38th Annual Small Satellite Conference

Presenter:

Mr. Carson Hula

NASA, United States, carson.m.hula@nasa.gov

International Space Station Satellite Deployment:

Jettison Policy and Best Practices for Satellite Payload Developers

Abstract

The International Space Station (ISS) deploys dozens of small satellites into Low Earth Orbit (LEO) each year. This presentation and associated paper cover the ISS Jettison Policy requirements and review/approval process, as well as best practices for satellite Payload Developers who have satellites manifested for deployment from ISS. Specifically, topics will include ISS Jettison Policy requirements to limit generation of orbital debris, limit risk of collision with ISS, and limit risk of collision with ISS visiting vehicles. The paper will include details on the ISS Program jettison candidate analysis and approval process, timelines for data submittal to ISS Program, resources for small satellite developers, and design & analysis recommendations for small satellite developers to maximize their likelihood of successful deployment from ISS. New Station deploy capabilities and ways the ISS Program addresses and facilitates innovations in small satellite technology, including propulsion systems, deorbit devices, constellation development, and novel tech demos, will also be explored.

The 2024 session topic that best fits this abstract is *Orbital Debris, SSA & STM.* The ISS Jettison Policy intends to quantify and control the risks of deploying and operating small satellites, not only to ensure the safety of the humans flying in space, but also to preserve the orbital environment for world space activities and enable the significant benefits brought by such utilization. The ISS Program is committed to working with smallsat providers to address their challenges and enable safe, accessible, innovative missions. The Policy has grown with the industry, with each deploy yielding hard-earned lessons learned that improve our process – not only for the next deploy campaign, but with applicability and adaptability for future applications in LEO and beyond.