

SPACE PROPULSION SYMPOSIUM (C4)  
Electric Propulsion (4)

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FLIGHT TEST OF THE 800 W HET-40 HALL EFFECT ELECTRIC PROPULSION SYSTEM ON  
SJ-9A SATELLITE

**Abstract**

The 800 W HET-40 Hall effect electric propulsion system developed by Shanghai Institute of Space Propulsion (SISP), has been flight tested on SJ-9A satellite launched on October 14, 2012. The HET-40 system, China's first flight Hall effect electric propulsion system, includes one 660 W Hall thruster, one propellant storage and feeding unit, one 800 W power processing unit and one filter unit. The HET-40 system's first firing operation has been carried out successfully on November 7, 2012, and all planned 200 firings have been finished on December 16, 2013. On-orbit performance has been nominal and the system performance characteristics were calculated by the telemetry data. The test results of average system power, thrust and specific impulse are 741.3 W, 38.32 mN and 1495 s, respectively.