
# National Space Club

Presents

# INTERNATIONAL ASTEROID DAY 2026

**Understanding Cosmic Threats and Protecting Our Planet**

ASTEROID DAY

NSC NATIONAL SPACE CLUB

# INDIA SPACE ACADEMY

India Space Academy (ISA) is a pioneering educational and scientific project dedicated to igniting curiosity, promoting creativity, and furthering knowledge in Space Science, Astronomy, Aerospace Engineering, Robotics, and STEM Education. In an era where space exploration is no longer the exclusive domain of government agencies but a frontier open to dreamers, developers, and discoverers, ISA stands as a bridge between academic learning and real-world scientific achievement.

## Our Vision

To establish a scientifically empowered India where every student, regardless of background, might reach for the stars, participate in space research, and determine the future of human discoveries beyond Earth.

## Our Mission

To establish a scientifically empowered India where every student, regardless of background, might reach for the stars, participate in space research, and determine the future of human discoveries beyond Earth.

# STEM Education & Space Outreach

From interactive astronomy camps to advanced aeronautical simulators, ISA's programs integrate complicated scientific topics into accessible, engaging experiences. We believe that rocket science isn't just for rocket scientists—it's for every interested mind eager to question "What if?"

# Innovation & Scientific Culture

ISA cultivates a robust research culture where students don't just learn about spacecraft; they develop models, analyse orbital data, debate planetary security tactics, and present their findings to peers and mentors across the nation.

# Impact on Students & Researchers

Our graduates and participants have gone on to seek advanced degrees in astrophysics, join research internships, compete in international space contests, and contribute to India's burgeoning space ecosystem. By promoting passion for research and lifelong study, India Space Academy is establishing more than a student network—we are building the next generation of space leaders.

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# NATIONAL SPACE CLUB

The National Space Club (NSC), under the purview of India Space Academy, is India's top student-driven platform for space enthusiasts, aspiring scientists, educators, and researchers. NSC was founded with a single goal: to democratise access to space science and foster a national community where knowledge about the universe is shared, appreciated, and enhanced.

## Purpose of NSC

To establish a scientifically empowered India where every student, regardless of background, might reach for the stars, participate in space research, and determine the future of human discoveries beyond Earth.

## National Scientific Outreach

To establish a scientifically empowered India where every student, regardless of background, might reach for the stars, participate in space research, and determine the future of human discoveries beyond Earth.

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# Community Building

NSC is more than just a club; it's a national scientific community. Members interact with peers who share their interests, mentors who assist their path, and specialists who introduce them to real-world opportunities in space science and technology.

# Space Education Initiatives

From International asteroid awareness campaigns to satellite technology workshops, NSC designs programs that make advanced space concepts accessible, exciting, and relevant to everyday life.

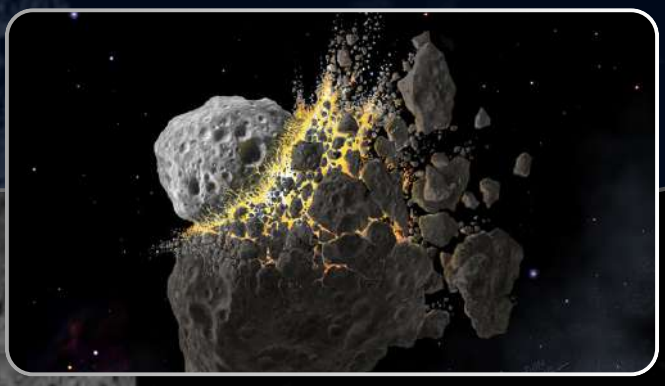
# Student Engagement & Research Awareness

We encourage students to go beyond textbooks by questioning, experimenting, modelling, and presenting. NSC members don't simply learn about space; they also interact with it.

# International Asteroid Day 2026

## AN INVITATION TO WONDER AND VIGILANCE

Asteroids are the remains of creation; rocky bits left over from the genesis of our Solar System 4.6 billion years ago. They range in size from pebbles to mountains hundreds of kilometres across and are time capsules. They contain information about the elements that built the planets, the chemistry that spawned life, and the forces that continue to shape our cosmic neighbourhood.



# Why Should Humanity Care?

Because asteroids are dual-purpose messengers, they carry both the building blocks of life and the capacity for devastating annihilation. While most asteroids orbit securely between Mars and Jupiter in the Asteroid Belt, thousands of Near-Earth Objects (NEOs) pass by our planet. Understanding them isn't optional; it's existential.

# How Do Asteroids Help Us Understand the Solar System?

Scientists use asteroids to peek back into the primordial cloud from which the Sun and planets formed. Unlike Earth, whose surface has been destroyed and sculpted by tectonics, asteroids are mostly unchanged. They are the Solar System's original fossils.

# Could an Asteroid Impact Earth

Yes. This has happened before. It will happen again. The question is not whether, but when—and whether humanity will be ready. From the dinosaur-killing Chicxulub impactor to the 2013 Chelyabinsk airburst, evidence can be found in the Earth's geological record and on dashboard cameras.

# Why Was Asteroid Day Created?

Asteroid Day is honoured worldwide on June 30, the anniversary of the 1908 Tunguska catastrophe, the greatest asteroid impact in recorded history. It was developed by astrophysicist Brian May, filmmaker Grigory Richters, and astronaut Rusty Schweickart to raise awareness of asteroid threats and accelerate detection efforts.

# Why Is Planetary Defence Important?

Planetary defence is the highest form of scientific responsibility. It symbolises humanity's decision to use knowledge, technology, and global cooperation to preserve our planet from cosmic threats. It is a science geared toward survival.

# DID YOU KNOW?

Asteroid 16 Psyche, located in the main belt, is believed to contain metals worth an estimated **$10,000 quadrillion**—more than the entire global economy. But its true value lies in what it can teach us about planetary core formation.

# EVENT HIGHLIGHTS

## Asteroids and the Origin of the Solar System

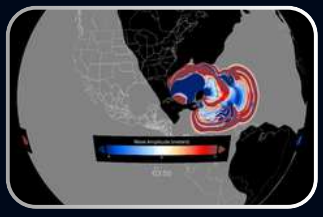
Explore 4.6-billion-year-old asteroid remnants, fossils of planetary formation, and discover how sample-return missions reveal Solar System origins today for scientists.

## The Asteroid Belt Explained

Journey through the Asteroid Belt between Mars and Jupiter, where gravity shaped countless worlds and preserved clues to planetary evolution.

## Asteroids vs Meteors vs Meteorites

Learn the difference between asteroids, meteoroids, meteors, and meteorites through a simple guide that clears common space misconceptions.



## Famous Impact Events

A giant asteroid impact 66 million years ago triggered global devastation, causing mass extinction and reshaping life's evolution on Earth

## The Tunguska Event (1908)

A powerful asteroid airburst flattened 2,150 square kilometres of Siberian forest, leaving no crater but a lasting warning.

## The Chelyabinsk Meteor (2013)

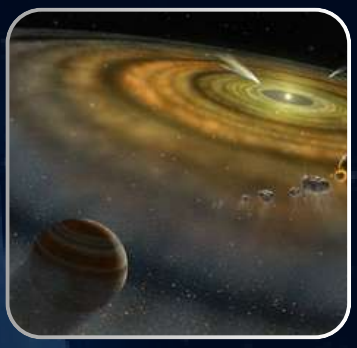
A 20-meter asteroid exploded over Russia, injuring 1,600 people and highlighting the ongoing threat of unexpected space impacts.

# KEYNOTE SESSION

## Asteroids, Near-Earth Objects and Planetary Defence

**Format**: Expert-Led Presentation with Visuals & Live Commentary

### The Asteroid Population



Our Solar System has about 1 million known asteroids, with millions more yet to be discovered. Each class, from M-types formed in the cores of old protoplanets, has its own narrative to tell. Investigate the main findings, classify these cosmic wanderers.

### Near-Earth Objects (NEOs)

What makes an asteroid a Near-Earth Object? When does it become "Potentially Hazardous"? This chapter clarifies the vocabulary to estimate risk. Learn about the Torino Technical Impact Hazard Scale, and how astronomers predict impact probabilities decades in advance.

### How Scientists Detect Asteroids

Planetary defence begins with observation. Discover the world's telescopes like Pan-STARRS and the Catalina Sky Survey, and next-generation telescopes like NASA's NEO Surveyor. Understand how software and citizen scientists work together to detect faint moving objects against billions of stars.

### Planetary Defence Technologies

Detection is only the first step. Explore asteroid-deflection methods including kinetic impactors, gravity tractors, nuclear deflection, and laser ablation—innovative techniques designed to alter trajectories and reduce the risk of potentially hazardous asteroid impacts on Earth.

# KEYNOTE SESSION

## Future Asteroid Missions

From ESA's Hera mission, which is investigating the aftermath of the DART hit, to NASA's OSIRIS-APEX and JAXA's forthcoming Martian moon expedition, the next decade offers unprecedented asteroid research. Learn about missions that aim to rendezvous, land on, and even steer these ancient bodies.

## Research Opportunities for Students

Asteroid science does not take place solely in laboratories. Students can contribute by using asteroid photometry, light-curve analysis, orbit computation, and citizen-science platforms. Universities around the world provide avenues into planetary defence research, which begins with curiosity.

## COULD YOU BECOME AN ASTEROID HUNTER?

Absolutely. The following generation of asteroid discoverers will not all be PhD astronomers. They will be data scientists, programmers, telescope operators, science communicators, and policymakers. The asteroid hunting community is looking for people who are passionate about space, patient with data, and brave enough to ask big questions. Today's inquisitive student may become tomorrow's asteroid hunter.

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# Why Join NSC?

**Interactive Workshops & Training Programs** — Hands-on learning in aerospace, robotics, and planetary science

**Expert Sessions & Industry Exposure** — Direct access to scientists, engineers, and space professionals

**STEM Activities & Innovation Challenges** — Competitions that build creativity and technical skills

**Leadership & Skill Development** — Opportunities to lead projects, organise events, and mentor peers

**National Scientific Community Networ**k — Lifelong connections with India's brightest space minds

# Event Details

- **Mode:** You Tube Live
- **Start Date of Registration:** 26 June 2026
- **Last Date of Registration:** 29 June 2026
- **Event Date:** 30 June 2026
- **Time:** 12 PM Onwards
- **Eligibility:** Undergraduate & Postgraduate students, Faculty members, research scholars, Enthusiasts.
- **Registration Fee :** Free
- **Certificate:** E-certificates of participation will be issued only to registered participants who successfully mark their attendance during the live session.
- **Registration Link: https://nsc.indiaspaceweek.org/international_asteroid_day/registration_form/**

# NSC Organising Volunteer Team

**Meet the dedicated volunteers and members of National Space Club who are contributed to the successful organization of International Asteroid Day.**

**Vishnudev Thogatamadam**
**Content Researcher**

**Madhav Manchanda**
**Video Designer**

**Rashmi Biswas**
**Graphic Designer**

**Dr. Deepak Kumar**
**Adviser**

**Adrija**
**Event Facilitator**

**Vuyyuru Prashanth**
**Video Designer**

**Vamsha Shetty**
**Graphic Designer**

# Contact us

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## NATIONAL SPACE CLUB

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