



03-09-2023 NEWS

Aditya L1

- The Aditya L1 spacecraft is equipped with seven different instruments to study changes in the Sun
- Four of them will be positioned in the opposite direction of the Sun and will carry out research activities.
- The other three instruments are to study the ion particles produced in the Sun's outer space by changes in the Sun

VELC

- The instrument, called the Visible Emission Line Coronagraph, will study the outer corona region of the Sun and the energy emitted from it.
- It can take 1440 photos per day. The instrument has been developed by the Indian Center for Space Physics in Bangalore in collaboration with ISRO

SUIT

- The instrument, called the Solar Ultraviolet Imaging Telescope, will study the UV rays emitted from the Sun's first two layers, the photosphere and chromosphere, and the variations in near-UV radiation.
- The instrument was designed by the Center for Space Research and Space Physics, Pune

SoLEXS& HelI 10S

- The instrument will study X-rays emitted from the Sun. In the same way, we can know the changes that occur through those rays
- The UR Rao Satellite Center in Bengaluru has manufactured these two separate instruments

ASPEX & PAPA

- Called the Aditya Solar Wind Particle Experiment & Plasma Analyzer Package for Aditya, the two instruments will study solar storms and their energetic ions.

Seaweed park in Ramanathapuram for the first time in the country at a cost of 128 crore rupees

- For the first time in the country, the foundation stone of a multi-purpose seaweed parks has been laid in Ramanathapuram district.
- A seaweed park is to be set up by the Department of Fisheries at Valamavur near Tirupalaikudi in Ramanathapuram District.
- Fishermen and fisherwomen from six districts will benefit from this park.
- The construction of the park is planned to be completed within 2 years.
- Kishan cards are being issued to fishermen like farmers.



- The ASPEx instrument was designed by the Physical Research Laboratory in Ahmedabad and the PAPA instrument by the Vikram Sarabhai Space Research Center in Thiruvananthapuram.

MAG

- The instrument called a magnetometer is capable of measuring the magnetic field at the point L 1 between the Sun and the Earth
- It has been developed by the Electro Optics Systems Laboratory in Bengaluru

Lagrange point

- The gravitational force and centripetal force between the orbiting planets are equal at five points
- The scientific world calls this the Lagrange point. Accordingly there are 5 Lagrange points between Sun and Earth
- At those points the spacecraft can be balanced using less fuel.
- According to this, Aditya spacecraft is going to stop near the L1 point, which is 15 lakh kilometers from the surface of the Earth.
- From here we can continue to observe the sun even during eclipses. This point changes every 23 days according to the cycle of the planets.
- Thus the spaceship operating from this location must also keep changing its position
- Aditya L 1 spacecraft designed to explore the outer part of the Sun was successfully launched by PSLV 57 rocket.
- The study of the solar system is important for the future living environment of humans.
- Because the Sun governs the evolution of all the planets including the Earth.
- An understanding of the events of the Sun is essential to know its changes.
- In particular, to know about the solar storms coming towards the Earth and to predict their impact, the studies on the Sun should be carried out continuously.
- ISRO announced Aditya L1 in January 2008 to probe the Sun at a distance of 15 crore kilometers from Earth.
- Scientists thought they could precisely study the Sun's hot corona from Lagrangian Point 1, 15 lakh kilometers from Earth.
- Aditya L1, India's first solar probe, weighs around 1475 kg. It is reported that its life span will last up to 5 years depending on fuel availability
- It is noteworthy that if this project is successful, India will occupy the fourth position in that order
- Magnetic storms from the Sun can affect our satellites and telecommunications networks
- Avoiding this would require early warning of magnetic storms in space weather. Aditya spacecraft will provide it to us. It is said that ISRO has spent 350 crore rupees for this project.

India ranks number one in coconut production

- Although India is the world's largest producer of coconuts, the number of coconut consumers is low
- India is the world's largest producer of coconuts, although Indonesia and the Philippines have the largest area under coconut cultivation.
- However, its use here is limited.