

ISRO touches new heights-Wins national award

Feature
Indian Space Research Organization

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On the 24th September 2014, India created history by becoming the first country in the world to enter the Mars orbit in the very first attempt. Its Mars orbiter mission also called 'Mangalyan', was placed successfully in the orbit of the red planet on this day. India thus joined the elite club of the countries exploring Mars—US, Russia and Europe. It has also become the first Asian country to reach Mars planet.

While all other countries including the US and Russia, had to face initial failures, India did it in one go. The whole operation was watched keenly by the scientists across the world.

The Organization behind achieving this fete is the Indian Space Research Organization, ISRO. To its credit, besides other achievements, is also the unmanned moon mission 'Chanderyan 1', which was launched in 2008 for scientific exploration- to map the moon's surface and look for precious metals. The head of the organization Dr. K.Radhakrishnan says that its second moon mission 'Chandrayaan 2', was also in the pipeline. "In this area of scientific exploration, we have of course the 'Chandrayaan 2', with the Indian lander and the Indian rover, which are to be put in place in another three years' time," he said. According to him "What we are now looking for is a major scientific mission and, when that can happen will depend upon the mission, could be 2018 or 2020.

No wonder then that ISRO has been chosen for this year's Indira Gandhi prize for Peace, Disarmament and Development. It has been chosen for the award for strengthening international cooperation in peaceful uses of outer space.

India's space activities which started in early 60's from Thumba in Thiruvananthapuram have come a long way since then. The immense potential of space technology in national development was first realized by Dr. Vikram Sarabhai who firmly believed that this powerful technology could play a meaningful role in solving the problems of the common man. He had said "We are convinced that if we are to play a meaningful role nationally, and in the comity of nations, we must be second to none in the application of advanced technologies to the real problems of man and society".

Initially, the space programme focused on achieving self- reliance by developing capability to build and launch communication satellites for television broadcasts, telecommunications and meteorological applications as also remote sensing satellites for management of natural resources. In keeping with objective of ISRO to develop space technology and its application to nation building, it has operationalized two major satellite systems. One is called Indian National Satellite (INSAT) and the other Indian Remote Sensing (IRS). The first one is used for communication services while the other is for management of natural resources. ISRO uses Geostationary Satellite Launch Vehicles (GSLV) for INSAT type satellites and Polar Satellite Launch vehicles for launching IRS type satellites. Its PSLV-C26 successfully launched IRNSS-1C, the third satellite in the Indian regional Navigational satellite system on October 16 from Satish Dhavan Space Centre, Sriharikota at which the Prime Minister Mr. Narendra Modi congratulated ISRO scientists. He described the occasion as a "matter of immense pride and joy". IRNSS is an independent regional navigation satellite system designed to provide position information in the Indian region and 1500 km. around the Indian mainland.

On December 21st ISRO successfully test fired GSLV mark III to earn yet applause by the Prime Minister. With this launch, India is now capable of sending astronauts into the space. It can double the capacity of payloads which it can carry into space and place up to 4 tonnes of communication satellites into space. India has thus become a major player in the multibillion dollar competitive market of commercial launch market.

Prime Minister Mr .Narendra modi has made it clear that he wants to expand the Indian space programme. Accordingly, the budget for space research has been increased by 50 percent to \$ 1 billion this financial year. In June this year the Prime Minister had asked ISRO to develop a satellite that would serve all SAARC nations. During his Myanmar visit he announced that the services of SAARC satellite will be extended to Myanmar also. This will be beneficial, among others, in the fields of health, telemedicine, and long distance education.

In the words of K. Radhakrishnan India's Mars Orbiter Mission (MOM), powered by smart satellites, has shown the world the way of doing things differently without making any sacrifice on the quality in space mission. Primarily a technological mission, Mars Orbiter Mission is India's first interplanetary mission to planet Mars. The orbiter craft has been designed to orbit Mars in an elliptical orbit. One of its main objectives is to develop the technologies required for design, planning, management and operations of an interplanetary mission.

The success of the Mars Orbiter Mission has been lauded also for its low price tag of \$74 million. The Chandrayaan-1 (India's first unmanned moon probe), which cost \$79 million, was launched to map the moon's surface and look for precious metals. The 'Mangalyan' was built with most of its parts manufactured indigenously.

The application of satellites for human welfare has also been quite impressive. For instance, INSAT-3D, which became operational in January this year, played an important role in tracking Cyclone Hudhud which hit the east coast of India in October last. During Cyclone Phailin, which hit east coast at the same time last year, images from Kalpana played a vital role.

India's space programme is thus set to move from one milestone to another and thus realize the dreams of Dr. Vikram Sarabhai – the father of country's space programme.

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