India creates another landmark: PM Modi on success of Aditya-L1

'Empowerment Gets A Boost As Women Join'

Surendra.Singh
@timesgroup.com

New Delhi: Prime Minister Narendra Modi hailed Isro scientists on Saturday for putting India's solar observatory Aditya-L1 in the halo orbit around the strategic Lagrange point L1 after a 127-day journey from Earth, saying "India creates yet another landmark".

President Droupadi Murmu, too, congratulated scientists for the mission, which is being led by project director Nigar Shaji. She said "significant participation of women scientists in Isro missions takes women empowerment too onto a higher orbit".

The PM wrote on X: "India's first solar observatory Aditya-L1 reaches its destination. It is a testament to the relentless dedication of our scientists in realising among the most complex and intricate space missions. I join the nation in applauding this extraordinary feat. We will continue to pursue new frontiers of science for the benefit of humanity."

Lauding the achievement, President Murmu said on X: "Another grand feat accomplished by Isro! As part of India's maiden solar mission, Aditya L1, the observatory has been placed in the final orbit and reached its destination at Lagrange Point 1."

"Congratulations to the entire Indian scientist community for the great achievement! (It) will enhance our knowledge of the Sun-Earth System and benefit.. humanity," she added.

Calling it "another milestone in Bharat's journey through space!!", Union home minister Amit Shah said it was a step towards achieving human welfare. Congress chief Mallikarjun Kharge said it was "an extraordinary milestone by our scientists".

PTI

File photo of Isro's PSLV-C57 carrying Aditya-L1, India's maiden solar mission spacecraft lifting off from in Sriharikota in Andhra Pradesh

Nigar Shaji: A gentle, smiling soul who led tough mission

Surendra.Singh
@timesgroup.com

New Delhi: Leading the complex scientific mission of putting India's first solar observatory Aditya-L1 at Langrang point from where the spacecraft will do the 'celestial surya namaskar' of the Sun is Isro's project director **Nigar Shaji**, a gentle and smiling soul, who had worked tirelessly on the mission with her team for eight years to make it a success.

Shaji, who joined the elite space agency in 1987, rose through the ranks to become the project director of India's first solar mission. The 59-year-old, who was earlier the associate project director of Resourcesat-2A, which is still operational, is also the programme director for all lower orbit and planetary missions. She started her stint in Isro by working at the Sriharikota spaceport off the Andhra coast and was later moved to the U R Rao Satellite Centre in Bengaluru, which is the key centre of developing satellites.

Born to a Muslim family in Tamil Nadu's Tenkasi district, Shaji did her schooling in Sengottai before getting admitted to the Government College of Engineering, Tirunelveli, where she earned an engineering degree in electronics and communications. Later, she did her master's in electronics from Birla Institute of Technology, Mesra.

Shaji's father Sheikh Meeran, a mathematics graduate who turned to farming by choice, always inspired her to do something big in life. "Both my parents were very supportive throughout my childhood," she said in a media interview.

Clearing any misconception about gender discrimination in the space agency, Shaji said she never faced any gender bias in Isro. It was due to the support of her seniors, she has been able to reach this position.

Aditya-L1 to get clear view of Sun after reaching halo orbit

▶Continued from Page 1

Precise navigation and control were paramount for HOI and required constant monitoring and adjustment of speed and position using onboard thrusters. The final phase of the intricate HOI manoeuvre involved a brief firing of control engines. With that, Aditya-L1 now resides in a periodic halo orbit, ensuring a continuous, unobstructed view of the Sun. The orbit, on the continuously moving Sun-Earth line and orbital period of about 177.8 Earth days, is three-dimensional, involving the Sun, Earth and a spacecraft.

"L1 offers several benefits, including a smooth Sun-spacecraft velocity change suitable for helioseismology... Being outside the Earth's magnetosphere allows for 'in situ' sampling of solar wind and particles, while continuous observation of the Sun and uninterrupted communication with ground stations are ensured," said a statement issued by Isro.

Aditya-L1, designed and realised at UR Rao Satellite Centre (URSC) with contributions from various Isro centres, carried payloads developed by the Indian Institute of Astrophysics (IIA), Bengaluru, Inter-University Centre for Astronomy and Astrophysics (IUCAA), Pune, and Isro.

To ensure compliance with HOI parameters, at least two trajectory corrective manoeuvres (TCMs) were conducted, on October 5 and December 14 last year. All payloads underwent thorough testing during the pre-commissioning phase, confirming satisfactory performance.

The spacecraft was launched on September 2, 2023, and put into an elliptical parking orbit (EPO) of 235.6km by 19,503km. From there, Aditya-L1 embarked on an extraordinary journey towards L1. "Five liquid engine burns were executed during the Earth orbit phase to gradually raise the apogee (farthest point from Earth) and attain the desired trajectory with the fifth burn, known as the trans-L1 injection (TL1I) manoeuvre," Isro added.

ANI

Students look at a display on Aditya-L1 in Kolkata on Saturday. The orbit, on the continuously moving Sun-Earth line and orbital period of about 177.8 Earth days, is three-dimensional, involving the Sun, Earth and a spacecraft