



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**

**Letter dated 5 March 2010 from 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 of, the Agency has the honour to transmit information on the launching of the following objects: MAQSAT 3 (international designator 1998-059A), Columbus (international designator 2008-005B), Jules Verne (international designator 2008-008A), GIOVE-B (international designator 2008-020A), Herschel (international designator 2009-026A), Planck (international designator 2009-026B) and GOCE (international designator 2009-013A) (see annex).

(Signed)
Stefania **Barbieri**
Legal Counsel
Head of the Legal Department



Annex

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

MAQSAT 3

COSPAR international designator:	1998-059A
Name of space object:	MAQSAT 3
Name of the launching authority:	European Space Agency (ESA)
Date and territory or location of launch:	
Launch date:	21 October 1998
Launch site:	Guiana Space Centre, Kourou, French Guiana
Orbital parameters at launch:	
Nodal period:	641.01 minutes
Inclination:	6.99 degrees
Apogee:	35,494 kilometres
Perigee:	1,003 kilometres
General function of the space object:	The third qualification flight of the Ariane 5 launch vehicle (Ariane 503) released MAQSAT 3 into orbit as a second payload. MAQSAT 3 is a mock-up of a EUTELSAT W communications satellite and has a mass of 2,600 kg. It is a cylinder approximately 3 m in height and 2.5 m in diameter, located inside the Speltra structure (4.2 m height, 5.4 m diameter, 704 kg mass). Below the Speltra is the Vehicular Equipment Bay (VEB), which has a height of 1.56 m, diameter of 5.46 m and mass of 1,500 kg. This complete assembly remained attached to the Ariane 5 second stage (EPS), which is a flat cylinder with propellant tanks and an attached engine (3.36 m height, 3.96 m diameter, 1,200 kg mass).

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

Columbus

COSPAR international designator:	2008-005B
Name of space object:	Columbus
Name of the launching authority:	European Space Agency (ESA)
Date and territory or location of launch:	
Launch date:	7 February 2008
Launch site:	Kennedy Space Center, Florida, United States of America
Orbital parameters at launch:	
Nodal period:	89.24 minutes
Inclination:	51.66 degrees
Apogee:	244 kilometres
Perigee:	229 kilometres
General function of the space object:	The European International Space Station (ISS) module Columbus was launched aboard the United States of America's STS-122 Atlantis mission on 7 February 2008. The 12,800 kg laboratory of 6.9 m length and 4.5 m diameter was mounted on Node 2 of ISS for in-orbit operation.

Jules Verne

COSPAR international designator:	2008-008A
Name of space object:	Jules Verne
Name of the launching authority:	European Space Agency (ESA)
Date and territory or location of launch:	
Launch date:	9 March 2008
Launch site:	Guiana Space Centre, Kourou, French Guiana
Orbital parameters at launch:	
Nodal period:	89.78 minutes
Inclination:	51.64 degrees
Apogee:	272 kilometres
Perigee:	254 kilometres
General function of the space object:	Jules Verne, also known as ATV 1, is the first automatic transfer vehicle of ESA. 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 of an actual docking with the ISS Zvezda module on 3 April 2008. It remained docked for six months before undocking, deorbiting and burning up in the Earth’s atmosphere.

GIOVE-B

COSPAR international designator:	2008-020A
Name of space object:	GIOVE-B
Name of the launching authority:	European Space Agency (ESA)
Date and territory or location of launch:	
Launch date:	26 April 2008
Launch site:	Baikonur Cosmodrome, Kazakhstan
Orbital parameters at launch:	
Nodal period:	850.36 minutes
Inclination:	55.97 degrees
Apogee:	23,453 kilometres
Perigee:	23,255 kilometres
General function of the space object:	GIOVE-B (Galileo In-Orbit Validation Element-B) is the second of the test versions of the 30-craft European navigational satellite fleet. It was launched by a Soyuz-Fregat rocket from Baikonur Cosmodrome at 2216 UTC on 26 April 2008.

Herschel

COSPAR international designator:	2009-026A
Name of space object:	Herschel
Name of the launching authority:	European Space Agency (ESA)
Date and territory or location of launch:	
Launch date:	14 May 2009
Launch site:	Guiana Space Centre, Kourou, French Guiana
Orbital parameters:	Sun-Earth L2 orbit
General function of the space object:	Herschel is an ESA astronomy satellite launched on an Ariane 5 rocket from Kourou on 14 May 2009 at 1312 UTC. Herschel operates from an orbital position around the second Lagrangian point and makes infrared observations of stars, galaxies and star-forming regions using a 3.5 m diameter mirror, the largest yet carried into space. The 3,400 kg spacecraft carries three instruments: the Photodetector Array Camera and Spectrometer (PACS), the Spectral and Photometric Imaging Receiver (SPIRE) and the Heterodyne Instrument for the Far Infrared (HIFI). Herschel also carries 2,300 litres of liquid helium to cool the instruments to a few tenths of a degree above zero Kelvin (-273.15 degrees Celsius). The mission lifetime is nominally three years, but may continue until the helium has been depleted.

Planck

COSPAR international designator:	2009-026B
Name of space object:	Planck
Name of the launching authority:	European Space Agency (ESA)
Date and territory or location of launch:	
Launch date:	14 May 2009
Launch site:	Guiana Space Centre, Kourou, French Guiana
Orbital parameters:	Sun-Earth L2 orbit

General function of the space object: Planck is an ESA astronomy satellite launched on an Ariane 5 rocket from Kourou on 14 May 2009 at 1312 UTC. From its orbital position around the second Lagrangian point, Planck measures minute variations in the cosmic microwave background radiation. This radiation is expected to provide scientists with detailed information about the age of the universe and the size, mass and geometry of the early universe. Planck is expected to produce two all-sky maps before the end of the mission, which is nominally to last 15 months. Planck has a mass of approximately 1,900 kg, carries a mirror with a 1.5 m aperture and two cryogenically cooled instruments, the High Frequency Instrument (HFI) and the Low Frequency Instrument (LFI). The HFI detects emissions in six frequency bands between 100 and 857 GHz, while the LFI operates between 30 and 70 GHz.

GOCE

COSPAR international designator: 2009-013A
Name of space object: GOCE
Name of the launching authority: European Space Agency (ESA)
Date and territory or location of launch:
 Launch date: 17 March 2009
 Launch site: Plesetsk Cosmodrome,
 Russian Federation
Orbital parameters at launch:
 Nodal period: 90.14 minutes
 Inclination: 96.71 degrees
 Apogee: 290 kilometres
 Perigee: 272 kilometres

General function of the space object: GOCE, the Gravity Field and Steady-State Ocean Circulation Explorer, is a European (ESA) Earth-science satellite. GOCE is designed to measure Earth's gravitational field to create very high-resolution maps of the geoid. These maps will provide the baseline for measurements of ocean circulation and sea-level change. The 1,100 kg spacecraft is 5 m long by 1 m wide and its fixed solar arrays will produce 1.3 kW of power. The satellite carries six high-sensitivity accelerometers arranged along the three axes of the spacecraft. To acquire high-resolution measurements, the satellite must travel at a low orbital altitude at which atmospheric drag effects are still significant. To compensate for these effects, the satellite has a sleek arrow-shaped design to reduce drag and small winglets and a tail fin for stabilization. GOCE's orbital altitude will also be maintained with the assistance of an on-board ion engine.
