

**GOVERNMENT OF INDIA  
SPACE  
LOK SABHA**

UNSTARRED QUESTION NO:1829  
ANSWERED ON:10.08.2011  
FAILURES OF GSLV  
Naik Dr. Sanjeev Ganesh;Sule Supriya

**Will the Minister of SPACE be pleased to state:**

- (a) whether the Committee appointed to analyze the failures of Geosynchronous Satellite Launch Vehicle (GSLV) has submitted its report;
- (b) if so, the details thereof;
- (c) whether the second Indian Moon Mission Chandrayaan-II expected to be flown by GSLV in 2013 is likely to be delayed; and
- (d) if so, the steps proposed to be taken to ensure that Chandrayaan-II is not adversely affected?

**Answer**

MINISTER OF STATE IN THE MINISTRY PERSONNEL, PG & PENSIONS AND IN THE PRIME MINISTER'S OFFICE(SHRI V. NARAYANASAMY):

(a) Yes, Sir.

(b) The first unsuccessful mission of GSLV was the launch of GSLV-F02 with Russian Cryogenic upper stage, on July 10, 2006. The primary cause of mission failure has been the loss of thrust in one of the liquid strap-on motor of the first stage. The anomalous behavior was attributed to the malfunctioning of propellant regulator of the gas generator system in this strap-on motor. Based on the recommendations of the Failure Analysis Committee, independent inspection and quality checks by in-house agencies for all critical components and sub-assemblies upon receipt from industries have been introduced.

The second unsuccessful launch of GSLV was the flight of GSLV-D3 with Indigenous Cryogenic Upper Stage on April 15, 2010. The mission failed as the Indigenous Cryogenic engine after its ignition couldn't sustain the combustion beyond 1 second. Based on the recommendations of the Failure Analysis committee, comprehensive test procedures to verify health of all flight systems/components of the Indigenous Cryogenic Upper Stage has been introduced.

The third unsuccessful launch of GSLV has been the flight of GSLV-F06 on December 25, 2010. The reason for the unsuccessful launch of GSLV-F06 has been the untimely and inadvertent snapping of a group of 10 connectors located at the bottom portion (shroud) of the Russian Cryogenic Stage. Based on the recommendations of the committee, redesign of the shroud, revisit of the connector mounting scheme, additional wind tunnel testing etc are being addressed.

(c) Chandrayaan-II is an Indo-Russian joint mission wherein India will develop the Orbiter and Rover module and the Lander module will be by the Russian side. Launch of Chandrayaan-II, the second Indian Moon Mission, is expected to be flown by GSLV, during the 2013-14 time period.

(d) All necessary steps viz. next test flight of GSLV with indigenous cryogenic stage; timely development and realization of various modules of Chandrayaan-II, are taken up, to ensure that the schedule for Chandrayaan-II is not adversely affected.