



ASTRONOMY DISCOVERY TOUR TO INDIA – UNIQUE OPPORTUNITY

21 April – 2 May 2010

Day 1 - Depart on International scheduled flight to Mumbai.

Day 2 – Mumbai

Arrive at Mumbai International airport. Upon arrival and met and transferred to the hotel. This evening you will be met by the Astronomers for the briefing session on the Observatories being visited during the tour. Dinner and overnight at hotel.

Day 3 Mumbai – Pune

Morning you will be transferred by coach to **Pune**. Upon arrival met and transferred to the hotel. Afternoon visit the **IUCAA (University)** (30 mins) where you will meet the scientific officers or the Professors for the brief (1 ½ hours). Dinner and overnight at hotel.

Day 4 Pune

Morning visit to the **GMRT & NCRA Observatory** (04 hours) - A private observatory which was commenced by Capt. W.S. Jacob at Poona (modern Pune). It was in operation from 1842 to Jacob's death in 1862. The main work done by the founder was the observation of 244 double stars, of which he published a catalogue. He is also famous for his calculation of the orbits of a few binaries, e.g., Centauri, and in particular for the triplicity of Scorpii in 1847. You will have a 4 hour session with Research Fellow / Professor. Dinner and overnight at hotel.

Day 5 Pune – Ahmedabad – Mount Abu

Morning transfer by coach to Ahmadabad where you will be met and drive to **Mount Abu** (240 kms). Upon arrival, check-in at hotel.

Mount Abu - A serene retreat set amidst lush forested hills, Mount Abu is the only hill station in Rajasthan. Situated at the southern tip of the Aravali range, this pleasant hill retreat in Rajasthan owes its cool climate to its rich flora covering the entire hillside that includes coniferous trees and flowering shrubs. Dinner and overnight at hotel.

Day 6 Mount Abu

Morning visit the Observatory Infrared Telescope Observatory at Gurushikhar, Mt. Abu (PRL) (15 kms).

The Infrared Telescope at Mount Abu is the first major facility in India specifically designed for ground based infrared observations of celestial objects. The telescope is located near the hill resort of Mount Abu in the state of Rajasthan. The observatory is at an altitude of 1680 metres adjacent to Gurushikhar - the highest peak in the whole of central India. Further the low amount of precipitable water vapour (1-2 mm during winter) at Gurushikhar makes it a good site for the infrared telescope observations. The site has been found to be good (about 150 cloud free nights per year) for astronomical observations. The specifications for surface finish of the telescope mirrors has been one-tenth of 589 nm line of sodium so that the telescope



can be effectively used for imaging studies at both optical and infrared wavelengths. The optical system of the telescope consists of 1.2 m paraboloid primary mirror that can be used in conventional Cassegrain and Coude configurations using hyperboloid secondary mirrors. The standard Cassegrain configuration utilises a nonvibrating secondary mirror with an effective focal ratio of f/13.

For infrared observations, to detect faint objects in the presence of sky brightness gradients a provision for nodding the primary mirror has been made. In addition there is provision for a vibrating secondary mirror with an effective focal ratio of f/45 for modulation of star signal. The second optical configuration consists of f/45 focal ratio Coude system for very heavy focal plane instruments like high resolution spectrographs. Later in the evening visit the stunning array of exquisite **Dilwara Jain temples**, beautifully carved temples built between 11th and 13th century A.D. are sheer elegance in marble, dedicated to the Jain Tirthankaras. The Vimal Vasahi temple is the oldest of these dedicated to the first Tirthankara. Built in 1031 A.D. (by Vimal Shah-a merchant and representative of then Gujarat ruler), it is a superb example of temple architecture. Another is Lun Vasahi temple and Adhar Devi temple with its many stairs is a tourist attraction.

Dinner and overnight at hotel

Day 7 Mount Abu – Udaipur

Morning drive to **Udaipur** (292 kms) en-route visiting **Ranakpur Temples** – the most magnificent 15th century Jain temples situated in the deep secluded valley of the Aravalli Hills. Though over 500 years old, the temples here are superbly preserved in a near-perfect condition. In the centre is the main “Chamukha temple” dedicated to Adinath. The most distinctive features are the 29 halls supported by 1444 pillars, of which no two are exactly alike. Every conceivable surface is carved and every corner and angle is engraved with Jain images.

Continue to Udaipur and check-in at hotel.

Later **City tour of Udaipur**, one of India's most romantic cities and famed for its lovely palaces and lakes. Begin by visiting the **City Palace** and wandering through its beautiful rooms and apartments, then continue on to the Garden of Maidens "**Sahelionki-bari**".

Dinner and overnight at hotel.

Day 8 Udaipur

The **Udaipur Solar Observatory** – situated on an island in the middle of the **Lake Fatehsagar** and the main office building is located at its NW-shore near **Bari Road** - Rani Road Junction. The sky conditions at **Udaipur** are quite favourable for solar observations. The large water body surrounding the telescopes decreases the amount of heating of the surface layers. This decreases the turbulence in the air mass and thereby improves the image quality and seeing. The main objective of obtaining the high spatial and temporal resolution observations of solar photospheric and chromospheric activity is to understand the various dynamic phenomena occurring on the surface of the Sun. You will spend about 1 ½ hours at the Observatory.

Fly to **Jaipur** Upon arrival transfer and check into the hotel.

Afternoon free for own activities.

Overnight at hotel.



Day 9 Jaipur

Morning tour of the impressive **Amber Fort**, situated on a ridge just outside Jaipur City. The Fort, completed in the early 18th century, took over 100 years to build and now, although deserted, offers a fascinating insight into the lifestyle of the Moghul ruling families.

Afternoon **city tour of Jaipur** – visit the imposing **City Palace**, still home to the Maharaja although several of the rooms are now open to the public. Many antiques and artifacts belonging to the ruling family are housed here, including a collection of weaponry. You will also visit the **Hawa Mahal** "Palace of the Winds", and the open-air **Jantar Mantar Observatory** to see the vast astronomical instruments. Tourist sightseeing meetings with the officials from the Observatory.



Dinner and overnight at hotel

Day 10 Jaipur – Agra

Morning transfer by coach to **Agra** en-route visit **Fatehpur Sikri**.

Fatehpur Sikri the deserted, red sandstone city that was built by Emperor Akbar as his capital and palace in the 16th century. Also visit the **Bulund Darwaza** the largest gateway in the world.

Continue drive to Agra and upon arrival – check into the hotel.

Later visit to **Taj Mahal** - This most famous Moghul monument was constructed by Emperor Shah Jahan in memory of his wife Mumtaz Mahal "the lady of the Taj". It has been described as the most extravagant monument ever built for love, for the emperor was heartbroken when Mumtaz died after 17 years of marriage, during the birth of her 14th child. (**Taj Mahal is closed on Friday**). Dinner and overnight at hotel.



Day 11 Agra – Delhi

Morning drive to Delhi (203 kms). Upon arrival, check into your hotel.

Also visit the **Jantar Mantar** (Observatory) and meet with Space officials.

A unique structure raised in 1724, now lies in the heart of Delhi's commercial centre near Connaught place. This is the **Jantar Mantar**, one of several astronomical observatories raised by **Maharaja Jai Singh II** of Jaipur. The various abstract structures within the **Jantar Mantar** are, in fact, instruments that were used for keeping track of celestial bodies. Yet, Jantar Mantar is not only a timekeeper of celestial bodies, it also tells a lot about the technological achievements under the Rajput kings and their attempt to resolve the mysteries regarding astronomy.

Quiet farewell dinner at the Crowne Plaza Hotel Restaurant with the representatives from Space.

Overnight at hotel.



Day 12 Delhi - Morning transfer to the International airport for flight back home.

Cost : £2850 per person

Cost Includes

- Accommodation on twin/double sharing basis for 10 nights in good quality hotels.
- International return economy class flights between the UK and India on scheduled airline services.
- UK departure taxes.
- Visa (we will obtain on your behalf).
- Based on room with breakfast and dinner in the hotels.
- Transfers and sightseeing by air conditioned vehicle as per the itinerary.
- Entrances at monuments at all cities as per the itinerary.
- Services of an English speaking escort cum guide for the tour as per the itinerary.
- Services of a Tour Manager and a SPACE representative.
- Gratuities for the drivers, guides, porters.

The price of our air holiday package includes the amount of £3.50 per person as part of the ATOL Protection Contribution (APC) we pay to the CAA. This charge is included in our advertised prices.

Cost Excludes

- Insurance – it is a requirement that you have insurance for your holiday.
- Any personal expenses such as laundry bills, telephone bills, beverages.
- The cost is based on current fuel prices, taxes and other statutory levies. In case of any increase in the same or any other inputs, we reserve the right to amend the price accordingly.

- The cost is based on current exchange rates. In case of more than 4% difference in exchange rates (at the time of operation of the tour) we reserve the right to adjust prices accordingly.
- Single Room Supplement (£585.00)

Currency & Air Fares : Local costs are based on £1 = US\$1.65 as published in the Financial times on 24 July 2009 and air fares as at 24 July 2009.

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