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Ensuring International Space Station Capabilities are More Widely Known

NASA Advisory Council Recommendation:

The Council recommends that NASA make the International Space Station (ISS) capabilities, achievements, and potential services more widely known outside the NASA community, especially within the business world. Consideration should be given to new and innovative approaches for doing so.

Major Reasons for the Recommendation:

The Space Operations Committee is very impressed with the past, current, and future capabilities of ISS. Some examples include: microbial vaccine development for staph aureus (MRSA) and salmonella, cancer treatment delivery, plant growth, macromolecular crystallization for Duchenne's muscular dystrophy, regenerative environmental systems, and education, to name a few. Research includes not only NASA and the international partners, but Department of Defense, National Institutes of Health, and commercial partners through the National Laboratory. NASA has used Space Act Agreements with various commercial organizations. While these appear to be quite successful, the committee believes there are still missed opportunities in the commercial sector, as many non-traditional partners are not aware of the capabilities and potential of ISS. The Space Operations Committee recommends that NASA look for new ways to make these capabilities known, either by marketing, appearing at non-traditional gatherings, broad announcements, or short educational articles in business publications. Some industry examples are: health care, environmental, or energy.

NASA Response:

NASA concurs and has continued to broaden outreach efforts through the generation and publication of "Research in Space – Facilities on the International Space Station" http://www.nasa.gov/pdf/393789main_iss_utilization_brochure.pdf. This publication describes all the research facilities on the ISS, as well as some research results highlights. It has been distributed to thousands of prospective users of the ISS and includes points of contact for each participating ISS Partner agency. NASA and its ISS Partner agencies are continuing with outreach efforts by recently publishing "The Era of International Space Station Utilization: Perspectives on Strategy from International Research Leaders," developed by international research leaders, including both ISS and non-ISS investigators. This publication will be posted to the Web site and distributed to prospective users of the ISS.

Since November 2009, new agreements have been established with the Defense Advanced Research Program Agency, the National Science Foundation (NSF), Boeing, Microsoft, and LEGO. Agreements are currently under development with multiple university researchers and one private firm. In the past few months, new NASA Research Announcements (NRAs) have been announced in "Crew Health and Performance and Materials Science" at

http://www.nasa.gov/mission_pages/station/science/nlab/nlab_proposal.html. The upcoming NRAs from the Science Mission Directorate for “Research Opportunities in Space and Earth Sciences” and the “Explorer 2010 Missions of Opportunity Program Element Appendix” for the “Stand Alone Missions of Opportunity Notice Announcement of Opportunity,” will both list ISS as an available platform. Additionally, the National Laboratory Office has posted a Broad Agency Announcement (BAA) titled “Enabling Support Equipment and Services for International Space Station as a National Laboratory,” which can be found at http://www.nasa.gov/mission_pages/station/science/nlab/index.html. The BAA is focused on commercial sector use and servicing of ISS and will be updated annually. NASA has added the capability to deploy CubeSats from the ISS commercial cargo resupply missions as another means of opening up the opportunity for space flight research to a larger group. NASA will continue to issue new NRAs, consistent with future funding availability.

Beginning in January 2010, a team was assembled to begin restructuring of the ISS Home page to include restructuring of the ISS Science pages. Improvements to the ISS Science Web pages will provide:

- Improved usability overall (i.e. clear, concise, and updated links).
- Clear ISS research mission statements, including research structure and science goals.
- New ISS research metrics page.
- Updated research news.
- Quick links for educators and students interested in ISS science.
- References and process outlines for potential and current ISS investigators, including potential funding sources and processes (“users guide”).
- Improved search functions for items such as ISS facilities, experiments and results, and ISS publications.
- ISS research translations to Earth benefits in a single Web location.
- Improvements to the National Laboratory Office Web page, to include sections for potential investigators, agreements, processes, and funding information.
- Upcoming events related to ISS science.
- Current events in ISS science.

Additionally, the first ISS Research Academy for new investigators was held August 3-5, 2010. Detailed information on the ISS Research Academy can be found at http://www.nasa.gov/mission_pages/station/science/nlab/nlab_conferences.html. This three-day event detailed the science that can be done on ISS during day one, the research opportunities (both NASA and non-NASA) and how to submit them during day two, and the process for working on ISS during day three. Part of the second day was devoted to the commercial companies that can provide services to researchers to enable them to successfully work through the ISS processes. A portion of the third day was used for a feedback session from the payload developers and the experienced Principal Investigators to aid NASA in modifying processes and systems that were overly cumbersome to the users. Based on this feedback, changes to the systems that the payload developers and Principal Investigators use routinely are being evaluated for implementation in the FY 2011 timeframe. NASA is

currently evaluating the effectiveness of the forum and determining the right frequency and locations for repeating the forum.

Finally, consistent with the direction in the President's FY 2011 Budget to Congress, NASA is in the process of establishing a nonprofit organization (NPO) through a competitive process to manage the U.S. national (i.e. non-NASA) uses of the ISS. It is anticipated that this NPO will have more latitude to broadcast the capabilities and services of the ISS to a wider audience than NASA, as well as publicize the ISS accomplishments. NASA anticipates starting the cooperative agreement competition this spring 2011 and awarding the NPO agreement during the third quarter of 2011. Management of the ISS research program will be transferred during the fourth quarter of 2011.