

Hanle dark sky reserve star party brings together astronomy enthusiasts for the third year

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Astronomy enthusiasts from across the country participated in amateur astronomy and astrophotography related activities at the third edition of the HDSR Star Party that was jointly organised by the Indian Institute of Astrophysics (IIA), Department of Wildlife Protection of UT Ladakh, and Bhabha Atomic Research Centre (BARC) between 18 and 23 September.

The Hanle Dark Sky Reserve (HDSR) in eastern Ladakh is famed for its extremely dark night sky, and is a much sought after destination for astrophotographers and amateur astronomers. HDSR was notified by the Govt. of Ladakh in December 2022, and is a unique science-driven, socio-economic development project. It rests on the two pillars of curtailing light pollution, and promoting astro-tourism that benefits the local communities. HDSR is centred around the Indian Astronomical Observatory at Hanle, which is operated by the IIA, an autonomous institution under the Department of Science and Technology (DST). The operations of the HDSR are made possible due to the strong commitment from various stakeholders, including the funding for astro-tourism and light management plan by the UT Ladakh administration.

The HDSR Star Party brought together several astronomy enthusiasts from Karnataka, Tamil Nadu, Madhya Pradesh, Gujarat, Delhi, Jammu and Kashmir, Maharashtra, Andhra Pradesh, Kerala, etc. The participants were selected, with a mix of expert astrophotographers as well as relative newcomers to the Bortle-1 dark skies of Hanle and they travelled to Leh at personal expense to avail of the dark skies of Hanle for four unforgettable nights.

“Hanle occupies a unique position within India’s amateur astronomy community. Its pristine dark skies and transparent atmosphere allows for observing and photographing faint celestial objects that are often impossible from other locations in India”, said Prof. Annapurni Subramaniam, Director of IIA.

“Many masterclasses were organised for the participants on astro-photography, the unique celestial sights that can be seen from Hanle, and visual observing, to equip them with the necessary skills”, said Dorje Angchuk, Engineer-in-charge of the Observatory. This included the “7 Wonders of the HDSR Night Sky”, compiled by Ajay and Neelam Talwar. The high altitude of 4250 metres and hence low oxygen content, combined with an extremely dry atmosphere poses a challenge. Hence, daily medical checks were conducted by the Observatory staff as well.

“Truly mesmerized by the might of dark star-studded skies at Hanle. It was a confluence of both scientific and spiritual journey. Reverse-migration of the nomadic community is a big change observed in Hanle besides upsurge in tourism, construction-work & cultural astronomy. 60 % of astro-ambassadors at Hanle were women. Ethnoastronomy, folklores and traditional songs make us understand the relationship between the vast experience, astronomical knowledge possessed over years by the elderly at Hanle and how important it is to conserve it for the generations to come. It is definitely a connect of the people, place, land, skies, entire nature holistically”, shared by Dr. Namrata Pathak, Scientist- G, DST, GoI.

“Some participants who had carried their instruments with them focussed on photographing deep sky objects like nebulae and galaxies, while others found immense pleasure in tracking down faint objects through their telescopes to see with their own eyes”, said Thupstan Rinchen, Officer-in-Charge of Hanle’s MACE Telescope of BARC. The relative beginners set out to photograph the Milky Way with their cameras, and the daily interaction between the participants was a learning experience for everyone.

The last night was organised as an Open Night, when the local villagers, tourists in the vicinity, and the local army personnel were invited to come and look through the telescopes at the Star Party. More than 300 people

visited during the Open Night, and were shown a number of celestial objects.

“HDSR is a haven for professional as well as amateur astronomers, and we were happy to share the breathtaking Hanle skies with the Star Party participants”, said Dr. Annapurni Subramaniam.

A critical component of HDSR are its 24 Astronomy Ambassadors, who were selected from the local villages, trained to be astro-tourism guides, and given telescopes for this purpose. These Ambassadors were active in the event and brought their telescopes for the use of the participants. “They are the key to the successful implementation of HDSR, and this Star Party was an occasion for them to learn from the many experts present”, said Dr. Niruj Mohan Ramanujam, head of the outreach section at IIA.



Fig 1- The HDSR Star Party participants at IIA’s Himalayan Chandra Telescope on Digpa Ratsa Ri, Hanle, Ladakh (image credits: Ajay & Neelam Talwar)



Fig 2-*The HDSR Star Party participants at the BARC's MACE Telescope at Hanle, Ladakh (image credits: Ajay & Neelam Talwar)*



Fig 3-*A masterclass on the 7 Wonders of the HDSR Night Sky*



Fig 4-A photograph of the Milky Way, taken at the HDSR Star Party by a participant (image credits: Dilip D'Souza).

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