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INITIAL FLIGHT TEST RESULTS OF THE LIPS-200 ELECTRIC PROPULSION SYSTEM ON SJ-9A SATELLITE

Abstract

LIPS-200 ion electric propulsion system has been developed by Lanzhou Institute of Physics(LIP) since 1990s and its first flight test was conducted on SJ-9A satellite, which was launched on October 10,2012. The flighting system of LIPS-200 on SJ-9A satellite is composed of a subsystem control unit, an ion thruster, a power processing unit(PPU) and a xenon storage and feed subsystem(XSFS) composed of a xenon tank, a Pressure regulator and a flow controller. After finishing the checkout and activation in orbit, the first firing operation has been implemented successfully on November 7, 2012. The first test phase was completed and the firing was implemented 22 times until December 9,2012. In this paper, the initial test results of the LIPS-200 on SJ-9A satellite in first test phase are presented in details.