

**Statement by Kevin Conole, United States Representative,
on Agenda Item 11, “Space Weather,”
February 4, 2020**

Thank you, Madame Chair and distinguished delegates. The United States is committed to advancing our space weather capabilities, and we look forward to further cooperation as interests and capabilities continue to expand around the globe. Space weather is an international concern, requiring understanding, preparation, and coordination to predict potentially severe events and to mitigate their impacts. Continuous space-based and ground-based measurements and focused research efforts are improving our modeling and forecasting capabilities. Broad participation from countries around the globe helps us understand both the drivers and the impacts of space weather, thereby improving our capacity to predict and mitigate severe space weather events.

The United States is leading and participating in numerous initiatives to improve space weather services and to advance the scientific understanding of the space environment. In March 2019, the White House released the National Space Weather Strategy and Action Plan. The plan supports three main objectives: 1) Enhancing the protection of critical infrastructure and national security assets; 2) Improving the accuracy and timeliness of space weather forecasts; and 3) Establishing procedures for responding to and recovering from space weather events. The plan calls for the U.S. to work through international fora, such as COPUOS and the World Meteorological Organization, to engage with international partners to ensure space weather products and services are globally coordinated and consistent. Additionally, the plan notes the importance of working to develop international standards for exchanging space weather data.

A great example of this are the recently adopted Long-Term Sustainability of Outer Space (LTS) guidelines on space weather. In fact, at the top of the recommendations in the 2019 Report of the Space Weather Expert Group (A/AC.105/C.1/2019/CRP.12), the Expert Group notes that implementation of the approved voluntary LTS Guidelines provides a foundation for a global approach to the mitigation of the adverse impacts of space weather. The Expert Group, therefore, reiterated “its view that implementation of the voluntary guidelines is of the utmost importance and should be prioritized for appropriate action within Member States and their national and international organizations.”

In order to accelerate the development of space weather services and improved scientific understanding, three U.S. agencies: NASA, NOAA, and the National Science Foundation, continue to coordinate funding opportunities to support scientists in the advancement of targeted space weather capabilities. The most recent funding opportunity in 2019 was an open call to the space weather scientific community to provide ideas on areas of improvement for space weather forecasting. It is anticipated that the announcement of selected initiatives will be made in early 2020. We continue to welcome the opportunity to discuss these and future initiatives with Member States and observers.

In November 2019, the United States began providing global space weather services for the International Civil Aviation Organization. The United States was designated as a global center with two other global centers that comprise a consortium of 13 other countries that provide space weather information for civil aviation. The beginning of these services in November 2019 capped off a significant effort by the United States, and the other two global centers, to deliver these services to the aviation community.

The United States strives to improve its space weather observing infrastructure and to maintain long-term continuity of essential observations. In this regard, the joint COSMIC-2 mission will provide an unprecedented amount of radio occultation data, on a full-and-open basis, to support both research and operations. In December 2018, the first release of data was provided to the public, and NOAA plans to provide low-latency data to support initial operational capability later this month. The COSMIC-2 suite of six satellites will reach its final distributed orbital configuration within a year. In December 2019, NOAA began operationally using space weather data from GOES-16 and plans to use GOES-17 space weather data by the spring of 2020. NOAA has also initiated development of the Space Weather Follow On mission that is planned for launch in 2024 to orbit around the Earth-Sun Lagrangian Point 1 (L1). This mission is designed to ensure the continuity of upstream solar wind and solar coronagraph measurements required for research and operations.

In June 2019, NASA launched the Ionospheric Connection Explorer (ICON) mission, which will study the frontier of space: the dynamic zone high in our atmosphere where terrestrial weather from below meets space weather above. And

the NASA Parker Solar Probe mission recently announced its first results, which reveal new information about the behavior of the material and particles that speed away from the Sun, bringing scientists closer to answering fundamental questions about the physics of our star. And there is an exciting space weather event to announce this weekend: The Solar Orbiter is scheduled to launch from the Kennedy Space Center on Sunday. This collaborative project with the European Space Agency will etch another chapter into exploratory science history as it sends back the first-ever images of the Sun's poles. Better understanding of the Sun and its massive magnetic field could help us mitigate the destructive effects of solar storms on communication satellites, GPS, and the health of our astronauts.

In closing, Madame Chair, the United States thanks the Abdus Salam International Center for Theoretical Physics for hosting the May 2019 International Space Weather Initiative workshop, in Trieste, Italy. The United States looks forward to continuing to work with the Space Weather Expert Group and with all Member States to build upon our current work. Thank you, Madame Chair.