



REPORT ON
NATIONAL LEVEL ONLINE COURSE

AstroQuest

National-Level Online Camp in Astrophysics From Fundamentals to Simulation for Classes 6-10

1st July 2026 to 15th August 2026

ORGANIZED BY
**Association of All Computer Science Teachers
(AACST)**

Workshop Patron & Mentor
Dr. Abha Khandelwal, Founder AACST
Director AACST Learning HUB

Workshop Convenor
Dr. Ojas Garg
Project Associate, PURSE Project MDU, Rohtak

EVENT OVERVIEW

The ASTROCOMPUTE Course was conducted as a structured, concept-driven national-level program for students of Classes 6 to 10, from 1st July 2026 to 15th August 2026. The bootcamp was designed to take young learners from foundational numerical and scientific thinking to the computational exploration of space and the universe.

The program successfully bridged the gap between classroom concepts and hands-on computational application, enabling students to connect their school-level learning with real-world scientific and space-related problems. Through its carefully structured modules and activities, ASTROCOMPUTE empowered young learners to explore how computation, mathematics, and science can work together to understand and investigate the mysteries of the cosmos.

EVENT AT A GLANCE

NUMBER OF PARTICIPANTS	05
TARGET AUDIENCE	Class 6-10
PATRON & MENTOR	Dr. Abha Khandelwal, Founder AACST
PRESIDENT	Dr. S.B. Kishor, AACST
SECRETARY	Dr. Pravin Ghosekar, AACST
WORKSHOP CONVENER	Dr.Ojas Garg

RESOURCE PERSONS

- Dr. Satyanarayanan K, Asst. Professor, Department of Physics, The Cochin College, Kerala Visting Associate(IUCAA)
- Dr.Ojas Garg (Project Associate,Purse Project,M.D.U.,Rohtak)

COURSE CONTENTS

SESSION 1 – A Journey into Astronomy: How Ancient People Studied the Sky

What Students Learned

- How ancient civilizations used the Sun to track time and seasons
- Why people observed the sky for farming, festivals, and navigation
- Basic idea of how the sky changes during the day and year

Outcome

Students understood how ancient civilizations used the Sun and stars to measure time, seasons, and directions.

SESSION 2 – Exploring Stars & Constellations Using Stellarium

What Students Learned

- How to identify stars, planets, and constellations
- How Stellarium shows the real night sky
- Basics of sky-watching and locating objects
- Simple plotting and motion visualization

Outcome

Students learned how to identify stars, planets, and constellations in the night sky using Stellarium and developed curiosity about sky-watching.

SESSION 3 – Understanding Telescopes and Famous Space Missions (Voyager, etc.)

What Students Learned

- How telescopes collect light and magnify distant objects
- Difference between small and large telescopes
- How space probes like Voyager explore planets
- Simple idea of solving problems using step-by-step methods

Outcome

Students understood how telescopes help us see distant objects and learned about important space probes that explore our solar system.

SESSION 4 – How Stars Are Born: Introduction to Star Formation

What Students Learned

- What clouds of gas and dust are
- How stars form and grow
- How astronomers use pictures, graphs, and light to study stars
- How patterns in data help us understand space

Outcome

Students learned how stars form from clouds of gas and dust and explored simple patterns in astronomical data.

SESSION 5 – How Big Is the Universe? Basics of the Big Bang

What Students Learned

- Simple idea of how the universe started
- How galaxies move apart
- How scientists use equations to understand space
- How computers help solve big astronomy questions

Outcome

Students understood the basic idea of how the universe began and explored simple numerical ideas used in astronomy.

SESSION 6 – Careers in Astronomy & Space Science

What Students Learned

- Different astronomy careers (astronomer, astrophysicist, space engineer, data scientist)
- How telescopes, satellites, and computers are used in real jobs
- How students can start learning astronomy from school level
- Importance of curiosity, observation, and scientific thinking

Outcome

Students learned about different career paths in astronomy, space research, astrophysics, and related fields.

COURSE SNAPSHOT

- Expert-Led Astronomy Sessions: The course featured insightful sessions conducted by experienced faculty members and domain experts, giving participants a strong conceptual foundation in the basics of Astronomy. Each session blended simple theory with practical demonstrations, making complex ideas easy to understand for young learners.
- From Visualization of Stars, Planets, galaxies through Telescope to formation of Stars to universe, Participants explored stars, planets, and galaxies using the Stellarium software. They learned how to identify constellations in the night sky and discovered how sailors in history used the North Star and constellation patterns for navigation. Students also gained introductory knowledge about star formation and the vast structure of the universe.
- Access to Recorded Learning Resources to support continuous learning, recordings of all sessions were made available on the Graphy Dashboard. This enabled Participants to revisit the lectures, practice through 6 national level quizzes, and strengthen their conceptual understanding at their own pace.
- Active Participation Through Feedback and Engagement Attendance for each session was documented through structured feedback forms, which also served as a platform for collecting participant reflections and ensuring active engagement throughout the course. This process helped maintain interaction and track learning progress.
- Certification and Final Assessment. Participants who completed the course requirements were awarded a Course Completion Certificate. A Final Assessment Test was conducted to evaluate their understanding of their basic knowledge for astrophysics concepts covered during the program.

Special Add-On Session

Dr. Abha Khandelwal conducted an exclusive add-on Session 1 as a special surprise for the participants. She introduced participants to the fascinating concept on stellarium software data based on AI and encouraged them to dive deep into the concept.

The session generated great curiosity and enthusiasm among the participants, as they were able to understand how concepts of AI and Machine Learning can be connected with real-world scientific discoveries and modern space research.

COURSE OUTCOMES

- Scientific Thinking among students
- Use of Stellarium Software
- Knowledge about Space Probes and Space Telescopes
- Formation of stars
- Formation of Universe(big bang theory)
- How to build a career in Astronomy.

Recorded Lectures: Were made available on Graphy Dashboard for revision before final Quiz for each session.

CLOSING REMARKS

The program concluded with an engaging interactive session led by Dr. Ojas, during which participants shared reflections and expressed great satisfaction with the enriching and informative session. They appreciated the depth of knowledge, clarity of presentation, and practical insights provided throughout the program.

Dr. Ojas conveyed his heartfelt gratitude to the esteemed Resource Person, Dr. Sathyanarayan, for delivering an enlightening and thought-provoking session. He appreciated his valuable guidance, scholarly contributions, and inspiring interaction with participants, which greatly enhanced the learning experience.

On behalf of himself and the entire organizing team, Dr. Ojas Garg also expressed heartfelt gratitude to Dr. Abha Khandelwal, Patron and Mentor of AACST, for her invaluable guidance, constant encouragement, and unwavering support throughout the planning and execution of the course. He acknowledged that her mentorship and readiness to provide support at every stage provided strong direction and inspiration to the organizing team.

He further thanked all participants for their enthusiastic involvement, active participation, and thoughtful discussions that contributed significantly to the success of the program. The session concluded on a positive and motivating note with a vote of thanks and best wishes for future academic endeavors.

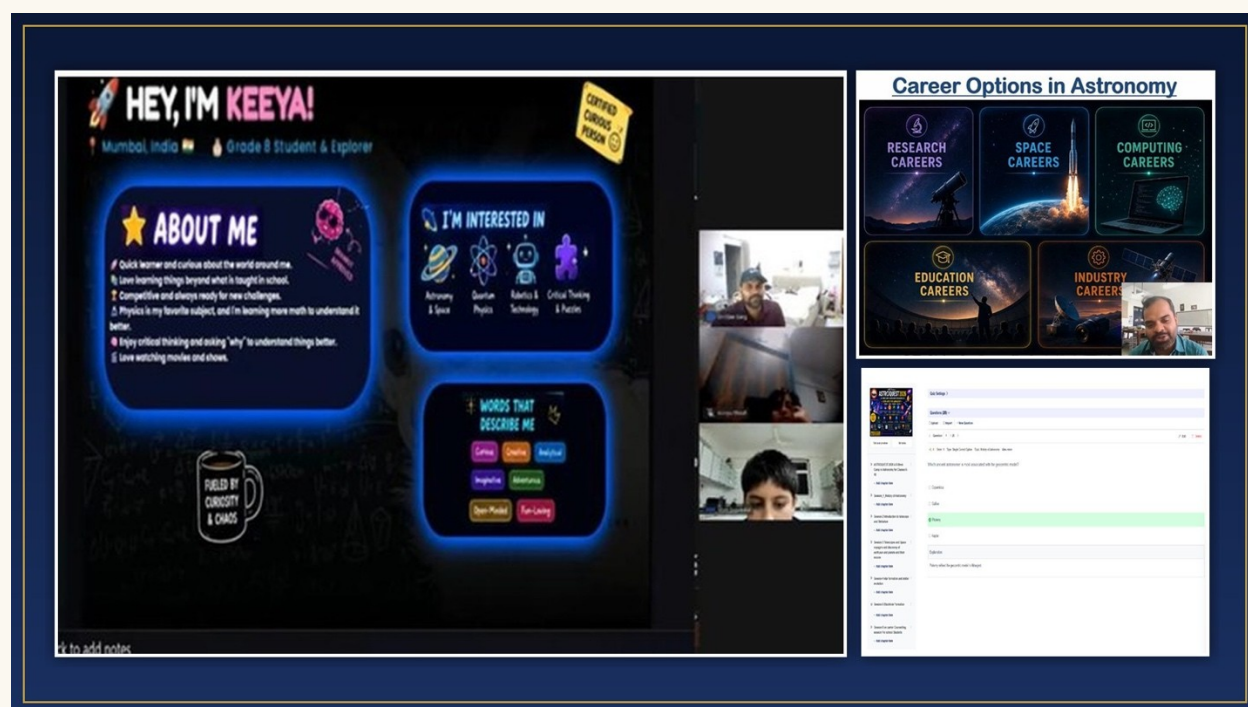
SUMMARY

The mentor Dr Abha Khandelwal, expressed deep appreciation for the dedicated efforts and effective coordination of the Convener, Dr. Ojas Garg, whose meticulous planning and enthusiastic leadership contributed immensely to the grand success of the course. His commitment to ensuring meaningful learning experiences and smooth execution of every session was highly commendable.

The AstroQuest National-Level 6 weeks Online Camp in Computational Astrophysics From History of Astronomy to Advanced Exploration through the software Stellarium laid foundation to study of astrophysics. The program received an enthusiastic response, with joining from diverse regions across India. This wide geographical representation reflected the growing interest among students, educators.

The course served as a structured pathway that guided learners from foundational thinking to hands-on exploration of the universe. Through Stellarium software, participants experienced how to gaze at night sky and watch various constellation and navigate their way . The program thus became a valuable platform for knowledge exchange, skill development, and fostering awareness about the evolving role of softwares in astronomy and space science.

Glimpses of the Webinar



REPORT PREPARED BY
AACST Editorial Team