



**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 2 February 2011 from the Permanent Mission of  
Denmark to the United Nations (Vienna) addressed to the  
Secretary-General**

The Permanent Mission of Denmark 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 concerning space object Oersted (international designator 1999-008B) (see annex).



## Annex

### Registration data on a space object launched by Denmark\*

#### Oersted

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

Committee on Space Research international designator:	1999-008B
Name of space object:	Oersted
State of registry:	Denmark
Date and territory or location of launch	
Date of launch:	23 February 1999, 10 hr 29 min 55 sec UTC
Territory or location of launch:	Vandenberg Air Force Base, California, United States of America
Basic orbital parameters	
Nodal period:	99.59 minutes
Inclination:	96.48410 degrees
Apogee:	841.79 kilometres
Perigee:	636.11 kilometres
General function of space object:	<p>The Ørsted satellite, named after the Danish scientist Hans Christian Ørsted (1777-1851), is the first satellite mission since Magsat (1979-80) designed for high-precision mapping of the Earth's magnetic field. It was launched with a Delta-II rocket from Vandenberg Air Force Base, California, on 23 February 1999 into a near-polar orbit. As the first satellite of the International Decade of Geopotential Field Research, the satellite and its instrumentation has been a model for current and forthcoming missions such as the Challenging MiniSatellite Payload (CHAMP) and Swarm.</p> <p>Ørsted external field science is coordinated by the Danish Meteorological Institute. The internal field science is coordinated by the National Space</p>

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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.

Institute of Denmark (part of DTU Space). Satellite control is managed by the industrial company Terma A/S (Herlev, Denmark).

The Ørsted satellite was built as a joint effort of various Danish research institutions and companies with significant contributions from the National Aeronautics and Space Administration of the United States, the Centre national d'études spatiales of France, the German space agency (DARA) and the European Space Agency. The satellite weighs 62 kg, measures 34 x 45 x 72 cm and contains a boom 8 metres long, deployed shortly after launch, carrying the magnetic field instruments. The satellite is gravity-gradient-stabilized; attitude manoeuvres are performed using magnetic torquers. The satellite communication is via S-band (2215.0 MHz on downlink and 2039.645 MHz on uplink). The Ørsted orbit has an inclination of  $\sim 96.5^\circ$ , a period of  $\sim 100$  minutes, a perigee at  $\sim 650$  km and an apogee at  $\sim 860$  km (decreased to respectively 99.59 min, 636 km and 842 km after 11 years and 8 months in space). The orbital plane is slowly drifting and the local time of the equator crossing decreases by 0.91 min/day, starting from an initial local time of 02:26 on 23 February 1999 for the south-going track. The nominal lifetime of the mission was 14 months (2 months commissioning phase and 12 months science phase), but after more than 11 years in space the satellite is still healthy and providing high-precision magnetic data.

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

Website:	<a href="http://www.terma.com/index.dsp?page=1185#">www.terma.com/index.dsp?page=1185#</a>
Space object owner or operator:	The Oersted satellite is operated by Terma A/S (Denmark).
Launch vehicle:	Delta-II