

SPACE DEBRIS SYMPOSIUM (A6)
Mitigation and Standards (4)

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SPACE DEBRIS MITIGATION TECHNOLOGY AND APPLICATION FOR LAUNCH VEHICLE
ORBITAL STAGE

Abstract

In order to reduce the generation of space debris effectively, avoid the space debris endangerment to the safety of space activities and spacecrafts, protect the space environment, the launch vehicle orbital stage should take passivation measures to eliminate potential danger about generating debris by its disintegration on the orbit after the payload separation. In addition, the orbital stage should leave the operation orbit as soon as possible and handle its orbit-life. In this paper, research, development and engineering application of the space debris mitigation technology for Launch Vehicle Orbital Stage of LM-4 series and LM-2D Launch Vehicle are elaborated. It mainly include research, application and result of residual propellant venting technology, the mitigation design, the active de-orbit technology of the launch vehicle orbital stage. Finally the later technology research work direction of space debris mitigation is proposed, which makes contributions to the mitigation of international space debris.