

Using the ISS to Prepare for Exploration (01)
Exploration Technology Demonstrations Using ISS (2)

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SELECTION OF ENABLING SUPPORT EQUIPMENT AND SERVICES FOR NASA'S
INTERNATIONAL SPACE STATION NATIONAL LAB

Abstract

NASA was chartered in the NASA Authorization Act of 2005 to operate a share of the International Space Station (ISS) as a US National Lab. The Agency actively sought ways to expand access to the ISS National Lab for the conduct of basic and applied research and development (R&D) to U.S. federal, state and local government entities, and to U.S. private entities. One mechanism used to enable the ISS NL was a Broad Area Announcement (BAA) issued in April 2010 focused on US private entities (including, but not limited to, commercial firms, non-profit institutions, and academic institutions). This BAA sought to provide for two thrust areas intended to better support R&D within the ISS National Lab: payload integration and operations services, and support equipment and instrumentation capabilities for utilization of ISS. NASA intended to use NASA's legal authority to enter into contracts, cooperative agreements, or grants with BAA respondents. This BAA closed out on December 31, 2011.

While Broad Area Announcements are an often-used vehicle for solicitation, the procurement process for dealing with resulting proposals varies greatly. This paper describes the response of US private entities to the ISS National Lab BAA, and the streamlined evaluation mechanisms NASA implemented to be able to rapidly adjudicate each proposal. Application of this process allowed NASA to very rapidly make acquisition decisions, and enable projects to proceed where funding was available. Resulting enabling projects funded after selection under this process will have tremendous impact on the ability of the ISS National Lab to be used by a large variety of other government agencies and private entities to conduct ground-breaking R&D for space exploration and other missions. A key example was a Nitrous Oxide fuel propulsion experiment demonstrating a new, robust, high performance, versatile, deeply throttle-able, and nontoxic engine and propulsion subsystem.