

**GOVERNMENT OF INDIA  
DEPARTMENT OF SPACE**

**LOK SABHA  
STARRED QUESTION NO. 14**

**TO BE ANSWERED ON WEDNESDAY, FEBRUARY 24, 2016**

**LAUNCH OF SATELLITES**

**\*14. SHRI A.ARUNMOZHITHEVAN:**

**Will the PRIME MINISTER be pleased to state:**

- (a) the details of the satellites launched by the Indian Space Research Organisation (ISRO) during the year 2015 and the ones lined up for 2016;**
- (b) the details of the foreign satellites therein;**
- (c) whether ISRO is contemplating a solar mission to study the Sun and if so, the details thereof;**
- (d) whether the Antrix Corporation has signed agreements with other countries for launch of satellites; 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.14 REGARDING “LAUNCH OF SATELLITES” ASKED BY SHRI A.ARUNMOZHITHEVAN FOR ANSWER ON WEDNESDAY FEBRUARY 24, 2016.**

- (a) During the year 2015, Indian Space Research Organization (ISRO) has launched 4 Indian satellites (weighing about 8500 Kg) and 17 foreign satellites (weighing about 2100 Kg) from five countries. ISRO proposes to launch 8 Indian satellites (weighing about 12000 Kg) and 19 foreign satellites (weighing about 850 Kg) from five countries in the year 2016. The details are enclosed in Annexure-I.**
- (b) The 17 foreign satellites from five countries (Canada , Indonesia, Singapore, United Kingdom and USA) were launched during the year 2015 on-board ISRO’s Polar Satellite Launch Vehicle (PSLV) from Sriharikota, under commercial agreements between Antrix Corporation Limited (Antrix) and respective foreign customer. The 19 foreign satellites from five countries (Algeria, Canada, Germany, Indonesia and USA) are proposed to be launched in the year 2016.**
- (c) Yes Madam. ISRO is working towards the development, realization and launch of the first Indian solar mission, Aditya-L1. In this mission, Aditya-L1 satellite will be placed in a halo orbit around the Sun-Earth Lagrangian point-1 (L1), which is about 1.5 million kilometer from the Earth. The primary objective of the mission is to study the solar corona in different wavebands.**
- (d) Yes Madam.**

**(e) Antrix Corporation Limited has signed agreements with customers from 7 (seven) countries for launching 25 satellites viz., Algeria (3), Canada (3), Germany (4), Indonesia (1), Japan (1), Malaysia (1) and USA (12), on-board PSLV, during 2016-17 time period.**

**\*\*\*\*\***

## ANNEXURE-I

<b>DETAILS OF INDIAN SATELLITES LAUNCHED DURING THE YEAR 2015</b>			
<b>SN</b>	<b>Satellite</b>	<b>Launch Date</b>	<b>Purpose of Satellite</b>
<b>1.</b>	<b>IRNSS-1D</b>	<b>28-03-2015</b>	<b>Navigation</b>
<b>2.</b>	<b>GSAT-6</b>	<b>27-08-2015</b>	<b>Communication</b>
<b>3.</b>	<b>ASTROSAT</b>	<b>28-09-2015</b>	<b>Space Science</b>
<b>4.</b>	<b>GSAT-15*</b>	<b>11-11-2015</b>	<b>Communication</b>
<i>* Procured Launch using foreign launcher</i>			

<b>DETAILS OF FOREIGN SATELLITES LAUNCHED DURING THE YEAR 2015</b>				
<b>SN</b>	<b>Satellite</b>	<b>Country</b>	<b>Mass (kg)</b>	<b>Date of Launch</b>
<b>1</b>	<b>DMC-3/1</b>	<b>United Kingdom</b>	<b>447</b>	<b>10/07/2015</b>
<b>2</b>	<b>DMC-3/2</b>		<b>447</b>	
<b>3</b>	<b>DMC-3/3</b>		<b>447</b>	
<b>4</b>	<b>CBNT-1</b>		<b>91</b>	
<b>5</b>	<b>De-orbitsail</b>		<b>7</b>	
<b>6</b>	<b>LAPAN-A2</b>	<b>Indonesia</b>	<b>76</b>	<b>28/09/2015</b>
<b>7</b>	<b>NLS-14</b>	<b>Canada</b>	<b>14</b>	<b>28/09/2015</b>
<b>8</b>	<b>LEMUR-2/1</b>	<b>USA</b>	<b>7</b>	<b>28/09/2015</b>
<b>9</b>	<b>LEMUR-2/2</b>		<b>7</b>	
<b>10</b>	<b>LEMUR-2/3</b>		<b>7</b>	
<b>11</b>	<b>LEMUR-2/4</b>		<b>7</b>	
<b>12</b>	<b>TeLEOS-1</b>	<b>Singapore</b>	<b>400</b>	<b>16/12/2015</b>
<b>13</b>	<b>VELOX-C1</b>		<b>123</b>	
<b>14</b>	<b>KentRidge-1</b>		<b>78</b>	
<b>15</b>	<b>VELOX-II</b>		<b>13</b>	
<b>16</b>	<b>Athenoxat-1</b>		<b>7</b>	
<b>17</b>	<b>Galassia</b>		<b>4</b>	

<b>INDIAN SATELLITES PROPOSED TO BE LAUNCHED IN THE YEAR 2016</b>		
<b>SN</b>	<b>Satellite</b>	<b>Purpose of Satellite</b>
<b>1.</b>	<b>IRNSS-1E (Already Launched)</b>	<b>Navigation</b>
<b>2.</b>	<b>IRNSS-1F</b>	<b>Navigation</b>
<b>3.</b>	<b>IRNSS-1G</b>	<b>Navigation</b>
<b>4.</b>	<b>CARTOSAT-2C</b>	<b>Earth Observation</b>
<b>5.</b>	<b>GSAT-18*</b>	<b>Communication</b>
<b>6.</b>	<b>SCATSAT-1</b>	<b>Wind vector measurements</b>
<b>7.</b>	<b>RESOURCESAT-2A</b>	<b>Earth Observation</b>
<b>8.</b>	<b>INSAT-3DR</b>	<b>Meteorology</b>
<i>* Procured Launch using foreign launcher</i>		

<b>FOREIGN SATELLITES PROPOSED FOR LAUNCH IN THE YEAR 2016</b>			
<b>SN</b>	<b>Satellite</b>	<b>Country</b>	<b>Mass (kg)</b>
<b>1</b>	<b>BIROS</b>	<b>Germany</b>	<b>135</b>
<b>2</b>	<b>SkySat-Gen2-1</b>	<b>USA</b>	<b>110</b>
<b>3</b>	<b>LAPAN-A3</b>	<b>Indonesia</b>	<b>120</b>
<b>4</b>	<b>M3M</b>	<b>Canada</b>	<b>85</b>
<b>5</b>	<b>Maxvalier</b>	<b>Germany</b>	<b>20</b>
<b>6</b>	<b>Venta-1</b>	<b>Germany</b>	
<b>7</b>	<b>GHGSat-D</b>	<b>Canada</b>	<b>28</b>
<b>8</b>	<b>DOVE</b>	<b>USA</b>	<b>27</b>
<b>9</b>	<b>DOVE</b>		
<b>10</b>	<b>DOVE</b>		
<b>11</b>	<b>DOVE</b>		
<b>12</b>	<b>DOVE</b>	<b>USA</b>	<b>30</b>
<b>13</b>	<b>DOVE</b>		
<b>14</b>	<b>DOVE</b>		

**FOREIGN SATELLITES PROPOSED FOR LAUNCH IN THE YEAR 2016**

<b>SN</b>	<b>Satellite</b>	<b>Country</b>	<b>Mass (kg)</b>
<b>15</b>	<b>DOVE</b>		
<b>16</b>	<b>ALSAT-2B</b>	<b>Algeria</b>	<b>120</b>
<b>17</b>	<b>ALSAT-1B</b>		<b>110</b>
<b>18</b>	<b>ALSAT-1N</b>		<b>7</b>
<b>19</b>	<b>Pathfinder-1</b>	<b>USA</b>	<b>50</b>