Committee on the Peaceful Uses of Outer Space
Scientific and Technical Subcommittee 58th Session
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Agenda Item 10– "Space Weather"

Madam Chair and Distinguished Delegates,

On behalf of the Japanese delegation, I am pleased to present Japan's recent activities regarding this agenda item.

Taking into account an increasing number of space operations, it is important to monitor the solar system and the space environment as a whole for the safety and sustainability of our outer space activities.

The National Institute of Information and Communications Technology (NICT) of Japan has a long history of measuring solar radio waves since 1952. NICT currently conducts solar observations with its own solar radio telescope, and provides ground stations with data on solar winds and images from satellites of the United States. Additionally, NICT has constructed a ground-based observation network of the ionosphere and the geomagnetic field for the purpose of monitoring and forecasting equatorial ionospheric disturbances. These instruments provide useful data for space weather monitoring, forecast and research.

Since the identification of big solar flares in 2017, NICT has strengthened its ability to observe space weather with a dual observation system, and has set up a second NICT branch in Kobe, Japan, acting as a secondary space weather information centre. Additionally, NICT began 24/7 space weather forecast operations on December 1, 2019.

NICT has made several contributions to the formulation of the space weather international framework. NICT contributes to the activities of an expert team under the Science and Technology Subcommittee of COPUOS including the survey of space weather research and operation among Member States and international organizations in accordance with LTS Guidelines B.6 and 7. NICT also contributes to the activities of the International Civil Aviation Organization (ICAO), the World Meteorological Organization (WMO), the International Telecommunication Union (ITU) and International Space Environment Services (ISES). NICT was assigned as one of the ICAO Space Weather Global centres in collaboration with Australia, Canada and France, and began operations on November 7, 2019. NICT also acts as the secretary of the Asia-Oceania Space Weather Alliance (AOSWA) collaborating on operations and research of space weather in the Asia-Oceania region since 2011. At present, twenty-nine institutes

in fourteen countries are members of the alliance. A virtual meeting of AOSWA was held on November 24, 2020 to discuss the activities of space weather research and operation under the COVID-19 circumstances in each country.

Madam Chair,

Starting in 2015, Japan launched a nation-wide collaborative research initiative called “Project for Solar-Terrestrial Environment Prediction” (PSTEP) with the support of Grants-in-Aid for Scientific Research on innovative Areas, provided by Japan’s Ministry of Education, Culture, Sports, Science and Technology. More than 100 researchers in Japan and around the world have been involved in this project. PSTEP aimed to develop a synergistic interaction between predictive and scientific studies of the solar-terrestrial environment and to establish the basis for the next-generation space weather forecasting using state-of-the-art observation systems and advanced physics-based models. This wide range of domestic and international cooperation successfully yielded many fruitful scientific and operational results in the field of space weather.

Madam Chair,

From 2019 to 2020, Professor Kazuo Shiokawa from Nagoya University served as chair of the Scientific Committee on Solar-Terrestrial Physics (SCOSTEP). Japan cooperates with its SCOSTEP partners in addressing the evolving situation of the solar-terrestrial system.

Madam Chair,

We have faced many restrictions due to the COVID-19 situation in 2020. It is a severe situation for space weather research and operation in which international collaboration and coordination are essential. In spite of this difficult situation, Japan has been able to carry out significant activities in this field, and we look forward to continuing our work on space weather issues through various initiatives.

Thank you for your attention.