



Dr. Nataša Dragović
General Secretary, IOAA

Welcome to the IOAA!

Hello everyone! The organizers have worked very hard over the past year to develop interesting problems and select fun excursion destinations for us to visit. I am confident that you will both enjoy and face challenges ahead.

I know you've put a lot of effort into preparing for the IOAA over the past few months, and I understand that participating in an International Olympiad can be stressful. Despite this pressure, I hope you also see it as a chance to meet people from around the world. Challenge yourself to talk with individuals from different continents, get to know your team, and your group competition team. We share at least one common passion: a fascination with astronomy and astrophysics. Let that be a starting point, but I am sure you have many other things in common.

Wishing you the best of luck in the next ten days!

Dear Readers,

It is our pleasure to welcome you to the inaugural edition of *nakshatra*, the official newsletter of the International Olympiad on Astronomy and Astrophysics (IOAA) 2025, hosted in the dynamic city of Mumbai, India. The word *Nakshatra* comes from Sanskrit, meaning "unchanging star pattern" or "lunar mansion," and holds deep significance in Indian astronomy. Its pronounced as nak-shat-rah.

nakshatra will capture the lively hum of conversations, discoveries, and daily happenings at the heart of IOAA. Think of it as your daily dose of the universe, with a twist! Across ten issues, we'll bring you a vibrant mix of content, including spotlights on women astrophysicists, brain teasers, light-hearted astronomy-themed humour, features on India's cultural heritage and rich astronomical knowledge, along with daily weather updates, the event itinerary, and photo highlights capturing memorable moments with all of you. Our team looks forward to meeting you, hearing your stories, and showcasing your reflections and creative snippets throughout the event.

Wishing you a stellar experience ahead!
Editorial Team



Weather Forecast



Max:

32°C / 89.6°F

Min:

26°C / 78.8°F

Mumbai

Partly cloudy sky with possibility of moderate rain or thunderstorm.

Source: India Meteorological Department

Today's Programme



15:45 hrs – 19:00 hrs

Opening Ceremony

Venue: Jio World Convention Centre,
Bandra Kurla Complex



This Day, That Year

12 August, 1877: Discovery of Mars' Moons

12 August, 1877, marked the discovery of Mars' moon Deimos ("terror") by astronomer Asaph Hall. Its brother moon Phobos ("fear") was discovered 6 days later. They were named after the sons of Ares (Mars), the Greek God of War. Hall used the 26-inch refractor telescope at the US naval observatory, then the largest refractor telescope in the world. The discovery confirmed speculations, including that of Jonathan Swift, who predicted two Martian moons in his 1726 book *Gulliver's Travels*—over 150 years earlier!



Image Credit: Phobos and Deimos (Wikimedia Commons/ Public Domain)



Image Credit: Westin Powai, St. Regis, Parel

As part of the IOAA 2025 outreach, we had a nationwide Cosmic Canvas competition showcasing young talent in astronomy-themed art. Here are some of the winning entries.

Home away from home: St. Regis, Lower Parel and Westin, Powai will be your home for the next ten days.

Gearing up for the 18th IOAA!



Press Conference on 11 August, 2025

Partners and Supporters



The Science Olympiads in India are generously supported by the Government of India through the Department of Atomic Energy (DAE), the Department of Science & Technology (DST), the Department of Space (DoS), the Ministry of Earth Sciences (MoES), and the Ministry of Education (MoE). The 18th IOAA is supported by the Government of India through its Department of Atomic Energy (DAE) via the Vigyan Pratibha Project of HBCSE. We thank CASIO India for providing calculators for IOAA 2025.



About the Host Institute

IOAA 2025 is hosted by the Homi Bhabha Centre for Science Education (HBCSE), a national centre of the Tata Institute of Fundamental Research, Mumbai. The centre aims to promote equity and excellence in science and mathematics education from primary school to undergraduate college level and encourages the growth of scientific literacy in the country. HBCSE is the premier institution in the country for research and development in STEM education and is India's nodal centre for Olympiad programmes in the sciences and mathematics.



Mahatma Gandhi - His Life Was His Message!

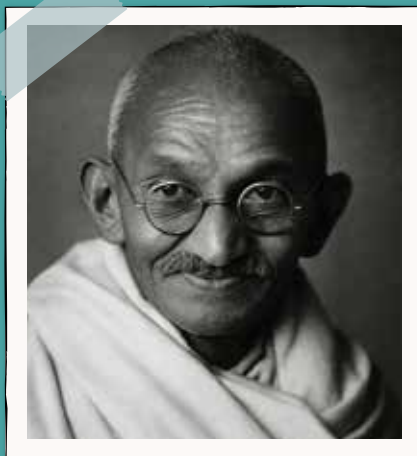


Image Credit: AI generated

"Generations to come will scarce believe that such a one as this ever in flesh and blood walked upon this earth."

—Albert Einstein

The moment anyone lands in India, they would notice a bald-headed, smiling, frail face on the country's currency. This is Mahatma Gandhi—the man who stood up against an empire, relying on the strength of his convictions and ideals. His principle that a leader should 'be the change you wish to see in the world' has inspired many activists across the globe. A pragmatic idealist and an idealistic pragmatist, his life continues to inspire people, offering a vision of non-violence, truth, and social justice, while reminding us that 'an eye for an eye will make the whole world blind.' His commitment to simple living, self-sufficiency, and spiritual growth serves as a model for a meaningful life. Given his advocacy for simplicity, currency may be the last place he might have wanted his face to appear. Yet, this ironic homage symbolises Gandhi's significance in shaping India and inspiring the world.

About 18th IOAA Logo

The GSLV-rocket shaped "i" in the logo, crowned by the Moon, marks India's evolving space ambitions—from early observational astronomy to modern missions enabling soft lunar landings and in-situ science.

The overall colour scheme reflects the hues of a galaxy, inspired by the Milky Way.



The letter "O" in the logo is represented by a 'spider', which is used in telescopes.

India's presence is further symbolised by (tri-coloured) comets.

One of Mumbai's iconic landmarks, the Gateway of India.

In Their Own Words



Our teams are geared up to ensure everyone has a great time and creates awesome memories, making this Olympiad special!

Krishna Sahu

Chair, Transport, Logistics, Licences & Medical
Chair, Catering & Menu

Delighted to welcome you to India to reconnect, discuss interesting astronomy questions, and create memorable experiences together.

Pritesh Ranadive

Astronomy Cell, HBCSE

HAPPY BIRTHDAY!

Cheng Le Eng

Contestant, Singapore

Upholding the spirit of *Atithi Devo Bhava* (an Indian belief that our guests are equivalent to the divine) is an honour. We have been working tirelessly over the past few months and remain deeply committed to offering every guest a warm, respectful, and memorable experience.

Gauri Tawate

Member, IOAA Secretariat

Supposedly leading a team powered by chaos, caffeine and clock-chasing!

Manoj Nair

Chair, Creative Design

Leader Hotel Coordinators



Mayuri Rege



Anupama Ronad

Student Hotel Coordinators



Vikrant Ghanekar



Pragati Dandekar



Feature

Eleanor Margaret Burbidge

(12 August, 1919 – 5 April, 2020)

British-born and educated astrophysicist, Eleanor Burbidge was the first woman president of the American Association for the Advancement of Science. She played a key role in the famous B²FH publication (acronym for authors: Burbidge, Burbidge, Fowler, and Hoyle), which explained how elements form in stars. She also discovered many quasars and worked on physics of quasars and massive black holes in her lifetime. Burbidge fought gender discrimination in science, notably declining the Annie Jump Cannon Award, given to women astronomers. According to her *"it is high time that discrimination in favor of, as well as against women in professional life be removed, and a prize restricted to women is in this category."*

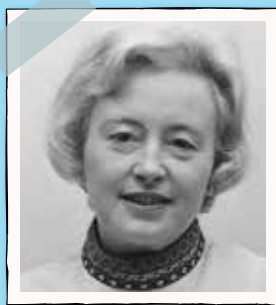


Image Credit: Wikimedia Commons/ Creative Commons

She remained active in research until her passing in 2020 at the age of 100. Do you know today happens to be her birthday?



This Day, That Year

12 August, 1919: Birth of Vikram Sarabhai

Vikram Sarabhai, born on 12 August, 1919, was a pioneering Indian physicist and visionary who founded the Indian Space Research Organisation (ISRO). Widely regarded as the father of India's space programme, he played a crucial role in advancing science and education in India. One of his greatest achievements was initiating India's first satellite, *Aryabhata*, which marked a major milestone in the nation's journey into space exploration.



Vikram A. Sarabhai (Left) with Thomas O. Paine (NASA Administrator) during an agreement to use a space satellite for educational TV in Indian villages.

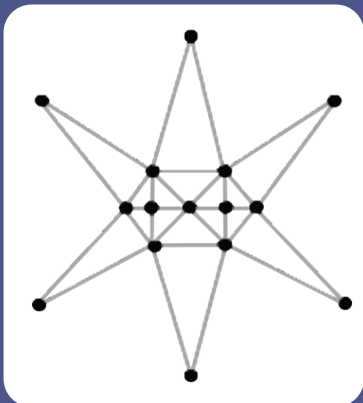
Image Credit: Wikimedia Commons/ Creative Commons

Mission: Trace the Star



Instructions:

1. Do not lift your pencil once you start drawing the star.
2. Do not retrace any line. Each segment can only be drawn once.
3. Follow the star's exact lines; no shortcuts or new lines allowed.
4. You may start from any point on the star.



Hot Takes for a Hotter Earth

The greatest threat to our planet is the belief that someone else will save it.



Keep an eye out for our amazing field team—they'll be roaming around, snapping photos and doing interviews for the IOAA newsletter *nakshatra*! Go say hello, and feel free to share your journey, your thoughts, or just a smile!



Why don't aliens visit our solar system?

Because they read the reviews — only one star!



Image by: Dev Verma



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