TUCSON, (AZ) (May 03, 2016) – Paragon Space Development Corporation® (Paragon) and partner Thin Red Line Aerospace (TRLA) received a Phase I Small Business Innovation Research (SBIR) award from NASA to provide a unique solution that will extend the life of cryogenic upper stage rockets. The useful life of a standard upper stage is no more than a few hours. The thermally isolating structure is a key piece to allowing systems to operate for weeks or months on orbit, giving upper stage platforms additional flexibility for payload maneuvering and deployment timing as well as direct use of upper stages for commercial and scientific use.

The proposed solution will provide NASA with an isolation solution between manned and unmanned spacecraft while allowing for the necessary structural characteristics for station keeping attitude control and telemetry on orbit. The technology has direct application to both NASA and commercial launch vehicles as well as proposed cryogenic depot platforms, enabling the orbital refueling stops identified by NASA as the long term approach to deep space manned missions to Mars and beyond.

“We are honored to once again partner with TRLA and provide NASA and the space launch community with a unique and innovative technology that will make exploration of deep space safer, and more reliable for all,” said Grant Anderson, Paragon President and CEO.

“We intend to prove that our solution will not only extend the on-orbit life of propellant depots but also provide increased mission flexibility for future NASA and commercial space exploration missions,” added TRLA President Maxim de Jong.

The technology is complimentary to the recently-announced launch and orbital environment protection system for cryogenic tank acreage that Paragon and TRLA won in March. With this solution, the isolation and protection of cryogenic stages is a one-stop acquisition for upper stage or payload manufacturers. Paragon and TRLA are actively engaged with industry partners to provide several cryogenic solutions that will support a range of applications for deep space exploration.

For the 2016 SBIR/STTR solicitation, NASA received 1,278 proposals of which it selected 399 for contract negotiation.

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For more information: http://sbir.gsfc.nasa.gov/SBIR/abstracts/16/sbir/phase1/SBIR-16-1-H2.04-8412.html