IAF SPACE EXPLORATION SYMPOSIUM (A3)
Moon Exploration – Part 2 (2B)

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CANADA AND NEW LUNAR EXPLORATION

Abstract

The past 3 years have witnessed a remarkable transformation in the global exploration landscape and nowhere is this more apparent than in lunar exploration. 2018-2019 alone has witnessed national policy commitment from the US , a more lunar-weighted ISECG roadmap, the first international partner commitments to the Lunar Gateway, and launch of the first of a number of privately financed lunar missions to the Moon. Missions are being launched from an increasingly diverse set of nations, and the next 3 years alone will witness as many as two dozen different missions, spacecraft and payloads being sent to the Moon to demonstrate and establish a range of early commercial transportation and other lunar services. Momentum has well and truly returned for lunar exploration, fittingly in Apollo's 50th Anniversary year , and this time it carries the genuine promise of sustainability with a diverse fleet of missions and players and a healthy mix of small, secondary missions accompanying larger human robotic missions.

At the same time, the new phase brings new challenges. Technically the next generation of missions target more remote destinations, more challenging environments, longer durations and / or more ambitious in situ capabilities. Programmatically this must all be achieved within the tight resource constraints of modern space today – smaller vehicles, lower costs, a more fluid geopolitical landscape and a more demanding expectations of near-term economic and societal return. A more flexible approach is required

that can accommodate rapid technology advancement, evolving geopolitical and economic circumstances, balance both national interests and commercial sustainability, and offer broadened collaboration and participation options with non-traditional stakeholders, from emerging space nations, non-space players, and even consumer sectors.

Canada made a major national commitment to the Moon in March 2019 with the Prime Ministerial announcement of a $2B+commitmenttotheLunarGatewayandLunarExplorationAcceleratorPrograms.Thispaperprovidesa$
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