Statement by the Republic of Korea
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Agenda Item (11): Space Weather

Thank you, Madam Chair.

I am honored to have this opportunity to introduce the national space weather activities of the Republic of Korea and its efforts to ensure the long-term sustainability of the space activities.

In the modern society, space weather can dramatically affect our daily lives, mainly through its impact on information technology (IT). By improving the capability of research and management of space weather, it is possible to operate the infrastructure in space and on the ground such as satellite, communication and power system. As part of the efforts to improve space weather research and forecasting capabilities, Korea's government agencies, research institutes, universities and companies have joined forces — for example, to extend ground-based observation system, develop predictive models, and improve space weather forecast services.

The Korean Space Weather Center (KSWC) of the National Radio Research Agency (RRA) is a government agency in charge of providing information on space weather. In early 2013, space weather was included in the national risk assessment process, and an official manual for space weather disaster management was adopted by the government. This manual describes the roles and missions of the organizations involved. The KSWC is the primary agency responsible for emergency measures against severe space weather conditions. The KSWC is also a Regional Warning Center (RWC) of the International Space Environment Service Organization (ISES) and responds space weather issues, in cooperation with international organizations such as the World Meteorological Organization (WMO) and the International Telecommunication Union (ITU).

The KSWC operates a number of ground observation systems for space weather and also has satellite tracking facilities for receiving the telemetry from ACE, STEREO, and DSCOVR satellites. In addition, the ASSA system was developed to predict sunspot explosions and analyze changes in solar activity, and is now one of the models at NASA CCMC. The S.A.F.E. system provides airlines and crews with estimates of radiation exposure over polar routes.

In particular, an advanced information processing system using big data and AI is planned to be built by 2021. Through the big data system, a large volume of space weather data such as solar image, solar wind observation data, magnetic field and ionosphere data can be collectively managed. AI will improve the forecasting process and the accuracy of space weather forecasts by supplementing information forecasters may miss. If the space weather forecasting system with this new technology is built stably and has accurate space weather forecasting capability, we can have reliable observation data and efficient data sharing system, which will be a good international example and contribute to the development of space weather

Madame Chair, and distinguished delegates,

Korea has been an active participant in international organizations' discussions, sharing of observation data, and work to improve technology exchange and forecast accuracy between countries. We are working with KASI to establish a joint monitoring system for the ionosphere over Asia region, and through this, we will gradually expand exchanges for ionosphere research in entire Asia. We will also continue to play the role of the L1 Satellite's Asia receiver and contribute to the preparation for global space weather risks. In addition to protecting our nation's assets threatened by space weather, we plan to strengthen our international cooperation system so that Korea can be an equal partner in global surveillance of space weather.

Thank you, Madame Chair. /END/