhaskar Acharya-II	**Dr. Upendra Bhargav** *Associate Professor* *Maharshi Panini Sanskrit University, Ujjain* *9893926689*	***Shri Shivaji Education Society, Amravati's Science College, Nagpur***
4/4/2025	4.30 – 6.00 pm	**Unit II** • Siddhant Shiromani of Bhaskar Acharya-II • Bhaskar Acharya-II	**Prof. Krishna Kumar Pandey** *Dean, Faculty of ancient Indian Sciences & Humanities , KKSU Ramtek* *9324151155*	***Santaji Mahavidyalaya, Nagpur***
5/4/2025	4.30 – 6.00 pm	**Unit III** • Interaction with the Astronomies of the World • Modern Era Astronomy	**Shri. Anvesh Devalapalli** *Research Scholar* *Department of vedang Jyotish* *KKSU, Ramtek*	***Dr. M. K. Umathe College, Nagpur***
6/4/2025	4.30 – 6.00 pm	**Unit III** • Our Universe • Cosmology	**Dr. Rajat Gautam** *Assistant Professor* *Central Sanskrit University, Devprayag Campus, Uttarakhand* *9064476544*	***College Of Multidisciplinary Studies, Nagpur***
7/4/2025	4.30 – 6.00 pm	**Unit IV** • Observational Instruments of Indian Astronomy • Jai Singh and his Observatories	**Dr. Pranav Muley** *Ph.D from KKSU, Ramtek.* *Scholar of Jyotisha, Nagpur* *7888047648*	***Santaji Mahavidyalaya, Nagpur***
8/4/2025	4.30 – 6.00 pm	**Unit IV** • Panchang, Horoscope and Astrology • Astronomical Siddhantas • Karnas and Koshtakas	**Dr. Ambalika Sethiya** *Assistant Professor* *Department of Vedang Jyotish* *KKSU ramtek* *9552496266*	***Shri Shivaji Education Society, Amravati's Science College, Nagpur (VALEDICTORY)***

---- 000 -----