International Space Station (ISS) Makes Rare Solar Transit over Chennai

The International Space Station (ISS) made a rare solar transit directly over Chennai, crossing the face of the Sun as viewed from Palavakkam for approximately 1.38 seconds.

A solar transit occurs when a celestial body or an artificial satellite passes directly along the line of sight between a terrestrial observer and the Sun, appearing as a dark silhouette traversing the solar photosphere.

KEY EXAM POINTS

- The entire crossing lasted only 1.38 seconds due to the station's orbital speed of ~27,600 km/h (7.66 km/s).
- Observed and recorded with solar filters from Palavakkam along Chennai's East Coast Road.
- Demonstrates precise orbital mechanics calculations required to position observation within narrow ground transit paths (often under 5 km wide).

DID YOU KNOW..!?

ISS was launched in 1998 as a collaborative orbital laboratory by NASA (USA), Roscosmos (Russia), ESA (Europe), JAXA (Japan), and CSA (Canada).

Orbit: Low Earth Orbit (LEO) at an altitude of approximately 400–420 km, completing ~15.5 orbits around Earth daily.

Syllabus Relevance: Relevance to Space science concepts and Tamil Nadu local scientific events.

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