SRM University's satellite to take to the skies

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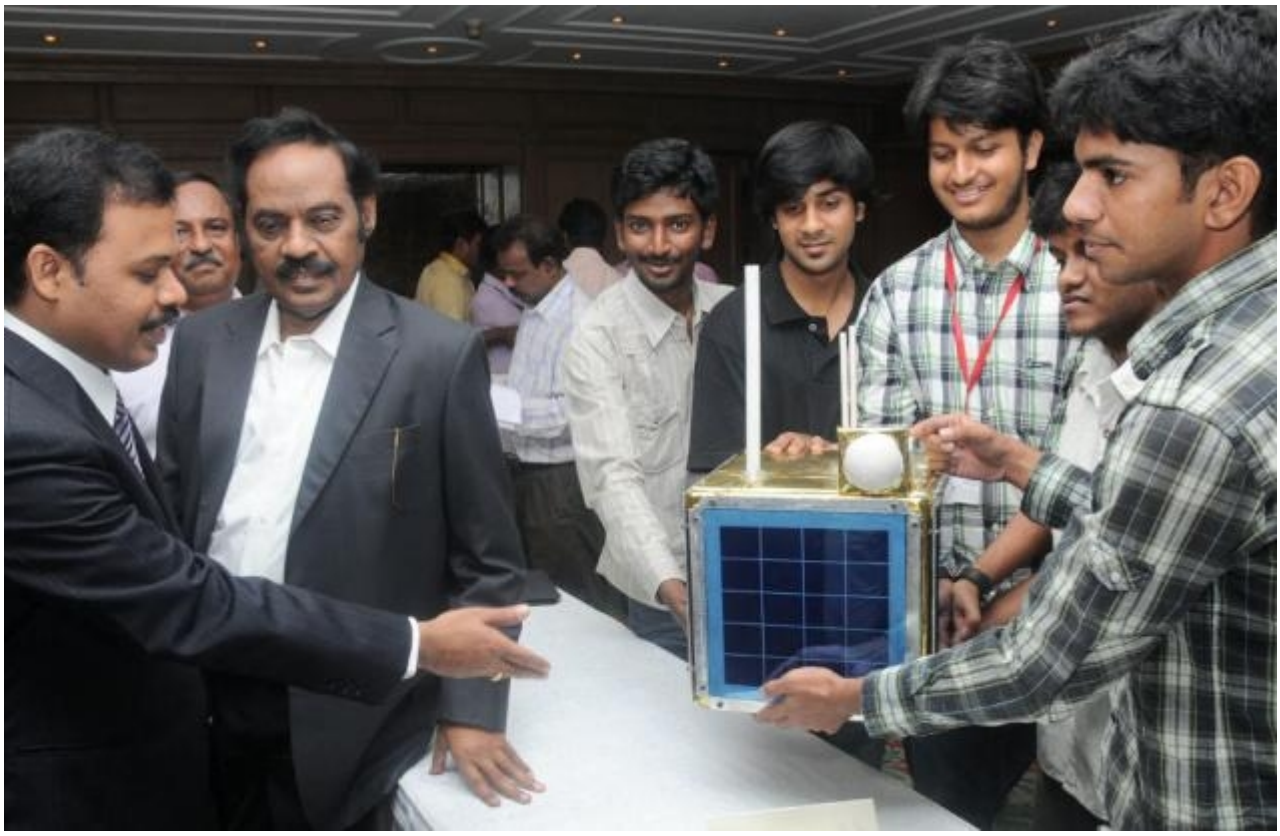

Students of SRM University explaining the features of SRMSAT to be launched along with Megha-Tropiques satellite, on board PSLV-C18, to university president P. Sathyanarayanan and Chancellor T.R. Pachamuthu in Chennai on Monday. Photo: M. Vedhan

As the PSLV-C18 carrying Megha-Tropiques, an Indo-French venture to study the atmosphere in the tropical regions, blasts off from Satish Dhawan Space Centre at Sriharikota on October 12, students will be holding their breath at the ground station at SRM University in the city outskirts.

Along with Megha-Tropiques, SRMSAT, a nano-satellite, to monitor the green house gases, carbon-dioxide and water vapour in the tropics using a grating spectrometer will be launched.

“Fifty students were involved in design and development of SRMSAT, one of the first nano-satellites to be launched by a private university in the country,” said P. Sathyanarayanan, president, SRM University.

“There is a dedicated lab at the university. All the students involved in the project worked at the lab, after college hours, for the past two years, choosing to stay late in the night designing and testing each and every instrument,” says L.B. Vishal, a mechanical engineering student.

When they found that the power amplifier on board was dissipating heat, the students came up with heat sinks. Likewise, communication systems were arrived at after a lot of simulation. Students of 12 departments began work on the satellite with the survey of literature and Loganathan, a former ISRO scientist and product architect of space systems at the university, was available 24x7 to make the dream project a reality. ISRO scientists conducted a review of the project every month and gave insights.

Of cuboid model, the nano-satellite weighs 10.4 kg with three solar panels and was made at a cost of Rs.1.5 crore. The grating spectrometer will monitor earth-based sources and sinks of green house gases for the next two years.

Already in place, the ground station consists of two Yagi-Uda antennae with low noise amplifiers and Trans-receiver and auto tracking is through a satellite tracking programme. “The ground station has been tested by tracking the existing satellites,” says D. Narayana Rao, Director, Research.

“The University is in talks with ISRO to start a Centre for Space Sciences in its Chennai campus. It will take six months to crystallize,” Mr. Sathyanarayanan said. University Chancellor T.R. Pachamuthu and Vice-Chancellor M. Ponnavaikko were present.