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Committee on the Peaceful Uses of Outer Space

International cooperation in the peaceful uses of outer space: activities of Member States

Note by the Secretariat

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I. Introduction

1. In the report on its forty-second session, the Scientific and Technical Subcommittee of the Committee on the Peaceful Uses of Outer Space recommended that the Secretariat continue to invite Member States to submit annual reports on their space activities (A/AC.105/848, para. 16).

2. In a note verbale dated 24 August 2005, the Secretary-General invited Governments to submit their reports by 31 October 2005. The present note was prepared by the Secretariat on the basis of reports received from Member States in response to that invitation.

II. Replies received from Member States

Belarus

[Original: English]

1. The Republic of Belarus is a party to the agreement of 17 February 2000 concerning cooperation in the use of outer space for peaceful purposes among the Governments of Belarus, Kazakhstan, the Russian Federation and Tajikistan.

2. A draft agreement concerning cooperation in the development and joint use of the allied State distance probing system is to be signed in the near future between the Governments of Belarus and the Russian Federation.

Finland

[Original: English]

1. Administration

1. The Finnish bodies involved in space activities are described in table 1.

Table 1

Finland: bodies involved in space activities

Organization	Ministry to which organization reports	Major activities
National Technology Agency (Tekes)	Ministry of Trade and Industry	Established in 1983, Tekes is responsible for Finland's relations with the European Space Agency, global and bilateral space cooperation, space technology programmes, and funding and implementation of the technological and industrial part of the Finnish space programme; it is also the secretariat for the Finnish Space Committee.

Organization	Ministry to which organization reports	Major activities
Finnish Space Committee (inter-ministerial coordination body)	Ministry of Trade and Industry	Established in 1985, the Committee is appointed by the Government for a three-year period (2004-2007) and is responsible for drafting national space policy.
Academy of Finland	Ministry of Education	Provides financing for the space science programme.

2. A new Finnish space strategy for 2005-2007 was prepared by the Finnish Space Committee and released in June 2005, with a summary in English.

3. There are 50 companies and research units in Finland that either do business in satellite equipment supply chains or study space technology. There are 7 universities in Finland that study remote sensing or space science. Navigation technology and new services are developed by 30 companies and 7 research units in Finland. More information is available on the following websites:

www.tekes.fi/eng/publications/Space_Directory_2003.pdf

www.tekes.fi/eng/publications/Mobile_Location_Directory_Finland.pdf

2. Outlook

4. Finland's space activities are described in detail in documents A/AC.105/788 of 2 December 2002 and A/AC.105/832 of 23 November 2004.

3. Budget trend

5. The Finnish space budget has remained unchanged since 1995, although the share devoted to European Space Agency (ESA) programmes has increased; the latter accounted for the main part of the budget in 2005.

6. Finland's space funding comes mainly from the National Technology Agency. Its contribution amounted to 18.5 million euros in 2005. The contribution of the Ministry of Trade and Industry, which is responsible for Finland's contributions to the ESA general budget, was 2 million euros in 2005. Several other ministries also fund space activities.

4. National activities

7. Finland's main interests in space are described in detail in document A/AC.105/788 of 2 December 2002.

8. Finland's participation in the ESA-European Union joint Galileo programme is described in document A/AC.105/816/Add.1 of 23 January 2004.

9. The AVALI (Business Opportunities from Space Technology) programme is also described in document A/AC.105/816/Add.1.

10. New programmes are being planned in the fields of satellite remote sensing and space science.

5. Ongoing international programmes and projects

11. Finnish involvement in ongoing international space programmes and projects is shown in table 2.

Table 2

Finnish involvement in	international	space	programmes	and projects

Organization or country	Mission	Finnish involvement
European Space Agency		
	Atmospheric Dynamics Mission (ADM-Aeolus)	Power supply units, instrument electronics
	Cluster II	Power supply units, two instruments
	CryoSat	Power supply units
	Environmental Satellite (ENVISAT-1)	Participation in the Global Ozone Monitoring by Occultation of Stars (GOMOS) instrument: global ozone measurement equipment data processing upgrade unit and ground segment
	Galileo (Global Navigation Satellite System-2)	Participation in pre-development
	Gravity Field and Steady- State Ocean Circulation Explorer (GOCE)	On-board software
	Herschel Space Observatory	Primary mirror polishing
	Huygens	Scientific probe landed on Titan, Saturn's largest moon: radio altimeter and atmospheric instrumentation
	Integral	Participation in the joint European X-ray monitor (two detector units), flight software validation
	Mars Express	Power supply units, participation in instruments
	Meteosat Second Generation (MSG)-1	On-board software validation
	Meteorological Operational Satellite (MetOp)-1	Power supply units for the Global Ozone Monitoring Experiment (GOME)
	Planck	Participation in low-frequency instrument; cryostat control unit
	Rosetta	Primary structure; power distribution system units; contributions to instruments
	Small Mission for Advanced Research in Technology (SMART-1)	Spacecraft Potential, Electron and Dust Experiment (SPEDE) instrument; demonstration of a compact imaging X-ray spectrometer/X-ray solar monitors

Organization or country	Mission	Finnish involvement
	Soil Moisture and Ocean Salinity (SMOS)	Participation in radiometer instrument
	Solar and Heliospheric Observatory (SOHO)	Two instruments: collaboration on Comprehensive Supra Thermal and Energetic Particle Analyser (COSTER)—Energetic and Relativistic Nuclei and Electron Experiment (ERNE) and Solar Wind Anisotropies (SWAN)
	Venus Express	Power supply units, participation in the Energetic Neutral Atoms Analyser instrument
	X-ray Multi-Mirror Mission (XMM)-Newton	Telescope tube structure and mirror thermal control unit
Belgium/ESA		Project for on-board autonomy mission: space debris detectors and their data-processing units
Canada		RADARSAT and other remote- sensing-related collaboration (Memorandum of Understanding)
Denmark		On-board data-handling unit for the Roemer spacecraft
Sweden		Microwave instrument on the Odin satellite
France/ESA		Participation in NetLander Mars- landers for the Centre national d'études spatiales (CNES) Premier 2009 mission; mission cancelled by CNES and work discontinued in Finland
Italy		X-ray instrument hardware for the X-ray astronomy satellite
Japan		International Space Station X-ray instrument
Netherlands/United States of America (National Aeronautics and Space Administra- tion (NASA))		Ozone-monitoring instrument on the NASA Earth-Observing System Aura spacecraft
Russian Federation		Silicon X-Ray Array for Spectrum- X-Gamma: project in hibernation
		RadioAstron Very-Long Baseline Interferometry instrument: project in hibernation
		Netlander Mars-landers
United States (NASA)		Two wide-angle imaging neutral-atom spectrometer mechanisms

Organization or country	Mission	Finnish involvement
		Cassini mechanisms, participation in the Cassini Plasma Spectrometer (CAPS) instrument
		High Energy Transient Explorer (HETE) II X-ray instrument
		International Space Station debris instrument
		Contour, instrument participation; mission failure after launch in 2002
		Near-Earth asteroid rendezvous X-ray instrument: mission ended successfully in 2001
		Stardust instrument participation
		Magnetospheric multiscale instrument participation
China, France, Germany, Italy, Russian Federation, Spain, Switzerland, United Kingdom of Great Britain and Northern Ireland, United States		Alpha Magnetic Spectrometer (particle physics experiment on the International Space Station (search for antimatter): silicon tracker, ground support and data-handling

Latvia

[Original: English]

1. Latvia has no national space research programmes and is not a member State of the European Space Agency.

2. Three Latvian universities, the University of Latvia, the Riga Technical University and Ventspils University College, carry out some research in the field.

3. The two most important areas of research at the Institute of Astronomy of the University of Latvia are global coordinated high-precision Satellite Laser Ranging for use at various international centres for Earth science and spectral observations of stars and determination of the coordinates of minor planets using charge-coupled device cameras. The Institute is a member of the International Laser Ranging Service (ILRS) and the European Laser Ranging Service.

4. The Fundamental Geodynamic Observatory of the University of Latvia is a member of two space technique networks: the global ILRS network and the Global Positioning System (GPS) network of the Reference Frame Sub-Commission for Europe of the International Association of Geodesy. It also intends to become a member of the international GPS service. Latvia's geodetic coordinate system is attached to and held in the world and European geodetic reference systems, which regularly receive all Earth rotation and time parameters for the needs of Latvia.

5. The Institute of Materials and Structures, in cooperation with the Institute of Aviation, both of Riga Technical University, is participating in five projects within the European Union Sixth Framework Programme for Research and Technological Development, including Friendcopter, Advanced and Low-Cost Airframe Structures,

Improved Material Exploitation at Safe Design of Composite Airframe Structures by Accurate Simulation of Collapse, Aircraft Integrated Structural Health Assessment and Stimulate Aerospace Research Technology in Associate Candidate Countries.

6. The International Radioastronomical Centre of Ventspils University College is participating in two projects within the Sixth Framework Programme: the European radio astronomy programme RadioNet and Express Production Real-Time electronic Very Long Baseline Interferometry Service. The Centre is also participating in the pilot project on the use of satellite data for the assessment of the environmental situation, which is a project of the Committee on the Challenges of Modern Society of the North Atlantic Treaty Organization.

7. Latvia is represented on several European Union space research committees, including the Global Monitoring for Environment and Security Advisory Council, the committee responsible for the Sixth Framework Programme thematic priority Aeronautics and Space and the European Strategy Forum on Research Infrastructures and its committees.