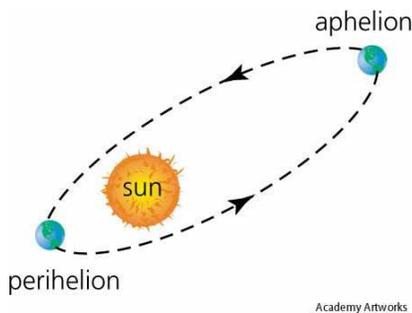


4th January, 2014 – Perihelion day

- *Earth at its closest point to sun*

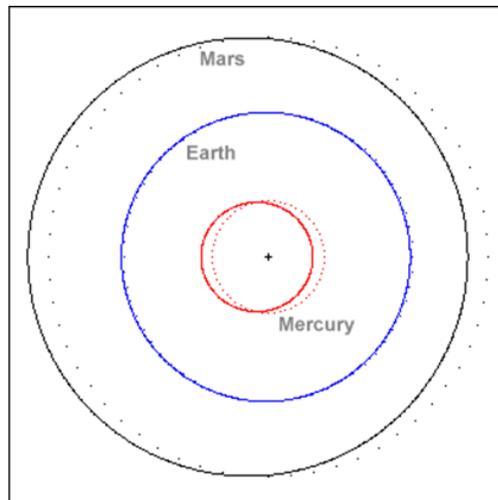
New Delhi 3rd January 2014: On January 4th at 11:59 hrs UT or at 17:29 hrs IST, the Earth will be at its closest point to the Sun (perihelion); the distance at that time is 147,098,291 km, which is about 5 million km closer than its farthest point in early July. The total energy received from sun by the globe on perihelion is around 7% more than what we receive when it is farthest to the sun (Aphelion). The word perihelion stems from the Greek words "peri," means near, and "helios," means the Greek god of the sun. Earth comes closest to the sun every year around January 3 and is farthest from the sun every year around July 4. When earth is closest to the sun, it is winter in the northern hemisphere and summer in the southern hemisphere.

Actually, our seasons are determined by the tilt of the Earth and not by how close the Earth is to the Sun. In January (perihelion) the land-crowded northern half of our planet is tilted away the Sun and the southern half are tilted towards the sun which is the summer time in Australia.



Johannes Kepler, a German astronomer, astrologer and mathematician proposed three laws of planetary motion and gave us insight into how these wanderers go around the sun, all planets in our solar system travel around the Sun in elliptical orbits. It's Kepler's 1st Law. Some planets go around sun in more elliptical orbit than others. Most planets follow orbits that are more elliptical than Earth's orbit. So in a sense earth's orbit is closest to being a circle in the whole solar family. Even then the slight deviation from a circle gives us two positions of earth when it's farthest and closest to sun.

The orbits of Mercury (red), Earth (blue) and Mars (black). The solid lines indicate each planet's elliptical path around the Sun. The dotted lines show circular paths with the same mean separation from the center. Earth is almost exactly the same distance from the Sun at aphelion and perihelion, but the orbits of Mars and Mercury depart significantly from a circle.



About SPACE Foundation

SPACE FOUNDATION CAME INTO EXISTENCE in 2001, with the goal of popularizing science and inculcating scientific temperament among masses specially students in India. Its aims and objectives are derived from the Constitution of India – Part IV-A Fundamental Duties of Citizen, Article 51 A (h), says – “*It shall be the duty of every citizen of India - to develop the scientific temper, humanism and the spirit of inquiry and reform*”. SPACE has been changing the face of Science and Astronomy awareness, education and innovation in India through path-breaking concepts, services and programs. We are constantly striving to use these programs to foster scientific temperament in society, especially among the youth who are the harbingers of our future. The ultimate intention is to create an intelligent, analytic and space savvy global community who will be the future leaders in man’s exploration of space and the universe, in a world that is rapidly heading to a space age. SPACE is also a part of the advisory panel for the restoration of our national heritage and scientific observatory Jantar Mantar.

Our Flagship Projects

- Project PARIDHI
- All India Asteroid Search Campaign- AIASC
- ISS Earth KAM (Earth Knowledge Acquired by Middle school students)
- Project Dark Skies
- Kalpna Chawla Quiz Contest
- Internet Telescope
- Project Khoj
- Heliodysey
- Hydro Rocketry Design Competition

For more information please log on to:

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