

Agenda Item 7
Space Debris

Madam Chair, Distinguished Delegates,

Uses of outer space play a key role in the social, economic, scientific and technological development of all states. Both government and non-governmental entities are dependent more and more on the outer space assets. The increasing number of space debris poses a serious threat. To ensure the safety, security and sustainability of outer space activities, Japan takes solid steps to the issue of space debris through domestic legal instrument, technical standards, research and development.

Space Situational Awareness (SSA) system is the cornerstone of the measures of space debris. Japan develops technologies for the measurement, monitoring and characterization of the orbital and physical properties of space debris. In order to prevent collision of space debris and space asset, related ministries and agency in Japan are developing the SSA system and we will strengthen the bilateral and international cooperation. Our SSA system will be in operation no later than 2023 including new MOD's radar, upgraded JAXA's optical telescope and radar.

Japan is conducting a research on space debris at a national level. To mitigate the collision risks among space debris, removal of large size debris such as upper stages of launch vehicle is effective. Japan is investigating the system for actively removing large sized space debris. JAXA in partnership with the private sector is committed to programs including research, ground testing, and demonstration in orbit and so on. JAXA is going to make a technical presentation on space debris research including observation, modeling, in-situ measurement of small debris, ADR, ground testing in the morning of Monday 18th February. I would kindly ask all delegates for your attention to this presentation.

Japan is of the view that all states carrying out space activities should behave in a responsible manner to prevent the increase of number of space debris. From this

viewpoint, we would like to encourage all Member States operating and launching satellites to properly implement the “UN Space Debris Mitigation Guidelines.”

Japan believes the discussion on technical standards and voluntary guidelines are helpful. In this regard, Japan implements space debris mitigation guidelines, such as the Space Debris Mitigation Guidelines of the COPUOS and voluntary guidelines proposed by the Inter-Agency Space Debris Coordination Committee (IADC) through domestic legislation and standard.

Japan enforced a national law, Act on Launching of Spacecraft, etc. and Control of Spacecraft; called as “Space Activities Act” in November 2018 in order to efficiently authorize and supervise non-governmental entities’ space activities. Under this law, the Government of Japan examines non-governmental entities’ plan to launch or control satellites within Japanese jurisdiction. All plans are required to satisfy criteria such as prevention of on-orbit break-up and post-mission disposal thereby reduce the number of space debris.

JAXA also developed JAXA standard in 1996 and it was one of the world’s first space debris mitigation guidelines developed. The current JAXA standard, JMR-003C, requires the mission to refrain from the on-orbit break-up of a space system after the end of its mission, to transfer a completed spacecraft in the Geostationary Earth Orbit (GEO) to a higher orbit, to reduce the orbital lifetime during which the orbital stage left in the Geostationary Transfer Orbit (GTO) and Low Earth Orbit (LEO), to minimize the number of objects released in orbit during the operation of a space system, to prevent human casualties on the ground caused by impact of space systems removed from the orbit as well as in the orbit caused by collision with a manned system during space systems launch, and to minimize damage caused by on-orbit collision.

With regard to IADC, Japan has been an active member of IADC and hosted the 36th session last June in Tsukuba, and 147 participants from various space agencies discussed on revising the IADC guideline to include numerical criteria, given the increasing congestion of outer space and the rise of a large constellation business model.

Another international contribution is that Japan has been actively engaged in and leads the discussion of international rating scheme on debris mitigation measures of satellites in the World Economic Forum (WEF) to encourage industry to voluntarily tackle to mitigate the increase in number of space debris.

For the sustainable use of outer space environment, Japan will continue to be actively engaged in tackling challenges of space debris and set an example through a series of measures mentioned above. Japan would like to call upon all Member States to make further efforts to mitigate space debris.

Thank you for your attention.