

**GOVERNMENT OF INDIA
DEPARTMENT OF SPACE**

**LOK SABHA
STARRED QUESTION NO.41**

TO BE ANSWERED ON WEDNESDAY, JULY 19, 2017

LAUNCH OF NANO SATELLITES

***41. SHRI SATAV RAJEEV:**

SHRI P.R. SUNDARAM:

Will the PRIME MINISTER be pleased to state:

- (a) whether the Indian Space Research Organisation (ISRO) placed 30 nano satellites and an earth observation satellite Cartosat-2 in a single launch by its Polar Satellite Launch Vehicle PSLV C-38 and if so, the details thereof;**
- (b) whether majority of satellites were from foreign countries and if so, the details thereof;**
- (c) the foreign exchange earned out of this satellite launch;**
- (d) whether ISRO has taken steps to protect these satellites from space debris once they are made functional; and**
- (e) if so, the details thereof?**

ANSWER

**MINISTER OF STATE IN THE MINISTRY OF PERSONNEL, PG &
PENSIONS AND IN THE PRIME MINISTER'S OFFICE**

(DR. JITENDRA SINGH):

(a) to (e) A Statement is laid on the Table of the House.

STATEMENT LAID ON THE TABLE OF THE LOK SABHA IN REPLY TO STARRED QUESTION NO.41 REGARDING “LAUNCH OF NANO SATELLITES” ASKED BY SHRI SATAV RAJEEV AND SHRI P.R. SUNDARAM FOR ANSWER ON WEDNESDAY, JULY 19, 2017.

(a) Yes, Madam. Indian Space Research Organisation (ISRO) has successfully launched an Indian earth observation satellite ‘Cartosat-2 series’ (weighing 712 kg) as primary payload on-board its Polar Satellite Launch Vehicle (PSLV-C38) on June 23, 2017 at 09:29 hrs along with 30 Nano satellites (total weighing 243 kg) in a single launch from Satish Dhawan Space Centre (SDSC), Sriharikota.

The Cartosat-2 series satellite provides high resolution images of earth’s surface at sub-meter resolution (Black & White image) and at 2-meter resolution (4-band colored image) for large scale mapping applications.

Out of these 30 Nano satellites, 29 satellites from 14 foreign countries were launched under commercial arrangement between Antrix Corporation Limited (Antrix), the commercial arm of ISRO and the foreign customers. One Nano satellite NIUSAT (weighing 15 kg) was from Noorul Islam University, Tamil Nadu.

(b) Yes, Madam. Out of these 30 Nano satellites, 29 satellites were from 14 foreign countries viz. Austria (1), Belgium (3), Chile (1), Czech Republic (1), France (1), Finland (1), Germany (1),

Italy (3), Japan (1), Latvia (1), Lithuania (1), Slovakia (1), UK (3) and USA (10).

(c) Antrix has earned foreign exchange of about 6.1 Million Euro through launching of the 29 Nano satellites.

(d) & (e)

ISRO has taken measures to protect its operational satellites from space debris by carrying out (i) collision avoidance studies for all launch vehicles of ISRO to clear lift-off time; and (ii) space object proximity analysis on a daily basis to assess close conjunction with other space objects, in particular, of those objects identified by Inter-Agency Space Debris Coordination Committee (IADC). The foreign satellites have reported satisfactory reception of signal after the launch and are monitored by respective customers.
