

SPACE PROPULSION SYMPOSIUM (C4)  
Electric Propulsion (4)

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## STATUS OF THE HEMP- THRUSTER DEVELOPMENT FOR SATELLITE MISSIONS

**Abstract**

The development of the HEMP (High Efficiency Multi Stage Plasma) technology for Electric Propulsion started in 1998. A complete assembly including thrusters, the power supply and control, the flow control, harness etc. is facing the qualification now and is planned to be launched on a telecom- satellite as the primary system in late 2014.

Furthermore, new satellite buses with higher power levels and the idea of using EP for orbit raising require higher ISP. HEMP maybe used for other mission profiles as well. The technology has to be developed further for higher power levels, higher voltage, longer operation times.

It is planned to present the technologies needed to meet the requirements of telecom- satellites, esp. of the SGEO- Satellite, and its benefits, including technologies for the subsystems required, the test facilities and helpful and successful computation of the HEMP- plasma and plasma- wall interactions in the test chamber.

The status of the development and the validation status will be the main part - it has become reality.