

Canadian Statement
Agenda Item 11 – Near Earth Objects
Delivered by: Sarah Pacey-Parker, Canadian Space Agency

Committee on the Peaceful Uses of Outer Space
Scientific and Technical Subcommittee
Sixtieth session, Vienna, February 6-17, 2023

Mr. Chair, Distinguished Delegates,

Canada values the ongoing contributions of scientists internationally and in Canada to better understand and characterize the population of Near-Earth Objects (NEOs). We believe that international collaboration on this front is paramount. Canada continues to support the work of the International Asteroid Warning Network (IAWN) and the Space Mission Planning Advisory Group (SMPAG), established by the United Nations Scientific & Technical Committee in 2013.

Mr. Chair,

Canada is proud to be home to NEOSat - the world's first space telescope dedicated to detecting and tracking asteroids, comets, satellites and space debris. This suitcase-sized satellite is still operational and tracks and characterizes space objects in orbital regimes from low-Earth Orbit (LEO) to deep-space. It orbits at an altitude of approximately 800 kilometres above Earth and circles the globe every 100 minutes, scanning space near the Sun to pinpoint asteroids and comets that may someday pass close to Earth.

Through the Canadian Space Agency's NEOSat Guest Observer program, Canadian astronomers publish near-Earth asteroid and comet observation data to the International Astronomical Union Minor Planet Center and participate in international observation campaigns led by the International Asteroid Warning Network, as well as support the photometric follow-up of exoplanet candidates from NASA's Kepler and Transiting Exoplanet Survey Satellite, and other international initiatives. Aligned with Canada's Policy on Open Government, all of NEOSat's astronomy images are available immediately after downlink on CSA's Open Data portal and the Canadian Astronomy Data Centre, freely available to scientists and researchers worldwide.

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We wish to offer our sincere congratulations to our US partners at NASA on the smashing success of the Didymos campaign and the Double Asteroid Redirection Test (DART). As the world's first test of a kinetic impact test using a spacecraft to deflect an asteroid, the results were impressive; with the minimum orbit period change surpassed by more than 25 times what was expected. This also marked the first time that the Hubble and James Webb Telescopes observed an event simultaneously. Canada's NEOSat space telescope was also able to observe the event minutes after the impact.

Mr. Chair,

Canada continues to support the James Webb Telescope project, a partnership between NASA, ESA and the CSA, which was launched on December 25, 2021. On July 12th 2022, the first full-colour images and spectroscopic data captured by the telescope were publicly release. Canada provided two instruments: the Fine Guidance Sensor (FGS) and the Near-Infrared Imager and Slitless Spectrograph (NIRISS). This partnership will offer Canadian astronomers a share of the observation time on the most complex and powerful space telescope ever built.

Finally, Mr. Chair, Distinguished Delegates,

Canada continues its exciting partnership with NASA's on the OSIRIS-REx mission, the first spacecraft to visit an asteroid for the purposes of a sample return. Canada's OSIRIS-REx Laser Altimeter (OLA) on NASA's asteroid-sampling mission OSIRIS-REx played a critical role in determining the sampling site from which OSIRIS-REx acquired samples in December 2020. OSIRIS-REx is now on its way back to Earth with its precious cargo, with an expected return in 2023. A final decision on the OSIRIS-APEX mission will occur after a critical health check in February 2024.

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This past year marked many impressive achievements in this field, which could not have been accomplished without extensive international cooperation and we look forward to future collaboration in this field.

Thank you for your kind attention.