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NASA'S SMALL SPACECRAFT SYSTEMS VIRTUAL INSTITUTE AND SMALL SPACECRAFT
ENTERPRISE

Abstract

In January of 2017, NASA's Space Technology and Science Mission Directorates established the Small Spacecraft Systems Virtual Institute (S3VI). The mission of the agency-wide institute is to advance the field of small spacecraft systems and allied sciences by promoting innovation, exploring new concepts, identifying emerging technology opportunities, and establishing effective conduits for the collaboration and the dissemination of research results relevant to small spacecraft systems and subsystems. To achieve this, the S3VI serves as the common portal for NASA-related small spacecraft activities, hosts the Small Spacecraft Body of Knowledge as an online resource for the annual Small Spacecraft Technology State of the Art report, including a components and subsystems database, and also collects and organizes related knowledge such as small spacecraft reliability processes and best practices. The S3VI also serves as the front door for other governmental, non-governmental, and external agencies that wish to collaborate or interact with NASA small spacecraft organizations.

NASA also presently has a growing number of small spacecraft related programs, projects, and efforts collectively termed the NASA Small Spacecraft Enterprise underway to advance the utility of small spacecraft instruments, technologies, and missions in order for NASA to achieve its exploration and science goals. These various activities will be outlined and described with a refocused emphasis on cis-lunar and deep space applications and supporting technologies.