

Summer Solstice 2008

June 21st is the Summer Solstice for the northern hemisphere. On this day, the sun rises at its northernmost position, attains the highest position in the sky, and sets at the northernmost position. This day also carries a special meaning for Bangladesh because of an imaginary geographic line that runs through the middle of the country. The Tropic of Cancer runs through Comilla, south of Dhaka and through Faridpur and Kushtia before it enters West Bengal. On this day, if you happen to find yourself on the Tropic of Cancer, the sun would shine directly overhead and cast no shadow of any erect object. The time would be about 12:30 p.m.

This day would also be the longest day of the year, with the sun rising on the Dhaka horizon at 5:12 a.m. and setting at about 6:49 p.m., giving us total daylight time of about 12 hours and 38 minutes. From this day on, the sun would rise later and set earlier, thus shortening the days until the Winter Solstice on December 22. One should bear in mind that in the southern hemisphere, these days are reversed, so, if you happen to be in Buenos Aires on those two days, don't be surprised if June 21 turns out to be the shortest day and December 22 the longest.

Ancient peoples were much aware of the day-to-day (and night-to-night) arrangements of the sun, moon, planets and stars. The two solstice days played an important role in the rise of human awareness about the movements of celestial objects and influenced the quest for finding the causes for those movements. The ancients utilized clever mechanisms that would allow the sun to shine on a pre-designated spot on the day of the solstice. Neolithic Stonehenge, built almost 5,000 years ago on the British Isles, was a magnificent structure where the sun used to rise over a particular stone on the day of the Summer Solstice. Observatories with similar functionality were also built in North and Meso-America.

Europe still celebrates the Summer Solstice that originated in those distant Neolithic times, whereas the Winter Solstice (*Poush* or *Mokor Shonkranti*) gained in prominence in Bengal and the Indian subcontinent. This is not surprising since the brief summer in Europe brought much desired relief from the prolonged winter months, giving people opportunity to celebrate sunshine and give thanks to nature. In Bengal, the autumn and winter months were for festivals, and variations of the harvest celebrations (*Nabanna*, etc.) took place around the time of the Winter Solstice.

Last year, *Anushandhitshu Chokro* Science Club organised a day-long solstice observation (*Korkot-Kranti Dibosh*) on June 21 in Dhaka. The solstice festival familiarised the attendees with various astronomical phenomena and the role of science in our lives. This year, *Chokro* is again marking the Summer Solstice with similar educational activities at schools and institutions in the country.

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