Astronomy Photography Workshop

About us

India Space Academy is an academic institution under the Department of Space Education of India Space Week. India Space Week is an autonomous body with support from central and state governments. The role of India Space Week is to promote space education and employment among the students, teachers, and research scholars of schools, colleges, universities, and institutions.

The academy develops workshops that spread awareness about the current requirements of the space industry. Also, it develops various programs to equip the students with the right information, skills, practical exposure, research exposure, and training to make them future-ready.

S.T.A.R

S.T.A.R is an acronym which stands for Space, Technology, Astronomy & Research. In this program ISA conducts multiple workshops, Courses, Training, Internship, and project works on various topics related to space, technology, astronomy, with a research-based method. The aim of this program to promote space education with the required skills needed for research and development in the Space Industry.

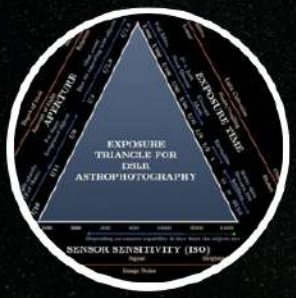
About the workshop

Objective

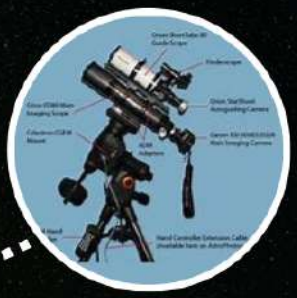
The workshop is designed to help you capture stunning images of the night sky, whether you're using a smartphone or a professional DSLR camera. We'll explore the science behind photography and how cameras work, making complex ideas simple and easy to understand. You'll also learn about the specialized tools and devices that can help you photograph the cosmos, from telescopes to tracking mounts. Additionally, we'll cover various techniques for processing your images to extract important astronomical data, making the most out of every shot you take.

Workshop Overview

Introduction to Astrophotography



Principle of Astrophotography



Astrophotography Equipments

Astrophotography

Planisphere or Stellarium

Image Processing

Capturing the night sky

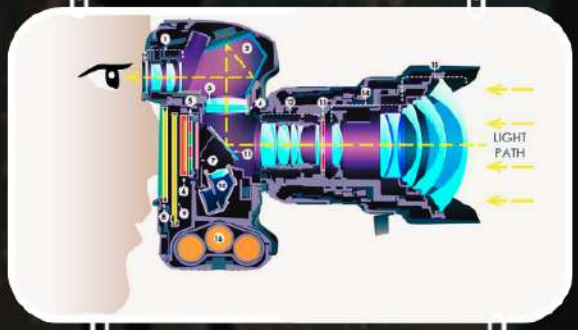
Workshop Plan

1. Introduction

- Overview of the workshop agenda.
- What is astronomy photography
- How astronomy photography started
- Where astronomy photography is used.

2. How do camera work?

- How human eye see its surrounding.
- Different parts of DSLR camera.
- Role and importance of camera sensor.



3. Principle of Photography?

- What is exposure?
- Exposure Triangle

4. Astronomy Photography Tools

- Telescopes and mount
- Camera and CCDs
- High tech equipment

5. Techniques to capture astronomy photography

- Prime focal astronomy photography
- A focal astronomy photography
- Different astro photographs

6. Image Processing

- Why image processing
- How to process image
- Different processing software
- Astronomy from the Image

7. Planning for Astronomy Photography

- Things to take care while planning for astronomy photography.
- How to use Stellarium and other resources for astronomy information

8. Future Scope in Astronomy Photography

- What are the future prospects of an astronomy photography career?

9. Q&A and Wrap-Up

- Open forum for participants to ask questions and clarify concepts.
- Recap of key takeaways and guidance on further resources for self-study.

Hands-On Activity

- **Objective:** Familiarize participants with the practical aspects of satellite subsystems.
- **Task:** Image processing using online tools.
- **Materials Needed:** Pre-installed software, practice image data

Live View

A live view of the Moon or other visible night sky object.

NOTE: **The live view is subject to clearance of sky.**

Learning Outcomes

By the end of these sessions, participants will:

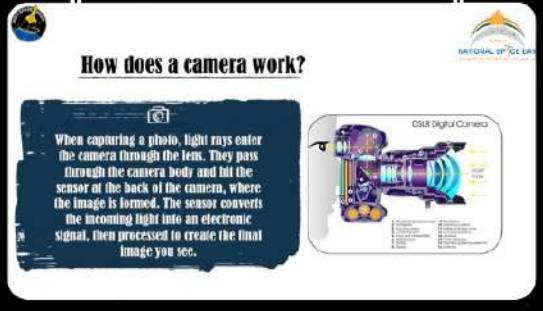
- 1. Grasp the significance of satellites in addressing real-world challenges.
- 2. Understand the key subsystems of CubeSats and CanSats and their functions.
- 3. Acquire basic knowledge of satellite design, electronics, and communication.
- Apply theoretical concepts through a hands-on activity.

Other Details

Workshop Date: 20 April 2025
Workshop Price: 150/-
Workshop Venue: Zoom Platform
Certificates: After completion of the workshop

National Space Day Celebration

(astrophotography workshop)



International Observe The Moon Night

Registration Details

Registration Start Date: 06 March 2025
Registration End Date: 19 April 2025

Link :https://workshop.indiaspaceweek.org/astrophotography

Registration is Open for all Students , Faculties and Space Enthusiasts

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