

SPACE PROPULSION SYMPOSIUM (C4)
Electric Propulsion (4)

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SUMMARY OF THE 25000 HOUR ROUND-TRIP ION DRIVE OF HAYABUSA

Abstract

Hayabusa asteroid explorer has continued powered flight in deep space using the microwave discharge ion engines since 2003. IES achieved the total accumulated operational time 39,000 hour unit and total delta-V 2,100 m/s as of Mar 2010 and brought us a lot of experience and knowledge, which will contribute future space missions. The accumulated operating hours of "ion drive" of the spacecraft reached approximately 25,000 hours that is the world record. Hayabusa is on the way to Earth. IES has a remaining duty 30 m/s in delta-V and 400 hour unit in operation with enough propellant 20 kg for Earth return in June 2010.