

# 'India should aim to capture 20% of space ecosystem'

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IF India wants to become the largest economy, we need to change our role and approach and the country should aim to capture 20 percent of the space ecosystem. Space has become the fourth frontier and if Indians are to land on the Moon by 2040 we need to build our capability, along with a space station, said AS Kiran Kumar, Chairman Governing Council and Physical Research Laboratory Management Council and former Chairman, Indian Space Research Organisation.

He added that the real challenge is to use the available technology and build solutions today for the problems we might face tomorrow. Kumar was delivering a lecture on the Indian Space Programme on the occasion of the Indian Institute of Astrophysics (IIA)'s founding day, headquartered in Bengaluru. The Kodaikanal Solar Observatory (KSO) also completed 125 years of its establishment on Monday. KSO was the first to confirm the Evershed effect—the radial motion in sunspots and has been watching the sun for 125 years.

Speaking about India's capabilities, the Chairman said NISAR is being built with the most advanced technology suits. "Americans are spending over one billion dollars and India is spending around 100 million dollars. Despite the difference in investment India's payload will also be integrated with the satellite and we will be the one to launch it. This common mission was only possible after a level playing field was created post-Chandrayaan-1 and when India launched its radar satellite and their consequent success. This tells us that one needs to first demonstrate their capa-



bilities before others accept you," he said while speaking in Kodaikanal and live telecasted in Bengaluru.

Briefing about India's growth in different space missions, Kumar made an interesting point about how ISRO's missions are so cost-effective. "Our space agency has perfected the art of putting smaller weight objects closer to celestial bodies through its innovative approach that has helped complete five of its missions—the three Chandrayaan missions, the Mars Orbiter Mission and the recently launched Aditya-L1 satellite," he said.

Further explaining this unique approach he added that India's launch vehicles previously had limited capabilities. The idea was to first take the object close to the celestial body and make it orbit around it. "The satellite's capabilities were tested and as soon as the vehicle reached the perigee point of the elliptical orbit, adding a little velocity would make its apogee point go further on limited fuel. So by consecutively adding a small amount of energy, one can learn from this approach that much can be achieved with limited resources," Kumar said. He also briefly spoke about the space sector opening and inviting more private companies to contribute—paving the way for more innovations.