



Committee on the Peaceful Uses of Outer Space Scientific and Technical Subcommittee 62nd Session February 3 – 14, 2025 Japan Item 8 : "Space Weather."

Chair, Distinguished Delegates,

On behalf of the Japanese delegation, I am pleased to present Japan's recent activities in the field of space weather.

With the increasing number of space operations, monitoring solar activity and the space environment is becoming ever more crucial to ensure the safety and sustainability of outer space activities. The National Institute of Information and Communications Technology (NICT) in Japan has been at the forefront of this effort.

NICT conducts solar observations using its own solar radio telescope and operates a ground station to receive data on solar winds and images from U.S. satellites. Additionally, NICT has established a ground-based observation network of the ionosphere to monitor and forecast ionospheric disturbances. These instruments provide useful data for space weather monitoring, forecasting and research.

NICT has been operating 24/7 space weather forecast operations since 2019 and has been monitoring and forecasting large-scale space weather phenomena that frequently occur during the solar maximum.

Chair,

NICT has made several contributions to the formulation of a space weather international framework. It has been a member of the International Space Environment Services (ISES) since its establishment, and has been the acting Chair of ISES since 2023. Since 2011, NICT has served as the secretary of the Asia-Oceania Space Weather Alliance (AOSWA) in collaboration with space weather operators and researchers in the Asia-Oceania region. Japan highly commends the

professional work of GISTDA Thailand in hosting the 7th AOSWA meeting last October.

In the final report of the Expert Group on Space Weather: Towards Improved International Coordination for Space Weather Services (document A/AC.105C. 1/122), adopted during COPUOS in 2022, the group recommended the establishment of a forum to discuss space weather coordination. In 2023, COSPAR, ISES and WMO led the first-round table meeting of the International Space Weather Coordination Forum (ISWCF) in Geneva, Switzerland. A positive outcome of the ISWCF discussions, was the establishment of GION, a global comprehensive ionosonde observation network in 2025. Japan has been supporting these efforts through NICT. NICT also contributes to the activities of ICAO, WMO, and ITU.

Additionally, since 2021, NICT has been developing space weather monitoring sensors on geostationary orbit satellites in cooperation with the Ministry of Internal Affairs and Communications (MIC) and the Japan Meteorological Agency (JMA). The unique sensors will be installed in the next generation meteorological satellite known as *HIMAWARI* which is scheduled to be fully operational by 2029. Observations using these sensors are important not only to monitor regional space weather, but also to help establish a global infrastructure that supports the safety and security of the ICT society.

JAXA has endeavored to contribute to the international space weather community, including to NICT, by providing critical data obtained by JAXA's artificial satellites such as *HINODE* (launched in 2006), and *ARASE* (launched in 2016). JAXA is also contributing to advanced research to improve space weather forecast, in collaboration with researchers from NAGOYA University's Institute for Space-Earth Environmental Research (ISEE), The Center for Heliospheric Science and many other universities across Japan. Currently, JAXA is developing the next generation of solar observing satellites, known as *SOLAR-C*, which will be launched in 2028. In the future, JAXA's integrated data obtained from a network of satellites is expected to support current space weather forecasting for human space flight activities on the Moon and Mars.

Thank you for your attention.