

20th SYMPOSIUM ON SMALL SATELLITE MISSIONS (B4)
Generic Technologies for Small/Micro Platforms (6A)

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NEW TECHNOLOGY TESTING RESULT OF SJ-9 SATELLITE

Abstract

New Technology Testing Result of SJ-9 Satellite

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New technology test satellite of SJ-9 was launched successfully on October 14, 2012. SJ-9 satellite is focus on much more new technology such as long-life and high-reliability high-accuracy and high-property, important elements, and two satellite formation flying and high-accuracy baseline measurement and so on. Satellite project SJ-9 for technologies demonstration consists of two satellites, SJ-9A small-satellite and SJ-9B micro-satellite of which the key demonstrations are high-precision two satellite formation flight. At same time, SJ-9A satellite includes of 17 new technology testing devices and 10 new-type elements. SJ-9B satellite includes of 7 new technology testing devices. First, satellite SJ-9A uses mature CAST-2000 platform which can support the test of key devices including of electronic propulsion system, high-performance small camera, etc. Satellite SJ-9B uses new-type CAST-100 platform which can support the test of key devices including of LWIR focal-plane coad optics long life stirling cryocooler, etc. SJ-9 satellite supplies with the reliable and stable platform for on-orbit new technology testing devices. SJ-9 satellite realize the key technology demonstrations of two satellite formation flight and high-precision baseline measurement, electronic propulsion system and high-performance satellite-to-ground integrated imaging. The new technology demonstrations such as super-capacitor, high-temperature superconduct, new-type attitude control devices have been tested successfully on orbit at first. 25 new technology testing devices of SJ-9 satellite have been finished basic test on orbit successful. All kinds of function and property for testing device satisfy with the requirements. SJ-9 satellite is successful. The technology level and ability of the satellite in China is raised up. And then these technologies have caught up with world level.