

IN STRATEGIC SPOT: The original mission was overhauled by former Isro chairman Rao

Aditya-L1 to join ESA observatory & Nasa probes

KALYAN RAY
NEW DELHI, DHNS

When Aditya-L1 reaches its slated parking slot after four months of a solitary voyage across deep space, the Indian Space Research Organisation (Isro) will be the third agency to occupy after the European Space Agency and Nasa — the two space giants that will rely on the Indian data to supplement their studies.

Indian astrophysicists hope to conduct front-line research with data from the unique solar observatory that itself underwent a transformation from a single instrument carrying a low-earth orbit probe named Aditya to a full-fledged Aditya-L1 observatory with seven instruments, thanks to former Isro chairman U R Rao, who overhauled the mission after discussions with scientists from several laboratories.

Going by its original proposal mooted over 15 years ago, the Aditya mission was to be a 110 kg payload carrying a single coronagraph in low-earth orbit.

But Rao dipped in to transform the project and encouraged the scientists to go for a much bigger Aditya-L1 mission with seven payloads at a steady



Isro's launch vehicle PSLV-C57 rocket carrying India's first solar mission, 'Aditya-L1', leaves a trail of smoke after its launch from the Satish Dhawan Space Centre, in Sriharikota on Saturday. PTI

vanage point to keep an eye on the sun around the clock.

A key reason to drop the low-earth orbit idea was that in such a position, there will be windows when the sun will be eclipsed interrupting continuous observation.

Rao, who retired as Isro chairman when the mission was first planned but remained active scientifically, suggested a bigger and more complex solar

problems. The Nasa probes are limited in their scope when compared against the Indian mission, which is to last for at least five years.

"Each instrument on board Aditya-L1 will try to observe something unique to supplement what is already known. There are several gap areas, which the Aditya-L1 mission hopes to fulfil," said Dipankar Banerjee, director of the Aryabhata Research Institute for Observational Sciences, Nainital, who was among scientists who first proposed a satellite for solar observations in 2006.

For instance, the observations to be carried out by the IAs Visible Emission Line Coronagraph or IUCCA's Solar Ultraviolet Imaging Telescope have never been tried before by any other agencies.

"The coronagraph will look at the sun from a close proximity and try to identify big solar storms whereas the UV telescope will take measurements that have never been tried from a space-based platform and also important for climate change perspective," said Banerjee.

The mission's planned objectives are casting new lights on complex solar activities like coronal mass ejections and monitoring the near-earth space environment.

Meet Nigar Shaji, project director of India's first solar mission

ET B SIVAPRIYAN
SRIHARIKOTA (AP), DHNS

Nigar Shaji, the Project Director of Aditya-L1, which soared successfully into the skies on Saturday, is a native of Shengottai, a town bordering Kerala, in the Tenkasi district of Tamil Nadu.

Nigar (59) studied at the SRM Government School in Sengottai and did her BE at the Tirunelveli Government Engineering College.

Nigar joins the likes of Mysiwamy Annadurai, M Vanitha, and P Veer-annuthuvel, the project directors of India's first, second and third lunar missions, respectively, as the head of the country's first observatory mission to the Sun, Aditya-L1 project.

Joining Isro in 1987, Shaji worked in several areas of the space agency, including in communication, satellite, design, and control systems. She was also the Associate Project Director of Resourcesat-2A, the Indian Remote Sensing Satellite for National Resource



Nigar Shaji

Nigar's brother S Sheik Saleem said the family was very proud of her achievements.

"We were tense since morning as we know things can go wrong anytime. But we were relieved when we saw the successful lift-off. It was a proud moment for us to see my sister making a speech from the podium," Saleem added. He said Nigar was a bright student since her school days and emerged as first in plus-two exams in Tenkasi Education District.