## Canada Statement Agenda Item 14 – Space Exploration and Innovation Delivered by: Sarah Pacey-Parker, Canadian Space Agency

Committee on the Peaceful Uses of Outer Space Sixty-Eighth session, Vienna, 25 June - 02 July 2025

Chair,

On October 5, 2024, Canada celebrated the 40th anniversary of Canadian astronauts in space. In 1984, Marc Garneau was the first Canadian to go to space for the Mission STS-41G. Canadians and the global space community are mourning his recent passing. Since that historic flight, nine Canadian Space Agency (CSA) astronauts have participated in 17 space missions, and three others are currently preparing for future missions. To enable space exploration to continue, there is a need to ensure long-term sustainability of space, and access to space, for the benefit of all. It is essential that COPUOS remain the cornerstone of global governance for the peaceful uses of space to ensure the centrality of consensus-based decision making for these important efforts and that we continue to work within agreed rules and guidelines to ensure the peaceful exploration and use of outer space.

Canada is excited to support the future of space exploration. Bringing humanity back to the moon in a safe and sustainable way requires ensuring astronauts' safety and addressing health concerns in deep space missions. Human health remains a priority for Canada with its development of new multipurpose medical and research platforms, as well as technology development in food and health systems for deep space and terrestrial uses. Over the last several months, CSA scientists and engineers have supported nine on-orbit science sessions on the International Space Station. With the help of the activities astronauts, they conducted for Canadian science experiments CARDIOBREATH, Space Health and Vascular Aging. As part of these experiments, astronauts wear the Bio-Monitor, a Canadian innovative all-in-one wearable technology. This system allows scientists to record astronauts' vital signs and to receive data directly from space for rapid analysis. These experiments and technology development activities allow Canada to leverage space to solve everyday challenges here on Earth including improving our understanding of medical conditions such as diabetes, osteoporosis and cardiovascular disorders, and enhancing health care services in remote communities.

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Canada is developing a Lunar Utility Vehicle as a first step towards Canadian participation in international lunar exploration to support lunar surface logistics and science. The Canadian multi-purpose utility rover will feature key capabilities including lunar night survival; guidance and navigation control from a Canadian operations Centre on Earth or by astronauts on the Moon; tools that could include a small robotic arm to assist logistics and crew operations, and advanced sensors to scan and analyze the environment and enable semi-autonomous navigation, as well as science instruments. The Lunar Utility Vehicle will strive to leverage innovation, highlight interoperability, and support Canadian industry. Canada remains a leader in space robotics and intend to bring this expertise from low earth orbit to deep space. In addition, Canada is continuing to explore opportunities to diversify and advance critical capabilities for lunar surface exploration, such as power generation and space resource prospecting, extraction and utilization. With these activities, Canada intends to stimulate industrial innovation, strengthen core capabilities in areas with strong potential for terrestrial benefit and increase industrial readiness and competitiveness of Canadian companies.

Finally, the CSA is developing its capability to curate its very first sample collected in space through the OSIRIS-Rex mission. The construction of a clean room for the curation of the Canadian sample at the John H. Chapman Space Centre in Longueuil began in January 2025. The Canadian sample will arrive no earlier than 2026 when the facility is ready.

Canada is proud to see humanity go back to the Moon, and it is both urgent and necessary that we find innovative ways to work together in a sustainable way to ensure opportunities for future generations. This is why we continue to strongly support the work of the Action Team on Lunar Activities Consultation (ATLAC) and look forward to agreeing the work plan during this session actively contributing to the discussions going forward.

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Canada sees this as a positive step toward humanity's future in space and we wish to express our full support to the efforts of the co-chairs.

Thank you.