

Result of development and early phase operation of Small Demonstration Satellite 1

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The Space-technology Demonstration Research Center (SDRC) in JAXA has been studying the small satellite and its related components. And since 1998, we have developed 20kg to 100kg class small satellite, such as MicroLabSat, MicroLabSatII and SOHLA-1.

In 2006, a program called Small Demonstration Satellite (SDS) was initiated. This program provides useful standard platforms by series of small satellites to newly developed components and advanced space technology with timely launch opportunity. The program will contribute as a strategic means of JAXA to improve reliability of space missions.

The study of quick and low-cost satellite developments is one objective of this project. In addition, these series of satellites will be developed by young engineers as hands-on training program in JAXA, and through the projects, they are expected to acquire comprehensive knowledge and ability to implement future space missions.

The paper describes JAXA's Technology Demonstration Program using small satellite, including its road map, selection policy of missions, quality management policy and development framework. And then development result of SDS-1, which was launched in January 2009, and its early phase operation result will be introduced.