

Total Solar Eclipse

October 24th 1995 - Fathepursikri - India



In the early hours of Tuesday 24th October, millions of people across India witnessed nature's most spectacular phenomenon, a total eclipse of the Sun. For a moment the position in the sky of the moon and sun, coincided. The early morning sunshine was briefly replaced by a eerie darkness. The only light coming from, the rarely visible solar atmosphere, the corona. The birds and the animals hushed in to a confused silence by the sudden onset of night, retreated to safety as the shadow of the moon swept across a quarter of the Earth's surface, at over twelve hundred miles an hour. A breath taking experience.

The sun is about 400 times larger than the moon and conveniently, it is also 400 hundred times further away. This amazing coincidence allows them both to appear, about the same size in the sky. Everything in sunlight has a shadow.

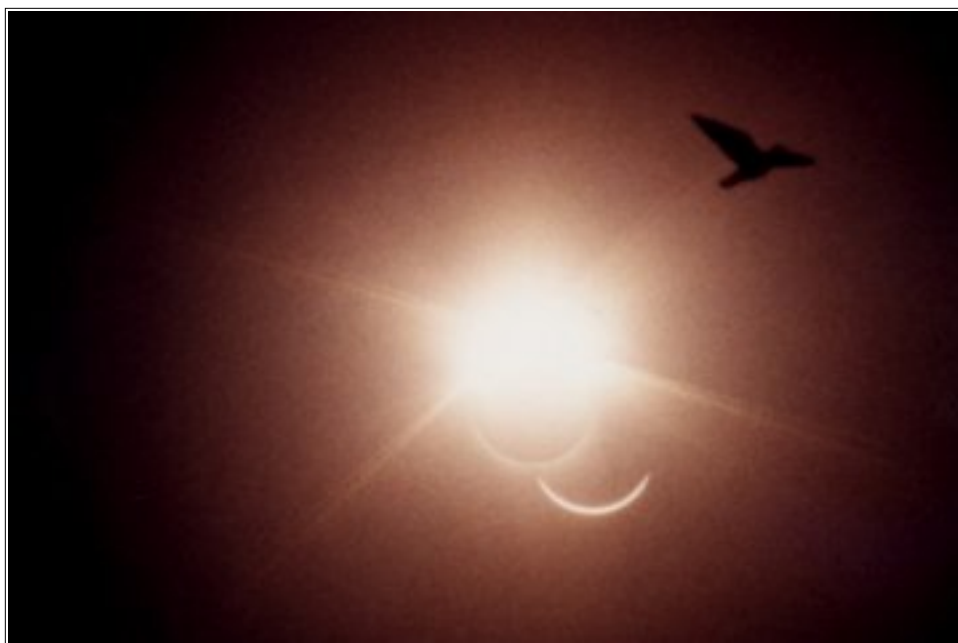
The shadow of the moon tapers like an ice cream cone to a point. Usually this tapering shadow falls unseen in space. Occasionally it falls on the Earth, that's when we see a total eclipse of the Sun. The relative sizes of, and distances between, the Sun, Earth and the moon determine the size of the moon's shadow on the Earth. The orbits of the Earth around the sun and the moon around the Earth are not in the same plane but tilted relative to each other. This 'tilt' ensures that an eclipse does not happen each month and is also responsible for the apparent random position of the moon's shadows on the Earth's surface.

The moon's shadow swept across India in less than half an hour. Entering northern India from Pakistan, narrowly missing New Delhi, Agra, Allahabad but just catching southern parts of Calcutta. Although duration of totality increased the further east along the track but so did the probability of cloud cover. The old deserted Mogul city of Fathepursikri was not only well inside the path but offered a 90% chance of a cloud free sky.

And so it was. At 8.34am in the romantic setting of Akbar the great's city, under excellent sky conditions, surrounded by thousands of visitors from many parts of the world including India itself, the moon gradually moved in front of the Sun. 'Baily's beads' marked the moment before totality as edge of the moon met the edge of the sun. An instant later the spectacular diamond ring glared into view as the last rays of the sun squeezed



through the deepest valley of the moon. With that the Sun disappeared and like a divine halo, its atmosphere came into view. Less than a minute later, as if god had taken a picture of the world with a camera flash, the strange darkness abruptly ended, as the first rays of sunlight beamed through the lunar valleys and the sun began to re-appear. An instant sunrise. No picture or a re-telling can ever capture the essence of this insignificant but awe inspiring experience. One of Akbar's inscription, in Arabic, on one of the entrances to Fatehpursikri reads, 'The world is but a bridge, cross over it but build no house up on it'. He was, philosophically, referring to the tentative nature of life. The same words could also capture the epitome of a solar eclipse, its transience. A remarkable sensation almost a religious experience.



Nowhere, are these religious connections observed more deeply than in India. Thousands of people travelled thousands of miles to observe the eclipse and yet millions of locals remained indoors, to avoid it. A curfew-like silence hung over the major cities which were not even in the path of totality. The infamous New Delhi traffic was almost non-existent. The tradition of Astrology in the Indian, mainly Hindu, culture is thousands of years in the making. Even today it is still a powerful force. The festival of Dewali, revered and celebrated by almost a billion Indians

was itself brought forward by a day to avoid a clash. It is amazing to think that a nation that can launch satellites into Earth orbit can also have such a deep rooted fear of a so natural an event. Thanks to government initiated, eclipse awareness program, many schools and many villages were offered the scientific explanation along with 'eclipse goggles' with which to safely view it. The efforts of the education and scientific community were rewarded with thousands of Indians in New Delhi, Agra, Jaipur and other cities, to not only observe but enjoy this celestial spectacle. According to one Jaipur resident, 'city life was normal and many took time out to observe it. During the 1980 eclipse the city was like a ghost town'. The next eclipse over India is 1999. But you won't have to travel. The path of totality also takes in the UK, at least Cornwall. But since it is on August the 11th, its bound to be raining .. so go to India!

