

A NEW HIGH: THE HINDU EDITORIAL ON THE ADITYA-L1 MISSION AND ISRO OUTREACH

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On January 6 evening, a stream of commands transmitted by scientists and engineers of the Indian Space Research Organisation (ISRO) were translated by a computer onboard the Aditya-L1 spacecraft into manoeuvres that guided it into orbit around an imaginary point in space. Thus, [Aditya-L1 reached its destination, around the L1 Lagrange point](#), from where it will have an unfettered view of the sun for its expected lifetime of five years. Aditya-L1 is an observatory-class solar mission that will study the sun with seven instruments: VELC, a coronagraph to study the uppermost layer of the sun's atmosphere; SUIT, an ultraviolet imaging telescope; SoLEXS and HELIOS, to study solar flares and coronal mass ejections; ASPEX and PAPA, to study the solar wind and plasma; and a set of digital magnetometers to measure properties of the magnetic field around the spacecraft. ISRO picked the L1 Lagrange point — 1.5 million km from the earth in the earth-sun direction and one of five Lagrange points in the earth-sun system — because the gravitational influences of the two bodies interact such that a smaller body here will not experience a net tug towards either. So, Aditya-L1 can stay at L1 while expending little fuel. Its scientific mission will begin in a month or so, once its thrusters' emissions drift away.

As such, Aditya-L1 supplements India's storied history of observing the sun — dating back to the Kodaikanal Solar Observatory, which commenced operations in 1901 — by lofting it into space. It also follows the [XPoSat mission](#), launched on January 1 to become only the world's second [X-ray polarimetry satellite](#), and eight years after AstroSat, which reached several highs of its own. An important issue with such achievements is public perception. For example, while Aditya-L1 and AstroSat are big strides from India's point of view, they pale in comparison to the imaging abilities of the James Webb Space Telescope, which is operated by three space agencies. Yet, many continue to expect the Indian spacecraft to capture hi-res photographs of the cosmos and are disillusioned when it does not. This is not fair (setting aside the fact that not all instruments are imagers). ISRO can do more, too, by expanding its own and its collaborating institutes' public outreach efforts, such as by hosting open days focused on specific missions and commissioning science communication on new results at regular intervals. Everyone should be able to celebrate a new high, but especially the people at large, so ISRO should also consider including components on missions that feed public interest. All these efforts will require funds, but considering the love ISRO has been getting from the government of late, it may just be a matter of asking.

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