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Deep space exploration next, prepare for it: PM to scientists



Astronaut and Axiom-4 pilot Group Captain Shubhanshu Shukla at the Aryabhata Gallery after its inauguration in Delhi on Saturday. SONU MEHTA/HT PHOTO

NEW DELHI: Prime Minister Narendra Modi on Saturday encouraged India's space scientists to prepare for deep space exploration missions, saying the nation must venture beyond the Moon and Mars to unlock cosmic secrets that could benefit humanity's future.

Iso chairman V Narayanan echoed this ambitious vision, declaring that India now "rubs shoulders" with developed nations in space technology. Speaking at the National Space Day event, Narayanan hailed astronaut Shubhanshu Shukla's successful ISS mission as a major achievement. **—PH**

Deep space exploration next, prepare for it: PM

HT Correspondent

[letters@hindustantimes.com](#)

NEW DELHI: Prime Minister Narendra Modi on Saturday challenged India's space scientists to prepare for deep space exploration missions, declaring that the nation must venture beyond the Moon and Mars to unlock cosmic secrets that could benefit humanity's future.

Indian Space Research Organisation (Isro) chairman V Narayanan echoed this ambitious vision, declaring that India now "rubs shoulders" with developed nations in space technology—a remarkable transformation for a country that was "60 years behind the advanced spacefaring nations."

Speaking at the National Space Day event, Narayanan hailed astronaut Shubhanshu Shukla's successful International Space Station (ISS) mission as a major achievement while crediting fellow astronauts Prashanth Nair, Angad Prathap, and Ajit Krishnan—currently training with Shukla for Gaganyaan, India's maiden human space flight mission—for their contributions.

"One of the major achievements we have is sending our own Gaganyat to the ISS. It was the idea of the Prime Minister to send one of the Gaganyatris to ISS before sending them through our rocket," Narayanan said, emphasising that all four astronauts were "equal and on par."

The Isro chief outlined India's technological leap from its first 17-tonne capacity launch vehicle to the current 40-storey-tall rocket capable of carrying 2,600 tonnes, alongside key recent milestones including the Aditya L1 mission, SpaDeX docking, the 100th launch with GSLV-F15, and the NASA-Isro's Synthetic Aperture Radar missions.

Addressing the National Space Day gathering via video link, Modi announced plans to establish an astronaut pool for upcoming missions and urged young Indians to join this elite group. "We have reached the Moon and Mars. Now, we have to peek into deep space, where several secrets that would benefit the future of humanity lie hid-



Group Captains Shubhanshu Shukla and Prasanth Balakrishnan Nair, along with others, on the occasion of National Space Day 2025 in New Delhi on Saturday. ANI

den," the Prime Minister said.

Modi emphasised that achieving space milestones had become "a natural trait of India and its scientists," adding that breakthrough technologies such as electric propulsion and semi-cryogenic engines would soon enable the Gaganyaan mission and India's own space station.

The Prime Minister set ambitious targets for India's space sector, asking whether five astronauts could achieve unicorn status within five years and challenging scientists to reach a capacity of launching 50 rockets annually. "Beyond galaxies lies our horizon. The endless universe tells us that no frontier is the final frontier," Modi told the gathering of space scientists, students, and policymakers.

Astronaut Shukla described India as being in a "golden period" for space missions and called for collective national effort to realise future ambitions. "To realise our ambitions, we need the whole nation to bring them into reality," he said.

Nair noted growing global admiration for India's space programme, predicting that personnel from Japanese space stations, SpaceX, and the European Space Agency would fly with India in future Gaganyaan missions. "We bring creativity and

something totally different to the world," he said.

Angad Prathap emphasised human spaceflight as crucial for superpower status: "One of the key things that is stopping us from becoming a superpower is human space flight. Let's work together towards it."

Union minister of state for science and technology Jitendra Singh revealed the secretive genesis of the Gaganyaan mission, first conceptualised in 2018. "We made a religious promise to each other that we won't utter a word about this until the Prime Minister announces the decision from the ramparts of Red Fort," he said, explaining that a Red Fort announcement becomes "a declaration of intent and the whole world notices it."

Singh noted that the Axiom-4 mission came as an invitation to India, reflecting global recognition of Indian capabilities. "They now started valuing Indian talent and capabilities," he said.

India's space technology played a significant role in Operation Sindoor, he said. "The opportunity to test such warfare technology comes rarely, and Operation Sindoor gave us that opportunity to test it in Pakistan's land," Singh said, adding that this capacity was achieved only in the last ten years.

NCERT RELEASES TWO MODULES ON INDIA'S SPACE PROGRAMMES

Sanjay Maurya

[letters@hindustantimes.com](#)

NEW DELHI: The National Council of Educational Research and Training (NCERT) on Saturday released two special modules on India's space programmes, tracing the nation's journey from transporting rockets on bicycles and bullock carts in the 1960s to emerging as a global leader in cost-effective space exploration with landmark missions like Chandrayaan-3 and Aditya-L1.

Marking National Space Day 2025, the council released two special modules on India's space journey—one for the middle stage (Classes 6 to 8) and another for the secondary stage (Classes 9 to 12), aimed at instilling curiosity and innovation in the next generation of space enthusiasts.

The special modules highlight the country's achievements from early innovations, modern-day achievements to upcoming Gaganyaan and Chandrayaan-4 missions. They also introduce students to Group Captain Shubhanshu Shukla, the first Indian astronaut to reach the International Space Station (ISS).

The modules, titled "India: A Rising Space Power", open with Prime Minister Narendra Modi's words from his address at the ISL-V-C23 launch in Sriharikota. "Space may seem distant, but it is an integral part of our daily life. It drives modern communication and connects even the remotest family to the ordinary. India's space programme is a perfect example of our vision of scale, speed and skill."

Both modules contain photographs, diagrams and timelines of India's space missions to help students understand the nation's space journey.

"NCERT modules are supplementary publications in English and Hindi that cover contemporary and culturally significant topics that are not part of the regular textbooks."