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CONSIDERATIONS FOR FOSTERING INTERNATIONAL COLLABORATION IN EXPLORING  
CISLUNAR SPACE

**Abstract**

International collaboration is and will be fundamental in humanity's efforts to pioneer space exploration and establish sustainable human space exploration activities for destinations beyond Low Earth Orbit (LEO). As humanity looks towards taking these next steps, we rely on our governments, private industries, and international partners to guide the way. However, it is essential that we lay the foundations early on to foster this international collaboration for mission planning and a governance strategy for the success of such grand endeavors.

During the 15th Space Generation Congress (SGC), an assembly of international students and young professionals, gathered in Mexico in September 2016 to address two fundamental challenges and questions surrounding deep space exploration—specifically, considering the context of a Cislunar Proving Ground. The Proving Ground is a concept that serves as an environment to innovate, demonstrate, and validate capabilities required to pave the way for long duration deep space exploration. Sponsored by NASA Advanced Space Exploration, the primary goals of the discussion were twofold. First, to design a mission architecture to identify and utilize global assets, essential capabilities and knowledge gaps to foster international participation in the Proving Ground. Second, to provide recommendations on developing a Global Governance Strategy to foster international collaboration.

In this paper, we report on the outcomes of these discussions. In the first section, specific recommendations illustrate potential mission architectures in the Cislunar space by employing Design Reference Missions (DRM) during the 2020s-2030s that foster international collaboration and participation by both public and private entities. Required infrastructure and capabilities are prioritized for specific segments of both crewed missions and dormancy (uncrewed) periods. A series of recommendations for the second section are geared towards the development of a Global Governance Strategy that provides a platform to actively promote international inclusiveness, discussion, collaboration, and an eventual evolved governance by both government and private sector entities.

While the recommendations provided in this paper are aligned to provide the voice of the next generation on the progress of humanity's reach into deep space exploration, these are areas that require both significant consideration and immediate action from our current leaders to lay the foundations for the future of space exploration.