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English only

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**Committee on the Peaceful  
Uses of Outer Space**  
Sixtieth session  
Vienna, 7-16 June 2017

**Application for membership of the Committee on the  
Peaceful Uses of Outer Space: Denmark**

**Note by the Secretariat**

The present document contains a copy of the application of Denmark for membership with the United Nations Committee on the Peaceful Uses of Outer Space. The Note Verbale of Embassy & the Permanent Mission of Denmark, Vienna, containing the application of Denmark, was received by the Secretariat on 10 May 2017 and was circulated to member States of the Committee in a note verbale OOSA/2017/8 CU 2017/173/OOSA/CPLA of 17 May 2017.

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**EMBASSY & PERMANENT MISSION OF DENMARK  
VIENNA**

File No.: 2017 - 18213

Verbal Note

The Embassy & Permanent Mission of Denmark, Vienna, presents its compliments to the Secretariat of the United Nations Office for Outer Space Affairs and hereby has the honour to inform that Denmark has decided to apply for membership of the Committee on the Peaceful Uses of Outer Space (COPUOS).

Background information about the Danish application to join COPUOS is attached, including information on the development of the Danish space industry.

The Embassy & Permanent Mission of Denmark would be grateful if the Secretariat of the United Nations Office for Outer Space Affairs could circulate this note verbale to the current Member States of COPUOS to inform them of Denmark's membership application.

The Embassy & Permanent Mission of Denmark, Vienna, avails itself of this opportunity to renew to the Secretariat of the United Nations Office for Outer Space Affairs the assurances of its highest consideration.

Vienna, 10 May 2017



To:  
United Nations Office for Outer Space Affairs  
United Nations Office at Vienna  
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### **Background Information about Denmark's application to join the United Nations Committee on the Peaceful Uses of Outer Space**

In anticipation of further development in the Danish space industry, Denmark is applying for membership of the UN Committee on the Peaceful Uses of Outer Space.

Denmark is interested in ensuring that outer space remains available for peaceful uses. COPUOS activities of particular interest to Denmark include the long term sustainability of outer space, and the question of the applicability of relevant international legal obligations to the activities of private companies operating in outer space.

In 1999 Denmark became a spacefaring nation after the successful launching of the Ørsted satellite. This was the culmination of a successful partnership between Danish research institutions and a number of high-tech companies. The Ørsted satellite is still in operation today.

Danish space activities are under the authority of the Ministry for Higher Education and Science.

In July 2016 Denmark's first space law entered into force.

Furthermore, Denmark has signed and ratified four UN treaties on outer space, i.e. the Outer Space Treaty, the Rescue Agreement, the Liability Convention, and the Registration Convention, and provides registration information to the Secretary General under the Registration Convention.

Denmark is also a founding member of the European Space Agency (ESA) and has relied on the agency with regard to prioritizing technology development and space activities. Denmark supports space technology research and development through ESA's E3P, GSTP, PRODEX, ARTES, FLPP, and GNSS Evolution programmes. Denmark does not have a national space technology programme.

In 2016 a new national space strategy was published. Existing core competence within research and industry includes: advanced stellar compasses and star trackers, X-ray detectors and mirrors, magnetometers, electrical power systems, on-board software, software validation, payload data processing, EGSE, the designing and manufacturing of demanding carbon fiber composite structures, the processing of earth observation data, magnetic components, advanced laser welding technolo-

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gy, microgravity facilities and equipment for on-board monitoring of the health of astronauts, and micro and nano satellites.

Space technologies have attracted substantial attention in recent years at Danish institutions of higher education. Technical University of Denmark (DTU Space) and Aarhus and Aalborg Universities now offer activities focusing on outer space and the use of space data. It is now possible to obtain engineering degrees in space-related technologies in Denmark. Student satellite (CubeSat) programmes attract students, who learn to handle real space challenges by using a CDIO approach (Conceive, Design, Implement, Operate). The AAUsat-4 and AAUsat-5 missions focused on receiving AIS beacons by applying a new design based on SDR principles. AAUsat-5 was deployed from the International Space Station, ISS in October 2015, whereas AAUsat-4 was launched in April 2016 on board a Soyuz launcher from French Guyana. DTUsat-2 was launched in June 2014. This satellite was built to track migrating birds by carrying a small transmitter powered by solar cells which beamed GPS positions to DTUsat-2 during overhead passes.

In addition, University of Copenhagen, University of Southern Denmark and Aarhus University carry out state of the art research in astronomy, cosmology, astrophysics, and planetary sciences. Examples hereof include the Dark Cosmology Centre at the University of Copenhagen, the Centre for Cosmology and Particle Physics Phenomenology at the University of Southern Denmark, and the Mars Simulation Laboratory at Aarhus University.

On 2 September 2015 the first Danish ESA astronaut Andreas Mogensen initiated his ten-day Iriss mission to the ISS. Andreas Mogensen was onboard a Russian Soyuz TMA-18 spacecraft which was launched from the Russian spaceport in Baikonour, Kazakhstan. The mission was a great success with extensive interest from the general public.

ESA's 5th Earth Explorer mission – Swarm – was successfully launched in late 2013. The mission, which was originally proposed by Denmark, is a constellation of 3 satellites aiming to map the magnetic field of the Earth. DTU Space acts as the science lead and has supplied the vector magnetometers and star trackers.

Denmark is currently deeply involved in a significant ESA project, the ASIM instrument (Atmosphere-Space Interactions Monitor) which is scientifically headed by DTU Space. ASIM will carry optical and x-ray sensors in order to study discharges from large thunderstorm systems into the upper atmosphere, known as Red Sprites, Blue Jets and Elves. ASIM will be attached as an external payload to the Columbus module on the ISS.