

Aryabhata Research Institute of Observational Sciences (ARIES)

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In News: Aryabhata Research Institute of Observational Sciences (ARIES) has announced that it will organize a live telecast of the upcoming solar eclipse on social media.

Aryabhata Research Institute of Observational Sciences (ARIES)

- **Location:** It is situated at Manora Peak, in Nainital, Uttarakhand.
- **Established in:** 1954.
- It is one of the leading research Institutes which specializes in observational Astronomy & Astrophysics and Atmospheric Sciences.
- It is an autonomous institute of the Department of Science & Technology (DST), Government of India.
- The main research interests of Astronomy & Astrophysics division are in solar, planetary, stellar, galactic and extragalactic astronomy including stellar variabilities, X-ray binaries, star clusters, nearby galaxies, quasars, and inherently transient events like supernovae and highly energetic gamma ray bursts.
- The unique position of ARIES (79° East), places it at almost in the middle of 180° wide longitude band, between Canary Island (20° West) and Eastern Australia (157° East), and therefore complements observations which might not be possible from either of these two places.

Solar Eclipse

- A solar eclipse occurs when the moon (at the new moon

phase) blocks the solar disk partially or completely, leading to a partial, annular, and total solar eclipse, respectively.

- During the eclipse, the shadow of the moon falls on Earth and constitutes a darker region known as umbra and relatively less dark region, penumbra.
- Even though we have a new moon every month, we do not witness eclipses so often due to the fact that the orbit of the moon is inclined at an angle of around 5° with respect to the Earth-Sun plane which leads to the alignment of the Sun, Moon, and Earth as a rare astronomical phenomenon.