

SPACE PROPULSION SYMPOSIUM (C4)
New Missions Enabled by New Propulsion Technology and Systems (6)

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HELICON TECHNOLOGY FOR LOW EARTH MISSION OF MINI SATELLITE

Abstract

This paper present a feasibility study jointly undertaken by University and Padua and Sitael-ALTA in order to verify the possibility of applying helicon technology for low earth orbit , mini satellites for drag compensation. The baseline is a small helicon thruster (50 W) developed in the frame of the FP7-space program HPH.com. The unit allow for thrust up to 1.2 mN at 50 W applying different type of gases.

The study which combine system design, orbital analysis, thruster design, and preliminary testing is intended to analyze the achievable mission profile for satellites in the range between 10 – 50 kg.