

OCTOBER 2021

ASTRO MONTHLY

The Newsletter of the Astronomy Club, IITK

SpaceX launched Inspiration4 15th Sept

Inspiration 4 was the first crewed orbital mission with no professional astronauts on board. The flight, dubbed "Inspiration4", was named to commemorate the four-person crew and their associated "pillars" of support for St. Jude Children's Research Hospital in Memphis, Tennessee: leadership, hope, generosity, and prosperity. Resilience and its four occupants circled Earth for three days before landing off the Florida Coast on September 18th.



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Landsat 9 Launch

27th Sept

Landsat 9 is an Earth Observation Satellite launched from space launch complex 3E at Vandenberg Space Force Base on an Atlas V 401 launch vehicle. Landsat 9 is expected to help study climate change and extend our ability to measure changes on the global land surface at a scale where we can separate human and natural causes of change.



© landsat.gsfc.nasa.gov

Autumn Equinox

23rd Sept

The September Equinox, which is called the “autumnal equinox” in the Northern Hemisphere and the “vernal equinox” in the Southern Hemisphere, marks the point where earth experiences equal lengths of day and night. The Sun crosses the Earth’s equator on this day.

During the equinox, the Sun crosses what we call the “celestial equator”—an imaginary extension of Earth’s equator line into space. The equinox occurs precisely when the Sun’s center passes through this line. When the Sun crosses the equator from north to south, this marks the autumnal equinox; when it crosses from south to north, this marks the vernal equinox.

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Mark Your Calendar

**Draconids
Meteor Shower**
6th to 8th October

Lucy Mission
16th October

**Orionids
Meteor Shower**
21st to 22nd October

**Mercury at Greatest
Western Elongation**
25th October

**Venus at Greatest
Eastern Elongation**
27th October

Prediction of Molecular Wind presence in Kuiper Belt and Gases beyond Kuiper Belt.

8th Sept

Astronomical objects with dimensions greater than 4 km still hold Carbon monoxide ice. Q. Kral et al. quantitatively analyzed and modeled the melting of CO ice. They predicted that CO is still produced at a rate of $2 \times 10^{-8} M_{\oplus} \text{ Myr}^{-1}$, and the solar wind blows them away from the Kuiper Belt. The model also predicted that a total mass of $\sim 2 \times 10^{-12} M_{\oplus}$ has blown away from the Kuiper Belt, 20 times the amount of CO ejection by the Hale-Bopp comet during its 1997 passage. They concluded the presence of gases in our Solar system. But, with the resolution of current instruments, the gas cannot be detected.

