Paper ID: 73808
oral

33rd IAA SYMPOSIUM ON SPACE AND SOCIETY (E5)
Interactive Presentations - 33rd IAA SYMPOSIUM ON SPACE AND SOCIETY (IP)

Author: Ms. Maitha Alshizawi
Mohammed Bin Rashid Space Centre (MBRSC), United Arab Emirates

PAYLOAD HOSTING INITIATIVE FOSTERING SPACE RESEARCH AND DEVELOPMENT TO BENEFIT SOCIETY

Abstract

Developing new technologies and payloads are essential to improve the quality of life and services provided to the society. Enabling access to space for different RD entities and commercial companies to test their new technologies in space is the main goal aimed by Mohammed Bin Rashid Space Centre (MBRSC) through Payload Hosting Initiative (PHI). MBRSC launched the Payload Hosting Initiative (PHI) in 2022. This initiative provides a 12U modular satellite platform that foster innovation in space technologies sector and ensure the experience exchange between governmental entities, universities and start-up companies. It will consist of a yearly launch of one to two satellite missions in which MBRSC will call for these entities to load their innovative systems and payloads and launch them on these satellites. PHI-Demo is considered as the first payload hosting initiative designed by MBRSC for technology demonstration. PHI-demo is hosting IoT communication payload using 5G technology and the data will be shared and demonstrated to different entities in ground. Also, PHI-demo is hosting a water-fueled propulsion system which is a new technology that is safe, green and efficient for small satellites. As extension to this initiative, MBRSC and The United Nations Office for Outer Space Affairs (UNOOSA) collaborate to provide the opportunity of hosting payloads on PHI platform with a volume of 5U. This initiative fosters innovation in the space technologies sector and ensure the experience exchange between MBRSC and payload hosted entities especially for developed countries. This paper focuses on the objectives and benefits of Payload Hosting Initiatives (PHI) to the society. It will presents the new technologies hosted in PHI-Demo mission and how space research and development can result in space product. Also, it will focus on the methodology of experience exchange in PHI-Demo and PHI-1 mission between MBRSC and different R&D entities.