

India Successfully Launches PSLV-C23

India on 30th June, 2014, successfully launched five foreign satellites from four countries on board PSLV-C23 rocket which placed them in orbit, an achievement described by Prime Minister Narendra Modi as an 'endorsement' of the country's space capabilities.

After a perfect lift off from the First Launch Pad in Satish Dhawan Space Centre here at 9.52 AM, Indian Space Research Organisation's workhorse Polar Satellite Launch Vehicle PSLV-C23 placed all five satellites into their intended orbits, one after the other between 17 and 19 minutes after liftoff, in textbook precision.



The PSLV-C23 carried a 714 kg French Earth Observation Satellite SPOT-7 as its main payload while a 14 kg satellite called AISAT of Germany, two 15 kg satellites from Canada CAN-X4 and CAN-X5 and seven kg Singapore satellite called VELOX-1 as piggy back payload on the flight.

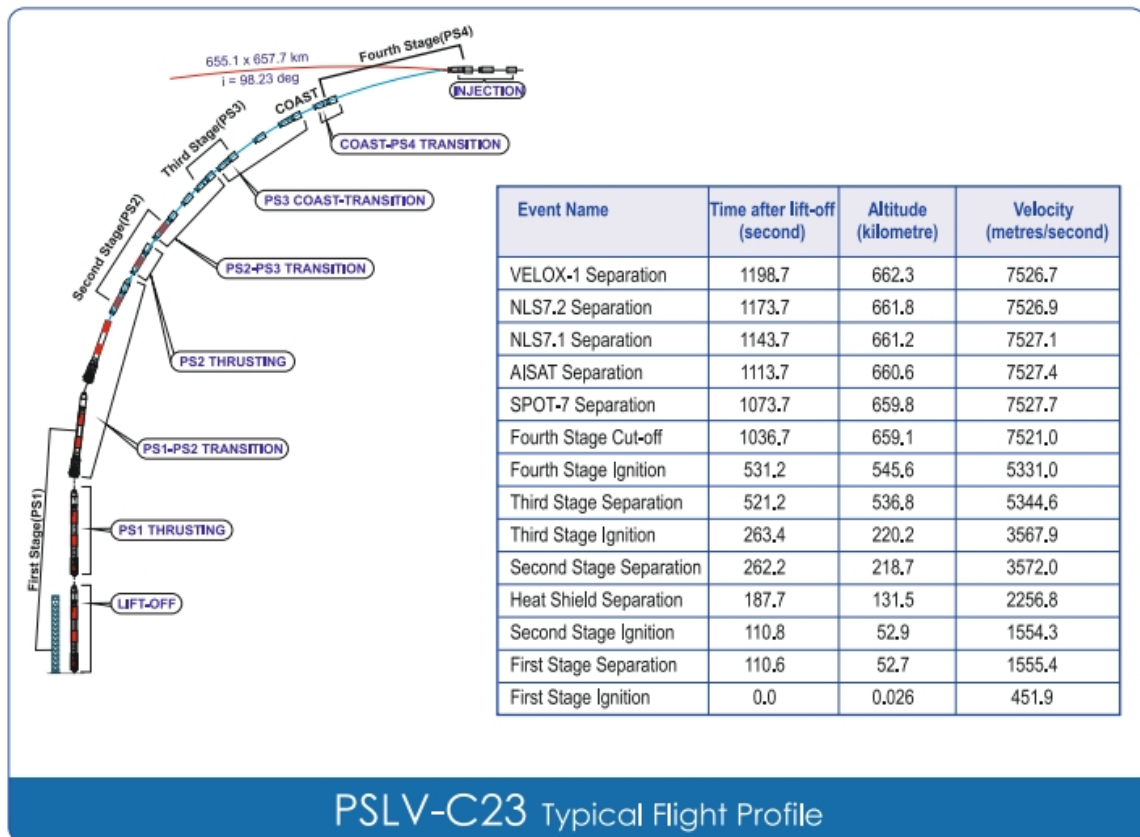
French satellite SPOT 7, identical to SPOT-6, which ISRO had launched in 2012, would be placed diametrically opposite to SPOT-6, forming part of the existing Earth observation satellite. European space technology company Airbus Defence and Space has built SPOT-7.

The five satellites were launched under commercial arrangements that ANTRIX (ISRO's commercial arm) entered with the respective foreign agencies.

Germany's AISAT satellite would focus on the global sea-traffic monitoring system with special emphasis on high traffic zones using AIS signals. It is also Germany's first DLR satellite in the nano-satellite class.

NLS 7.1 and NLS 7.2 are from the University of Toronto, Institute of Aerospace Studies/ Space Flight Laboratory in Canada. Both payloads would perform Two-spacecraft precision formation flying using differential GPS with centimetre-level relative position and sub-metre level accurate position control system.

Satellite VELOX-1 from Nanyang Technological University, Singapore is a technology demonstrator for in-house design of image sensor, MEMS-based attitude determination and control system and inter-satellite RF link.



The commercial launch comes nearly 16 months after ISRO launched six small foreign satellites on board the PSLV C-20 in February 2013. There had been 26 continuously successful flights of PSLV, till June 2014. PSLV has repeatedly proved its reliability and versatility by launching 70 satellites / spacecrafts (30 Indian and 40 Foreign Satellites) into a variety of orbits so far. Some notable payloads launched by PSLV include India's Chandrayaan-1 lunar probe and the Mars Orbiter Mission.

The Polar Satellite Launch Vehicle, usually known by its abbreviation PSLV is the first operational launch vehicle of ISRO. PSLV is capable of launching 1600 kg satellites in 620 km sun-synchronous polar orbit and 1050 kg satellite in geosynchronous transfer orbit. Until the advent of the PSLV, this service was commercially available only from Russia.

Launch Vehicles are used to transport and put satellites or spacecrafts into space. In India, the launch vehicles development programme began in the early 1970s. The first experimental Satellite Launch Vehicle (SLV-3) was developed in 1980. An Augmented version of this, ASLV, was launched successfully in 1992. India has made tremendous strides in launch vehicle technology to achieve self-reliance in satellite launch vehicle programme with the operationalisation of Polar Satellite Launch Vehicle (PSLV) and Geosynchronous Satellite Launch Vehicle (GSLV).

(Source : PTI & ISRO)