

Japan Item 9– “Space Weather”

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Chair, Distinguished Delegates,

On behalf of the Japanese delegation, I am pleased to present Japan’s recent activities on space weather.

Considering the increasing number of space operations, it is important to monitor solar activities and the space environment, 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 a ground station for receiving data on solar winds and images from United States satellites. Additionally, NICT has established a ground-based observation network of the ionospheric and the geomagnetic field to monitor and forecast ionospheric disturbances. These instruments provide useful data for space weather monitoring, forecasting and research.

Since the identification of large solar flares in 2017, NICT has strengthened its ability to observe space weather with a dual observation system. In addition, NICT began 24/7 space weather forecast operations in December 2019.

Chair,

NICT has made several contributions to the formulation of the space weather international framework. For example, NICT contributed to the publication of the “Draft final report of the Expert Group on Space Weather: towards improved international coordination for space weather services” (A/AC.105C. 1/L.401) during COPUOS in 2022. The first recommendation in this document shows that the three organizations related to space weather, COSPAR, ISES and WMO, lead efforts to improve the global coordination of space weather activities. To begin, the three organizations discussed and prepared the “Coimbra Declaration” in September 2022. NICT contributed to this effort, as a

representative of ISES and the only participant from the Asia-Oceania region. Japan would like to celebrate the first round table meeting of the International Space Weather Coordination Forum (ISWCF) held in November 2023 in Geneva, Switzerland. NICT also contributes to the activities of the International Civil Aviation Organization (ICAO), the World Meteorological Organization (WMO), the International Telecommunication Union (ITU) and the International Space Environment Services (ISES). The Institute was designated as one of the ICAO Space Weather Global centers in collaboration with Australia, Canada and France, and began operations in November 2019. NICT has also served as the secretary of the Asia-Oceania Space Weather Alliance (AOSWA) collaborating on space weather operations and research in the Asia-Oceania region since 2011. Japan would also like to celebrate the 6th AOSWA meeting held in October 2023 in Malaysia and hosted by the Universiti Kebangsaan Malaysia (UKM).

In addition, NICT has been developing space weather monitoring sensors on geostationary orbit satellites in cooperation with the Ministry of Internal Affairs and Communications (MIC) and Japan Meteorological Agency (JMA) since 2021. These sensors are expected to be installed in the next generation meteorological satellite "HIMAWARI" to be operational from 2029. Observations using these sensors are important not only to monitor regional space weather, but also to help establish a global infrastructure to support the safety and security of ICT society.

Thank you for your attention.