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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****Letter dated 12 April 2011 from the Head of the Legal Department  
of the European Space Agency to the Secretary-General**

In conformity with the Convention on Registration of Objects Launched into Outer Space (General Assembly resolution 3235 (XXIX), annex), the rights and obligations of which the European Space Agency has declared its acceptance, the Agency has the honour to transmit information on the launching of the space object PROBA-1 (international designator 2001-049B), SMOS (international designator 2009-059A), PROBA-2 (international designator 2009-059B) and Cryosat-2 (international designator 2010-013A) (see annex I) and information on the change of status of Jules Verne (international designator 2008-008A), previously registered in document ST/SG/SER.E/591 (see annex II).

(Signed) Marco **Ferrazzani**  
Legal Counsel  
Head of the Legal Department



## Annex I

### Registration data on space objects launched by the European Space Agency\*

#### PROBA-1

##### Information provided in conformity with the Convention on Registration of Objects Launched into Outer Space

Committee on Space Research international designator:	2001-049B
Name of space object:	PROBA-1
State of registry:	European Space Agency
Date and territory or location of launch	
Date of launch:	22 October 2001
Territory or location of launch:	Satish Dhawan Space Centre, Sriharikota, India
Basic orbital parameters	
Nodal period:	97.00 minutes
Inclination:	97.90 degrees
Apogee:	677 kilometres
Perigee:	552 kilometres
General function of space object:	The Project for Onboard Autonomy 1 (PROBA-1) minisatellite weighs 94 kilograms. It carries a radiation detector, a debris impact monitoring instrument and a remote-sensing camera for performance assessment.

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\* The information was submitted using the form prepared pursuant to General Assembly resolution 62/101 and has been reformatted by the Secretariat.

## SMOS

### Information provided in conformity with the Convention on Registration of Objects Launched into Outer Space

Committee on Space Research international designator:	2009-059A
Name of space object:	SMOS
State of registry:	European Space Agency
Date and territory or location of launch	
Date of launch:	2 November 2009, 0150 hours UTC
Territory or location of launch:	Plesetsk Cosmodrome, Russian Federation
Basic orbital parameters	
Nodal period:	100.03 minutes
Inclination:	98.45 degrees
Apogee:	760 kilometres
Perigee:	758 kilometres
General function of space object:	<p>The Soil Moisture and Ocean Salinity (SMOS) satellite is part of the Earth Explorer programme of the European Space Agency.</p> <p>SMOS was launched on a Rokot launcher with a Breeze KM upper-stage from Plesetsk on 2 November 2009.</p> <p>The primary instrument of the 658-kilogram satellite is the L-band Microwave Imaging Radiometer using Aperture Synthesis (MIRAS), composed of a 69-element Y-shaped antenna array. The satellite will monitor sea surface salinity and soil moisture on a global scale. SMOS data will be used to build maps of salinity and moisture levels and also contribute to global circulation models.</p>

### Additional voluntary information for use in the Register of Objects Launched into Outer Space

Launch vehicle:	Rokot SL-19
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## PROBA-2

### Information provided in conformity with the Convention on Registration of Objects Launched into Outer Space

Committee on Space Research international designator:	2009-059B
Name of space object:	PROBA-2
State of registry:	European Space Agency
Date and territory or location of launch	
Date of launch:	2 November 2009, 0150 hours UTC
Territory or location of launch:	Plesetsk Cosmodrome, Russian Federation
Basic orbital parameters	
Nodal period:	99.18 minutes
Inclination:	98.30 degrees
Apogee:	727 kilometres
Perigee:	710 kilometres
General function of space object:	<p>The Project for Onboard Autonomy 2 (PROBA-2) technology demonstrator satellite was launched on a Rokot launcher with a Breeze KM from Plesetsk on 2 November 2009.</p> <p>The 130-kilogram satellite carries two Belgian solar physics instruments: the Sun Watcher using Active Pixel System detector and Image Processing (SWAP), and the Lyman Alpha Radiometer (LYRA). SWAP is an extreme ultraviolet telescope that will be used to observe the solar corona. LYRA is a solar radiometer that will observe the Sun in four ultraviolet bands.</p> <p>PROBA-2 also carries two Czech plasma physics instruments: the Thermal Plasma Measurement Unit (TPMU) and the Dual Segment Langmuir Probe (DSLPL).</p> <p>TPMU will measure the ambient ion and electron temperature, the ion density and composition and the floating potential of the satellite body. DSLPL will study the plasma environment and how it varies with solar events.</p> <p>In addition, PROBA-2 will also demonstrate 17 advanced satellite technologies, including star trackers, sun sensors, a camera and a magnetometer.</p>

**Additional voluntary information for use in the Register of Objects Launched into Outer Space**

Launch vehicle: Rokot SL-19

**Cryosat-2**

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

Committee on Space Research international designator: 2010-013A

Name of space object: Cryosat-2

State of registry: European Space Agency

Date and territory or location of launch

Date of launch: 8 April 2010, 1357 hours UTC

Territory or location of launch: Baikonur Cosmodrome, Kazakhstan

Basic orbital parameters

Nodal period: 99.16 minutes

Inclination: 92.03 degrees

Apogee: 726 kilometres

Perigee: 710 kilometres

General function of space object: Cryosat-2 is a European Space Agency science satellite. It will spend more than three years monitoring precise changes in the polar ice caps and floating sea ice to determine the rate at which the planet's ice cover is diminishing. The primary instrument on Cryosat-2 is the Synthetic Aperture Interferometric Radar Altimeter (SIRAL). SIRAL will operate in three modes: a low-resolution mode, a synthetic aperture mode and an interferometric mode. The low-resolution mode will scan the sea surface and stable continental ice sheets in Antarctica. The synthetic aperture mode will measure the elevation of floating sea ice to determine its thickness and the interferometric mode will gather high-resolution data on the borders of ice sheets.

**Additional voluntary information for use in the Register of Objects Launched into Outer Space**

Launch vehicle: Dnepr

## Annex II

### Supplementary information on a space object previously registered by the European Space Agency\*

#### Jules Verne

##### Information provided in conformity with the Convention on Registration of Objects Launched into Outer Space

Committee on Space Research international designator:	2008-008A
Name of space object:	Jules Verne
State of registry:	European Space Agency
Registration document symbol:	ST/SG/SER.E/591
Date and territory or location of launch	
Date of launch:	9 March 2008
Territory or location of launch:	Guiana Space Centre, Kourou, French Guiana
Basic orbital parameters	
Nodal period:	89.78 minutes
Inclination:	51.64 degrees
Apogee:	272 kilometres
Perigee:	254 kilometres
General function of space object:	Jules Verne, also known as ATV 1, is the first automatic transfer vehicle of the European Space Agency. The 11-ton, 10.3 m × 4.5 m vehicle can carry 9 tons of additional cargo and dock automatically with the International Space Station (ISS). The maiden flight remained a “free-flyer” until the undocking of STS-123 on 27 March 2008. Jules Verne successfully demonstrated the ability to come within 3.5 km of ISS with the help of global positioning system transmissions and, in another attempt, within 11 m, with the help of laser ranging. These demonstrations earned approval by the ISS managers for an actual docking with the ISS Zvezda module on 3 April 2008. It remained docked for nearly six months before undocking, deorbiting and burning up in the Earth’s atmosphere on 29 September 2008.
Date of decay/re-entry/de-orbit:	29 September 2008

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