



**Secretariat**

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**Committee on the Peaceful Uses  
of Outer Space**

**Information furnished in conformity with the Convention  
on Registration of Objects Launched into Outer Space**

**Note verbale dated 28 August 2012 from the Permanent Mission  
of Italy to the United Nations (Vienna) addressed to the  
Secretary-General**

The Permanent Mission of Italy to the United Nations (Vienna) presents its compliments to the Secretary-General of the United Nations and, in accordance with article IV of the Convention on Registration of Objects Launched into Outer Space (General Assembly resolution 3235 (XXIX), annex), has the honour to transmit information on Italian space objects LARES and ALMaSat-1 (see annex).



## Annex

### Registration data on space objects launched by Italy\*

#### Laser Relativity Satellite (LARES)

International designator:	2012-006A
Name of space object:	Laser Relativity Satellite (LARES)
Name of launching State:	Italy
Satellite owner:	Italian Space Agency
Date and location of launch:	13 February 2012 at 1000 hrs UTC Guiana Space Centre, Kourou, French Guiana
Launch vehicle:	Vega
Basic orbital parameters:	
Nodal period:	114.75 minutes
Inclination:	69.49 degrees
Apogee:	1,450.00 kilometres
Perigee:	1,450.00 kilometres
Nominal geographical longitude (if applicable):	Not applicable
General function:	<p>The Laser Relativity Satellite (LARES) is a national mission of the Italian Space Agency. The mission's main scientific goal is to test Albert Einstein's theory of general relativity by the highly accurate measurement of the relativistic Lense-Thirring effect using the International Laser Ranging Service (ILRS) network (see <a href="http://www.lares-mission.com">www.lares-mission.com</a>)</p> <p>LARES is a passive satellite in the shape of a sphere measuring 0.38 m in diameter and with a weight of 360 kg, made of solid tungsten. The satellite accommodates 96 mirrors, known as Corner Cube Reflectors, which are capable of reflecting ILRS laser beams</p> <p>The LARES support system, which includes the LARES satellite separation subsystem, will remain attached to the Vega's Attitude Vernier Upper Module</p>

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\* The registration data are reproduced in the form in which they were received.

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## ALMaSat-1

International designator:	2012-006B
Name of space object:	ALMaSat-1
Name of launching State:	Italy
Satellite owner:	Italian Space Agency and University of Bologna, Italy
Date and location of launch:	13 February 2012 at 1000 hrs UTC Guiana Space Centre, Kourou, French Guiana
Launch vehicle:	Vega
Basic orbital parameters:	
Nodal period:	102.5 minutes
Inclination:	69.49 degrees
Apogee:	1,450 kilometres
Perigee:	310 kilometres
Nominal geographical longitude (if applicable):	Not applicable
General function:	<p>ALMaSat-1 is an educational microsatellite built by the University of Bologna</p> <p>The dimensions of the satellite are <math>0.30 \times 0.30 \times 0.30</math> m and the weight is 12.5 kg</p> <p>The goal of the mission is technological demonstration of a modular design capability to be used for various technological tests and Earth observation missions. The main objective of the first mission is to test the key performances of this low-cost multi-purpose bus and, in particular, of an innovative cold-gas propulsion module. The performance of the propulsion module will be demonstrated by lowering the altitude of ALMaSat-1 in order to control its re-entry</p> <p>For further information, see <a href="http://www.almasat.unibo.it">www.almasat.unibo.it</a></p>