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AD ASTRA ROCKET COMPANY SUCCESSFULLY COMPLETES ALL NASA NEXTSTEP CONTRACT MILESTONES FOR YEAR ONE, RECEIVES NASA APPROVAL TO PROCEED WITH YEAR TWO.

[Webster, Texas – for immediate release] – Ad Astra Rocket Company has successfully completed all milestones and deliverables for the first of its three-year Next Space Technology Exploration Partnerships (NextSTEP) contract with NASA. The 9 million-dollar, fixed price agreement, is structured as a one-year contract with two additional one-year extensions, based on successful completion of project milestones. After a successful year-one performance review, Ad Astra received NASA approval to proceed with year-two activities.

Under the NASA NextSTEP partnership, Ad Astra will demonstrate a 100 hour continuous firing of the VX-200SS™ VASIMR® prototype at a power level of 100 kW. This test, conducted in Ad Astra's 150 m³ Texas vacuum chamber, aims to bring the engine to a technology readiness level (TRL) 5, a step just before space flight. The VX-200SS™ includes a new proprietary rocket core design and will be capable of operating indefinitely in a thermally stable mode under space-like vacuum conditions.

Important year-one achievements include the redesign and manufacturing of the new VX-200SS™ rocket core and new vacuum and thermal management sub-systems for the laboratory. These are needed for handling the vacuum requirements and the unprecedented thermal load arising from the rocket's 3 million-degree plasma exhaust. Other milestones include the refurbishment of the rocket's cryogen-free superconducting magnet and the high power RF generators developed for Ad Astra by Nautel Ltd. of Halifax, Nova Scotia, Canada.

In the second year, Ad Astra will integrate all the VX-200SS™ sub-systems and conduct the first high power plasma firings, planned for late October of this year. These tests will continue in 2017 at increasingly longer pulse lengths. Ad Astra expects to reach the 100 hr./100 kW goal by mid-2018.

"We are pleased with this year's accomplishments and thrilled to continue with NASA on this exciting project on our path to space," said Dr. Mark D.

Carter, Ad Astra's Sr. VP, Technology Development and VX-200SS™ Project Manager. "I am proud of the Ad Astra team and its outstanding job in completing all year-one milestones and deliverables, on budget and on, or ahead of, schedule," said Dr. Jared P. Squire, Ad Astra's Sr. VP, Research and VX-200SS™ Deputy Project Manager.

Since 2005, Ad Astra has developed the technology with more than \$30 million in private investment, completing more than 10,000 high power firings of the VASIMR® rocket. These tests, while of short duration, demonstrated the engine's reliable performance, efficiency and stability. The planned long duration tests with NASA, aim to demonstrate its durability and thermal control.

ABOUT THE TECHNOLOGY

Short for Variable Specific Impulse Magnetoplasma Rocket, VASIMR® works with plasma, an electrically charged gas that can be heated to extreme temperatures and controlled and guided by strong magnetic fields, which also provide insulation. Plasma rockets, such as VASIMR®, have an extremely low fuel consumption and much higher performance as compared with conventional chemical propulsion or other electric rockets. They will provide a major economic and operational advantage for US leadership in space commerce, including satellite deployment, re-boost services, refurbishment and end-of-life disposal. In the longer term, with an appropriate nuclear-electric power source, VASIMR® would provide much faster and safer human and robotic transportation in deep-space where solar power is insufficient.

ABOUT AD ASTRA

A US Delaware corporation established in 2005, Ad Astra Rocket Company is the developer of the VASIMR® engine, an advanced plasma propulsion system for the emerging in-space transportation market. Ad Astra also owns and operates supporting R&D subsidiaries in the US and Costa Rica. The company also develops earthbound high technology applications in renewable energy, advanced manufacturing and applied physics. Ad Astra has its main laboratory and corporate headquarters at 141 W. Bay Area Boulevard in Webster, Texas, USA, about two miles from the NASA Johnson Space Center.