

Uka Tarsadia University

Department of Physics

Report on “Study Tour (Fundamental of Astronomy, Sky Observations, Nature Exploration and Camping Basics)”

Date: 9-10 April, 2025

Venue: Mahal Campsite, Dang, Gujarat

Time: 8:30 AM of 9th April 2026 to 1:30 PM of 10th April 2026

Total No. of Participants: 15

Name of the Expert: 1. Mr. Prakash Day

Prakash S. Dey, the founder of the Surat Astronomy Club (est. 2008), is a dedicated educator who transformed his passion for the cosmos into a vibrant community hub near Althan Garden. He specializes in professional sky-gazing, telescope workshops, and unique "astro-adventure" camps that blend wilderness survival with celestial study for students and professionals alike. Through his leadership, the club provides hands-on access to Milky Way photography and planetary observations, making complex astronomical concepts accessible through immersive one- or two-day regional expeditions.

2. Mr. Shakti Pathak

Shakti Pathak is a key resource person and coordinator associated with the Surat Astronomy Club, working alongside Prakash Dey to facilitate immersive outdoor learning. A specialist in nature exploration and wilderness management, he plays a vital role in organizing the logistics of adventure camps and guided treks through regions like Dang and the Sahyadri hills. His expertise lies in connecting students with the environment, leading sessions on biodiversity and "Leave No Trace" camping ethics. Through his work, he helps bridge the gap between scientific observation and physical exploration, ensuring a safe and educational experience for all participants.

Event Coordinator: Dr. Kinjalben Patel and Dr. Jaymin Ray



Program objective: To provide students with an immersive, hands-on learning experience that integrates the fundamentals of observational astronomy with essential wilderness survival and nature conservation skills.

Program outline: The **Department of Physics** at UTU in collaboration with **Surat Astronomy Club** organized an A study tour on “fundamental of astronomy, sky observations, nature exploration and camping basics” on April 9-10, 2026. 15 students from B.Sc., M.Sc. and Ph.D. programs participated in the tour along with 3 faculty members. This tour combines nocturnal sky observation sessions and astronomy workshops with daytime ecological treks and practical camping drills. Participants move from theoretical classroom concepts to real-world application, exploring celestial mechanics by night and biodiversity and campsite management by day. This study tour was organized in collaboration with Surat Astronomy Club, Surat

Program outcomes:

- Identify major constellations and planetary bodies using telescopes and naked-eye observation.
- Understand local biodiversity and conservation through guided nature exploration.
- Develop essential camping skills including tent setup, and site management.
- Learn to navigate using both traditional topographical cues and celestial markers.
- Build teamwork and self-reliance through group outdoor challenges and survival basics.

Schedule of Events in a tabular format

Time	Activity
8:30 AM	Bus Started from UTU
10:30 AM	Reached to Ambapani eco tourism and have breakfast.
11:00 AM	Departure for nature exploration and trek near ambapani. Learn about various plants and species.
1:30 PM	Return to Ambapani eco tourism site for lunch and rest
2:30 PM	Exploration Ambapani eco tourism site
4:30 PM	Journey started for Kalam dungar, Mahal, Dang
6:30 PM	Arrival to Kalam Dungar, Mahal Dang
6:40 PM	Evening trek to see sunset
7:30 PM	Gathered at point on Kalam Dungar. Observation of evening sky stars through telescope
8:00 PM	Dinner
9:00 PM	Session on camping basics including wild life species and nature around the tent followed by tent pitching
10:30 PM	Session on Telescope basics
11:30 PM (9 April) – 4:00 AM (10 April)	Sky observations and study of deep sky objects
4:00 PM – 6:00 PM	Rest
6:00 AM	Morning trek on second highest peak of Sahaydri hills of Kalam Dungar to see sunrise.
9:00 AM	Return to tent and breakfast
10:30 AM	Return journey started for UTU
1:30 PM	Arrival at UTU

List of Participants in a tabular format

Name of Participant	Stream	Nature of Program
List of Students		
Shreya choudhry	Physics	M.Sc. Physics
Renik Pinakin Chaudhari	Physics	B.Sc. Physics
Akash Bhilare	Mathematics	M.Sc. Mathematics
Simran Giri	Mathematics	M.Sc. Mathematics
Vaibhav mehta	Mathematics	M.Sc. Mathematics
Alhaz mayat	Mathematics	M.Sc. Mathematics
Kritika Suthar	Forensic Science	B.Sc.Forensic Science
Dhwani U Patel	Forensic Science	B.Sc.Forensic Science
Praseeda Pradeep	Forensic Science	B.Sc.Forensic Science
Bina R Patel	Forensic Science	B.Sc.Forensic Science
Vasvi D Rana	Forensic Science	B.Sc.Forensic Science
Gayatri Suthar	Forensic Science	B.Sc.Forensic Science
Aniket Hanmant Sawat	Chemistry	Ph.D Chemistry
Jagdish Dalsukhbhai Patel	Chemistry	Ph.D Chemistry
Margi H solanki	Physics	Ph.D. Physics
List of Faculty Members		
Dr. Kinjalben Patel	Physics	
Dr. Jaymin Ray	Physics	
Dr. Anil Gore	Chemistry	

Details

The study tour, "Fundamentals of Astronomy, Nature Exploration, and Camping Basics," aimed to merge theoretical science with field experience. For Physics, Chemistry, Maths, and Forensic Science students, the objective was to apply classroom principles—from orbital mechanics to chemical ecology—within a practical, high-altitude environment.

Central highlights included telescopic deep-sky observations at Kalam Dungar and biodiversity treks near Ambapani. Physics and Maths students practiced celestial mapping, while Chemistry and Forensic Science students analyzed botanical properties and environmental trace evidence under varying outdoor conditions.

Starting from UTU, the schedule balanced ecological treks at Ambapani with intensive night-sky sessions at Mahal Dang. Students engaged in tent pitching and telescope calibration workshops, culminating in a sunrise trek to a Sahyadri peak to study topographical mapping and atmospheric optics.

Academic dialogues focused on the mathematical precision of star tracking and the chemical signatures of celestial bodies. Forensic students discussed evidence in forest terrains, while Chemistry majors explored the sustainability of eco-systems, fostering a cross-disciplinary exchange of scientific ideas.

The event successfully bridged the gap between theory and reality for B.Sc., M.Sc., and Ph.D. scholars. It sharpened analytical skills across all streams—from calculating light refraction to understanding forensic survival—leaving a lasting impact on the students' collaborative research and environmental perspective.



Pitching Tent



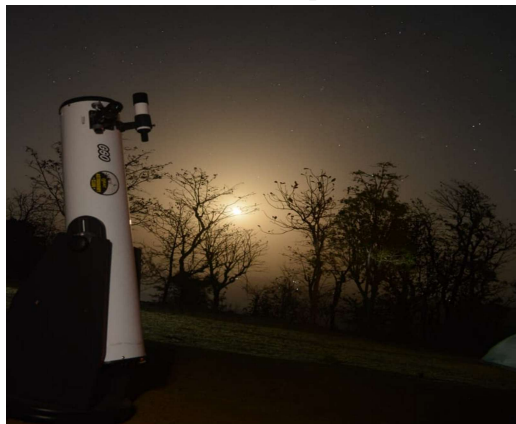
Setting the Telescope



Moon



Telescope



Jupiter



Concluding Remarks

- The tour provided a seamless blend of professional astronomical insight and expert wilderness guidance. This approach transformed the trip into a holistic experience, successfully bridging the gap between celestial science and nature exploration.
- Criteria: 5 and 7

Report prepared by Dr. Kinjalben Patel

Date: 25 April 2026

Kinjalben Patel

Sign of the HOD

