

## Year Report

Name of the Team: Antariksh Club of VI	
<i>Main Objective of the Team:</i> <b>To promote astronomy and increase aware</b>	ness about astronomy among people.
Number of events conducted in AY 2023- 2024	7
Name of the events:	<ol> <li>Chandrayaan Mahotsav</li> <li>Interesting Aspects of Chandrayaan-3</li> <li>Role of Technology in a Multi- Messenger View of our Universe</li> <li>Observational Astronomy: Yesterday, Today and Tomorrow</li> <li>Astrophotography Workshop</li> <li>GMRT Visit</li> <li>Public Star Party</li> </ol>
Number of Team Members:	40
Name of Key Organisers:	Harsh Jalnekar Anas Ansari Shreyas Gaikwad Shreya Channawar Gyanesh Choudhary Chanchal Rathad Sahil Sawant Gautam Kulkarni Rajan Sudan Bhavya Shah
Provide the link of your Social Media Handles	Instagram: https://instagram.com/antarikshclubvi/ Facebook: LinkedIn: https://www.linkedin.com/company/antariks h-astronomy-club/ Twitter: Website: https://antariksh- website.vercel.app/

# **Individual Event Reports**

Name of the event:	Chandrayaan Mahotsav
Dates of event:	4 <sup>th</sup> September 2023
Online Platform/ Venue:	Lecture Hall, VIT, Pune
Event span (hours/days)	5 hours
Footfall/Total attendance	70
Name and contact of the key organiser(s)	Gautam Kulkarni
No. of people involved in the organising committee (all levels of hierarchy included, Core team to Volunteers)	14
Objective of the event	The All India Council for Technical Education AICTE recently called upon all technical institutes in India to celebrate the "Chandrayaan Mahotsav" in honor of the successful Chandrayaan-3 mission by ISRO. The mission was a moment of great pride for India, and Vishwakarma Institute of Technology (VIT), Pune, took up the mantle of organizing a special event to commemorate this achievement. The event was organized under the aegis of the Antariksh - Astronomy Club, an initiative aimed at promoting space exploration and knowledge.
	The event spanned several hours and was designed to educate, engage, and inspire those interested in the field of space exploration.
Brief description of the said event	Internal Talk and Audio-Visual Presentation: The celebration commenced with an internal talk and an audio-visual presentation. Sahil Sawant , a club member, kicked off the event by discussing the significance of the Moon for Earth, both culturally and technically. Space Missions Overview: HARSH JALNEKAR took the stage to provide an

overview of various space missions, like Apollo missions, and USSR space missions and Luna Missions, thereby captivating the audience with the wonders of space exploration. Gyanesh Choudhary followed up by delving into the specifics of the three Chandrayaan missions, like videos of Chandrayaan-1, Chandrayaan-2 Orbiter captures and Chandrayaan-3 Lander-Rovers, sharing clips and insights from ISRO's achievements.

Chandrayaan-3 Presentation: Kaushik Salunke rounded off the presentations by providing in-depth information about Chandrayaan-3, further enhancing the attendees' knowledge about this remarkable mission.

Quiz Time: Anas Ansari and Siddhant Ghodke, two club members, conducted a lively quiz session, challenging the audience with 30 multiple-choice questions related to space exploration and Chandrayaan missions. This interactive segment allowed attendees to test their knowledge and learn new facts.

Sky Gazing Workshop: The evening concluded with a sky gazing workshop led by Sumitkumar Chandanshive and Chanchal Rathad . Despite some light pollution on the horizon, participants were treated to breathtaking views of the ''Vega Star'' and another twin star system. Additionally, attendees had the unique opportunity to catch a glimpse of Alpha Centauri.

 Key event outcomes
 Enhanced understanding of ISRO's space missions, methods that are followed to achieve success in complex missions and enriching knowledge and curiosity among students as well as faculty.

Milestones set by the event (if any)	
Name and bio of chief guest along with social media links (if any)	







Name of the event:	Interesting Aspects of Chandrayaan-3
Dates of event:	21st July 2023
Online Platform/ Venue:	Sharad Arena, VIT, Pune
Event span (hours/days)	2 hours
Footfall/Total attendance	300
Name and contact of the key organiser(s)	<ol> <li>Chanchal Rathad</li> <li>Sahil Sawant</li> <li>Harsh Jalnekar</li> <li>Sumit Chandanshive</li> </ol>
No. of people involved in the organising committee (all levels of hierarchy included, Core team to Volunteers)	20
Objective of the event	• The main objective of the event was to provide comprehensive insights into rocket design, highlight the challenges and achievements of the Chandrayaan-2 mission. Also, the event aimed at fostering engagement through an interactive Q&A session with Mr. Suresh Naik sir about the different realms of astrophysics and the universe. Inspire and inform attendees about advancements in space exploration.

Brief description of the said event	The Antariksh Club organized an Invited Talk event featuring Mr. Suresh Naik, former Group Director of ISRO, as part of a Faculty Development Programme by the Department of Multidisciplinary Engineering at Vishwakarma Institute of Technology, Pune. Attended by faculties and students from VIT and VIIT, the event attracted over 200 students and 100 faculty members. Mr. Naik's lecture covered rocket design, Chandrayaan missions, and the discovery of water on the Moon, captivating the audience. The interactive session allowed attendees to pose questions on India's space endeavors, further enriching the discussion. Antariksh Club members engaged with Mr. Naik, discussing topics like observational astronomy and space technology. The event concluded with a farewell to Mr. Naik after approximately 2 hours, leaving attendees inspired and informed. In addition to the enlightening discussions, the event served as a platform for fueling the curiosity among the attendees regarding the space missions.Attendees had the opportunity to exchange ideas with Mr. Suresh Naik, fostering a spirit of innovation and cooperation within the academic community. The event's success not only enriched the educational experience but also strengthened the scientific basis of the listeners.
Key event outcomes	<ul> <li>Attendees gained a deeper understanding of rocket design, Chandrayaan missions, and the significance of the discovery of water on the Moon.</li> <li>Mr. Naik's engaging presentation style and insightful discussions inspired and motivated students and faculty members to pursue careers in space science and technology.</li> <li>The interactive session provided a platform for attendees to pose questions and receive valuable insights from Mr. Naik, enriching their knowledge of India's space exploration endeavors.</li> </ul>
Milestones set by the event (if any)	
Name and bio of chief guest along with social media links (if any)	Mr. Suresh Naik - The former Group Director of ISRO





Name of the event:	Role of Technology in a Multi-Messenger
	View of Our Universe
Dates of event:	October 5, 2023
Online Platform/ Venue:	1222,1224 VIT, Pune
Event span (hours/days)	2 hours
Footfall/Total attendance	80
Name and contact of the key organiser(s)	1. Chanchal Rathad
	<ol> <li>Sahil Sawant</li> <li>Harsh Jalnekar</li> </ol>
	4 Jameer Manur
No. of people involved in the organising committee (all levels of hierarchy included, Core team to Volunteers)	20

Objective of the event	• The main objective of the event was to provide comprehensive insights into rocket design, highlight the challenges and achievements of Chandrayaan-2 mission. Also, the event aimed at fostering engagement through an interactive Q&A session with Mr. Suresh Naik sir about the different realms of astrophysics and the universe. Inspir e and inform attendees about advancements in space exploration.

Brief description of the said event	<ul> <li>The guest lecture by Prof. Dhruba Saikia at the Antariksh Club of Vishwakarma Institutes focused on the theme of "Role of Technology in a Multi- Messenger View of our Universe." Prof. Saikia, an esteemed authority in astronomy, provided attendees with a captivating journey into the world of astronomy and astrophysics.</li> <li>Throughout the lecture, Prof. Saikia covered various topics, including ancient astronomy, the definition of science, and the Nasadiya Sukta from the Rig Veda. He also discussed methods of collecting information about the universe, such as using electromagnetic</li> </ul>
	<ul> <li>radiation, gravitational waves, high-energy particles, and neutrinos.</li> <li>Additionally, Prof. Saikia highlighted the importance of technology in extending our exploration beyond human sensory abilities. He showcased observatories worldwide and cutting-edge technologies like the James Webb Space Telescope (JWST) and the Square Kilometer Array (SKA).</li> <li>Furthermore, the lecture addressed challenges in observational astronomy, such as constructing X-ray telescopes and the use of muons in muography. By exploring these topics, Prof. Saikia aimed to educate, inspire, and promote a deeper understanding of the universe among attendees.</li> <li>In addition to discussing technological advancements and observational methods, Prof. Saikia also emphasized the interdisciplinary nature of modern astronomy. By encouraging interdisciplinary collaboration, Prof. Saikia aimed to inspire the next generation of researchers to explore the mysteries of the universe using innovative approaches and</li> </ul>
	cutting-edge technologies.

Key event outcomes	<ul> <li>Attendees gained a deeper understanding of rocket design, Chandrayaan missions, and the significance of the discovery of water on the Moon.</li> <li>Mr. Naik's engaging presentation style and insightful discussions inspired and motivated students and faculty members to pursue careers in space science and technology.</li> <li>The interactive session provided a platform for attendees to pose questions and receive valuable insights from Mr. Naik, enriching their knowledge of India's space exploration endeavors.</li> </ul>
Milestones set by the event (if any)	
Name and bio of chief guest along with social media links (if any)	Prof . Dhruba Saiki - Head of the Astronomy Centre for Educators at IUCAA







Name of the event:	Observational Astronomy: Yesterday, Today and Tomorrow
Dates of event:	14th of September 2023
Online Platform/ Venue:	VIIT
Event span (hours/days)	2 hours
Footfall/Total attendance	120
Name and contact of the key organiser(s)	<ol> <li>Chanchal Rathad</li> <li>Sahil Sawant</li> <li>Harsh Jalnekar</li> <li>Anas Ansari</li> </ol>
No. of people involved in the organising committee (all levels of hierarchy included, Core team to Volunteers)	17
Objective of the event	To provide an educational opportunity for students and enthusiasts to learn about observational astronomy and its evolution over time. To share insights and knowledge about various aspects of observational astronomy, including celestial bodies, historical milestones, technological advancements, and future prospects.

Brief description of the said event	<ul> <li>The event, titled "Observational Astronomy - yesterday, today, and tomorrow," held on September 14, 2023, at the Seminar Hall of Vishwakarma Institute of Information Technology (VIIT), Pune, was a resounding success. Organized by the Antariksh Club, it featured an enlightening talk by Jameer Manur Sir, a distinguished alumnus of VIIT and a Senior Research Staff member at IUCAA (Inter University Centre for Astronomy and Astrophysics).</li> <li>The event commenced with a warm felicitation by Prof. Dr. Shraddha Habbu, Head of the Electronics and Telecommunication Engineering Department, VIIT, marking a nostalgic reunion for Jameer Manur Sir. It was expertly hosted by Gyanesh Choudhary and Rajan Sudan, dynamic members of the Antariksh Club, who provided valuable insights into the club's mission, activities, and vision.</li> <li>Jameer Manur Sir's talk traversed the realms of observational astronomy, from its historical roots to contemporary advancements and future prospects. He highlighted the significance of observational and theoretical astronomy, explored celestial bodies, discussed milestones in astronomy's history, and elucidated technological innovations shaping the field.</li> <li>The event attracted 17 Antariksh Club members and an enthusiastic audience of 120 astronomy enthusiasts, fostering a spirit of curiosity and learning. Attendees left with a deeper appreciation for the cosmos and a renewed sense of wonder, inspired by Jameer Manur Sir's captivating journey through the mysteries of the universe.</li> <li>Overall, the event served as a platform for education, inspiration, and community engagement, epitomizing the Antariksh Club's commitment nurturing a passion for astronomy and space sciences among students and enthusiasts.</li> </ul>

Key event outcomes	<ul> <li>The event served as a source of inspiration for attendees, particularly students and aspiring astronomers. Jameer Manur Sir highlighted the possibilities and potential career paths in astronomy, motivating attendees to pursue their interests in the field.</li> <li>Attendees gained a deeper understanding of observational astronomy, its historical significance, current advancements, and future directions. Jameer Manur Sir's insightful talk provided attendees with a comprehensive overview of the field, enriching their knowledge and perspective on the cosmos.</li> </ul>
Milestones set by the event (if any)	
Name and bio of chief guest along with social media links (if any)	Jameer Manur Sir - Founder of Antariksh Club and Senior Research Staff member at IUCAA





Name of the event:	Astrophotography Workshop
Dates of event:	November 4th, 2023
Online Platform/ Venue:	C-301 VIIT, Pune
Event span (hours/days)	5 hours
Footfall/Total attendance	30
Name and contact of the key organiser(s)	Kaushk Salunke, Chinmay Dalvi
No. of people involved in the organising committee (all levels of hierarchy included, Core team to Volunteers)	30
Objective of the event	To familiarize participants with the basic concepts of astronomy and astrophotography, including celestial bodies, phenomena, and observational techniques.
	To educate participants about the challenges posed by atmospheric turbulence and temperature variations on astrophotography, particularly when capturing images near the horizon.
Brief description of the said event	The astrophotography workshop, led by Mr. Jameer Manur, was an enlightening and engaging event that provided participants with a comprehensive understanding of astronomy and the art of capturing celestial images.
	The workshop began with an interactive discussion on astronomy, where participants shared their thoughts on celestial objects and phenomena. Mr. Manur emphasized the blend of skill and artistry required in astrophotography, encouraging participants to learn the basics and apply them creatively.
	Throughout the session, Mr. Manur delved into various topics, including the challenges of capturing images in different atmospheric conditions, the significance of celestial objects visible in the night sky, Earth's motions, and

	different astronomical coordinate systems.
	In the second session, the focus shifted to the fundamentals of astrophotography, where Mr. Manur explored factors influencing image quality, the choice of equipment, and camera settings. Participants gained insights into the instruments used in astrophotography, including telescopes and image sensors, as well as photographic concepts such as magnitude, ISO, shutter speed, and aperture.
	The workshop concluded with a discussion on planning for outdoor astrophotography, covering aspects such as location selection, weather conditions, target objects, and instrument limitations.
	Overall, the event provided participants with a solid foundation in both the theoretical and practical aspects of astrophotography, equipping them with the knowledge and skills to pursue this fascinating hobby with confidence and creativity.
Key event outcomes	Participants learned about the challenges associated with capturing images in varying atmospheric conditions, such as air turbulence and temperature fluctuations. Participants learned about the challenges associated with capturing images in varying atmospheric conditions, such as air turbulence and temperature fluctuations.
Milestones set by the event (if any)	
Name and bio of chief guest along with social media links (if any)	Mr. Jameer Manur - Founder of Antariksh Club and Senior Research Staff member at IUCAA





Name of the event:	GMRT Visit
Dates of event:	23 <sup>rd</sup> February 2024
Online Platform/ Venue:	Narayangaon, Pune
Event span (hours/days)	1 day
Footfall/Total attendance	35
Name and contact of the key organiser(s)	Gautam Kulkarni
No. of people involved in the organising committee (all levels of hierarchy included, Core team to Volunteers)	20
Objective of the event	To learn about radio telescopes, the Antariksh Club of VI organizes educational visits to facilities like the Giant Metrewave Radio Telescope (GMRT).
Brief description of the said event	Through these visits, members gain practical insights into radio astronomy, including how radio telescopes operate, their significance in studying celestial phenomena, and the data analysis techniques involved.
Key event outcomes	Enhanced understanding of radio astronomy through GMRT visit, enriching knowledge and fostering curiosity.
Milestones set by the event (if any)	
Name and bio of chief guest along with social media links (if any)	Mr. Jameer Manur





Name of the event:	Public Star Party
Dates of event:	6 <sup>th</sup> April 2024
Online Platform/ Venue:	Near Velhe, Pune
Event span (hours/days)	1 night
Footfall/Total attendance	30
Name and contact of the key organiser(s)	Harsh Jalnekar
No. of people involved in the organising committee (all levels of hierarchy included, Core team to Volunteers)	30
Objective of the event	The objective of the Star Party is to provide an inclusive and immersive experience for participants to observe celestial objects in the night sky.
Brief description of the said event	Through telescope observations, guided tours of celestial objects, and informative presentations, the event aims to inspire curiosity about astronomy and provide a deeper understanding of the universe. Star Party serves as a platform for community engagement, encouraging interaction and knowledge-sharing among attendees of all ages and backgrounds.
Key event outcomes	To create memorable and transformative experiences under the night sky, where participants of all ages come together to marvel at the beauty of the cosmos. Understand and visualize the visible constellations and also the stories associated with it. Through telescope observations and interactive activities, we aim to ignite a passion for astronomy and inspire a sense of exploration.
Milestones set by the event (if any)	
Name and bio of chief guest along with social media links (if any)	Mr. Jameer Manur



