

SPACE PROPULSION SYMPOSIUM (C4)
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5KW CLASS OF ANNULAR-GEOMETRY ION THRUSTER DEVELOPMENT

Abstract

For development of the electric propulsion within under-hundred kilowatts power range, either concept of multi-ring ion thruster or multi-ring Hall thruster has been selected as a priority because its maturity technology. A 5kW class of annular-geometry ion thruster (AGIT), as a fundamental of multi-ring ion thruster, has been developed by Lanzhou Institute of Physics (LIP) since last year. In this paper, the AGIT concept study is presented by target performance of 5kW power, 4000s specific-impulse, and more than 50% efficiency. The prototype model design and its numerical analysis are described briefly. The test result of the prototype model is reported in detail. LIP's next development of dual-ring ion thruster and hybrid of ion & Hall is introduced.