

Saros 132: Night Sky Observation at The Sagar School, Tijara

Saturday, 5 October 2019

Programme

Observation begins at 5 pm on 5 October, Saturday

Observation ends the following morning on 6 October at 6am.

Preparation

As a participant you should be well rested on arrival for the observation, otherwise you will be sleepy during the night and miss out on all the heavenly bodies in the night sky.

Observation details

The event is "low threshold" - close to Delhi so relatively easy to reach for all, with reasonably dark skies, but don't expect Himalayan skies.

Date

Saturday, 5 October 2019, 5 pm until Sunday, 6 October 6:30 am.

Location

Sagar School Observatory, Village Baghor, Tehsil Tijara, Near Maliyar Gurjar, Alwar, Rajasthan 301411

Location Coordinates: 27° 53' 12.72" N, 76° 53' 50.34" E

Map Reference: <https://goo.gl/maps/u176dvGMViy2DQM79>

Transport

A bus will transport the participants to the site from Goethe-Institut / Max Mueller Bhavan, 3 Kasturba Gandhi Marg, New Delhi.

Please arrive at the Institut by 1:30pm. We will reach the observation site at 5pm – 1 hour ahead of sunset – so that you have time to orient and familiarise yourself with the location and the observation sequence. Travel time from Goethe-Institut / Max Mueller Bhavan to The Sagar School Observatory is approximately 2½ hours.

NOTE: If you will be traveling to the site on your own, kindly mention this when you apply for the call.

If you prefer to use your own transport, this is the location: <https://goo.gl/maps/u176dvGMViy2DQM79>

Night sky

October 5 is the First Quarter Moon. Jupiter and Saturn will be visible in the evening. Saturn and the Moon will be in conjunction, close to each other. Uranus and Neptune will also be visible later in the night. We will also hunt for star clusters and double stars.

Food

Dinner will be provided at the venue.

As there is no canteen facility at the school, you are advised to carry a few beverages (hot/cold) and snacks for the entire night.

Mandatory items

1. Water bottles.
 2. Dinner will be provided but do bring anything else you may like for post-midnight snacks, fruits, chocolates etc.
 3. Wear closed shoes.
 4. Odomos, odomos and odomos.
 5. Durrie, foam sheet, or a folding chair for relaxing and breaks between observing.
 6. Other items of comfort to last an entire night of observation.
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Astro-etiquette

Please take time to read the astro-etiquette.

VEHICLES - If you arrive in your own transport you will need to enter your details in the entry register at the school entrance. Please enter "Stargate – Observatory" under the column for reason to visit. This is a residential school and the school has graciously provided access to their unique and wonderful facility. We request all participants of Stargate to please be considerate of all school regulations, such as car parking, per the guards' instructions, maintaining silence, and respecting the strict no smoking policy. Please drive very slowly on the school premises.

LIGHTS - Avoid all bright lights. Avoid using white light (red light is OK). Red lights should be small and dim, and care should be exercised that they are not pointed at an observer or a telescope. Cover laptop screens with a red filter and be careful when using your cell phone. Use of green lasers should be limited so as not to ruin photos.

NOISE - Avoid loud or boisterous behaviour. Star-gazing is a quiet, peaceful experience. Please use headphones if you want to listen to music while you are at an observing session.

****What to carry to the observation?***

1. Your own observing plan for the night.
 2. Observing aids like star charts, schedule, drawing paper, note book, pencil, clipboard to take notes of drawings.
 3. A torch covered with 2-3 layers of red cellophane paper, extra batteries for the torch.
 4. Camera, tripod, remote/intervalometer, batteries, extra battery, empty storage card, spare storage card (if you plan to do astrophotography).
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Observational Highlights of the evening – Saturn and Moon close to each other in the sky.

- 17:30 (Observatory) Observe Venus in daytime sky, and possibly Mercury too if the western horizon is clear of clouds.
- 18:04 Sunset (direction 265°)
- 18:15 First Quarter Moon, 7 days old, 48% lit in constellation Sagittarius. Observe the Moon using a large 14inch telescope at high magnification. Watch the craters on the terminator – i.e. the boundary dividing the night and day on the Moon.
- 18:30 Image the Moon using your mobile phones through the giant telescope in great detail.
- 18:27 Dusk, Sun is 12° below horizon
- 19:00 (Astronomy Lab)..... Orientation for the participants
- 19:21 Astronomical Twilight ends, it is true night.
- 19:30 (Observatory Terrace) Constellation survey
- 20:00 Observe the King of Planets – Jupiter, four Galilean satellites, cloud bands on the surface.
- 20:30 Observe the ringed planet – Saturn, the most beautiful sight in the heavens.
- 21:00 (School Canteen)..... Dinner
- 21:48 Jupiter sets
- 22:00 After dinner movies – stunning time lapse movies from the Himalayan night sky.
- 22:38 Neptune transits – at this time the planet is at its highest point in the sky – altitude = 56° in constellation Aquarius.
- 23:00 Night sky observation continues, observe Neptune
- 23:28 Moon sets
- 23:38 Saturn sets
- 00:01(Astronomy Lab) Midnight break
- 01:00 Outdoor observation resumes with interesting double stars
..... The Winter Hexagon – the brightest constellations in the sky

01:38 Uranus transits, at this time the planet is at its highest point in the sky – altitude = 75°, in constellation Aries.
02:00 Observe deep sky objects
05:00 Astronomical Twilight begins, true night ends
05:54 Dawn, Civil Twilight, Sun is 12° below horizon
06:17 Sunrise (direction 95°)