



NASA SBIR 2015 Phase I Solicitation

H14.02 International Space Station (ISS) Demonstration of Improved Exploration Technologies

Lead Center: JSC

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NASA is investing in technologies and techniques geared towards advancing the state of the art of spacecraft systems through the utilization of the ISS as a technology test bed. Successful submissions will describe requisite testing on ISS. Proposals that do not require testing at the ISS should respond to other subtopic solicitations in appropriate technical areas. If submitted to this subtopic they will be considered non-responsive.

NASA encourages submissions that increase the Technology Readiness Level of space exploration and pioneering technologies in areas that include but are not limited to the following:Â

- Ambient temperature catalyst replacement for the ISS Water Processing Assembly.
- High pressure oxygen generation applicable to both ISS and future human space flight vehicles, demonstrated on ISS.

For all proposed technologies, research should at a minimum be conducted to demonstrate technical feasibility and prototype hardware development during Phase I and show a path toward Phase II hardware and software demonstration and delivering flight unit or software package for ISS testing.

Phase I Deliverables - Research to identify and evaluate candidate technologies applications to demonstrate the technical feasibility and show a path towards a hardware/software demonstration. Bench or lab-level demonstrations are desirable. The technology concept at the end of Phase I should be at a TRL of 3-6.

Phase II Deliverables - Emphasis should be placed on developing and demonstrating hardware and/or software prototypes that can be demonstrated on orbit (TRL 8). The contract should deliver unit for functional and environmental testing at the completion of the Phase II contract. The technology at the end of Phase II should be at a TRL of 6-7.

Proposals should be generated to assume costs that are limited to the deliverables and the ISS Program, if chosen for flight, would provide safety, upmass and other integration costs.

Potential NASA Customers include:Â

- International Space Station Program (http://www.nasa.gov/mission_pages/station/main/index.html).
- Orion Multipurpose Crew Vehicle (<http://www.nasa.gov/exploration/systems/mpcv/index.html>).Â

