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ISRO, Norway and the 'Svalbard mission'

Tiki Rajwi
THIRUVANANTHAPURAM

On November 20, 1997, a Rohini RH-300 Mk-II sounding rocket rose to the skies from Svalbard, Norway, operationalising a new rocket launching range there. The solid propellant-powered rocket was shipped from India for the launch, while four senior hands of the Indian Space Research Organisation (ISRO) were specially flown to Norway to make sure everything went off all right.

The resolve to deepen space sector ties between India and Norway following Norwegian Ambassador Hans Jacob Frydenlund's visit to the ISRO headquarters last week offers an occasion to recall this challenging mission which took place 26 years ago at Ny-Alesund, Svalbard.

"The RH-300 Mk-II was given a new name by the NSC (Norwegian Space Centre): Isbjorn-1, which translates literally as 'Polar Bear-I.' If we love our royal Bengal tigers, they love their polar bears!", ISRO veterans P.V. Manoranjan Rao and P. Radhakrishnan have recalled in their 2012 book, '*A Brief History of Rocketry in ISRO*.'

On the technical side, the Norway mission presented unique challenges for ISRO. The Rohini rockets had till then flown only in the tropical hot and humid conditions in India. "The Svalbard archipelago, on the other hand, sits in the Arctic Ocean and temperatures were on the extremely low side," says Mr. Dathan, who was managing the solid propellant plant at VSSC back then. (Mr. Dathan later became Director, VSSC. He is presently Mentor (Science) to Kerala Chief Minister Pinarayi Vijayan).

The Norway mission in 1997 presented unique challenges for ISRO as the Rohini rockets had till then flown only in India

ISRO had shipped the RH-300 Mk-II to Norway after qualifying it for arctic weather conditions. Renamed Isbjorn-1, it lifted off at 11:07 p.m. IST on November 20, 1997. The rocket, unfortunately, did not achieve the predicted height, rising only up to 71 km. The reason was a strange one. To keep the ambient temperature at 18 degrees celsius, it was kept covered with a velostat shroud. The idea was that it would pierce through the cover during launch. Instead, the rocket dragged it along, and the increased drag resulted in a lower altitude.

Nevertheless, the Norwegian scientists seemed quite happy with the launch, for the data collected during the flight led to some new findings. "Well that is space science," notes '*A Brief History of Rocketry in ISRO*,' adding that the launch marked a new era of cooperation between the two countries in space research.