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AD ASTRA ROCKET COMPANY AND NASA JOHNSON SPACE CENTER SIGN AGREEMENT ON VASIMR® PAYLOAD SAFETY AND RELIABILITY SUPPORT

[Houston, TX For immediate release] – Ad Astra Rocket Company and NASA Johnson Space Center (JSC) have signed a Support Agreement (Annex 6) to collaborate on aspects of safety, reliability and mission assurance related to the development of VASIMR® technology. As the Agreement reads, the parties will:

> *"…work together to examine, understand, and document the safety and reliability aspects of the VASIMR® technology and develop a design approach for the flight system that conforms to accepted NASA safety, reliability and mission assurance best practices."*

The agreement was signed today by NASA-JSC Director of Safety and Mission Assurance (S&MA), Mr. William S. "Bill" McArthur Jr. and Ad Astra's Chief Executive Officer, Dr. Franklin R. Chang Díaz. The Support Agreement, also known as an Annex, is the sixth such agreement entered into by the parties under an "Umbrella" Space Act Agreement, executed in December of 2007. The "Umbrella" document establishes the basic framework for collaboration and serves as host to Annexes, such as this one, that define specific tasks and objectives to be accomplished over a certain period. The technical activities will be coordinated, on the NASA side by Mr. Michael P. Fodroci, Chief, ISS S&MA Division and, on the Ad Astra side, by Dr. Jared P. Squire, Senior Vice President for Research.

NASA JSC S&MA Chief William S. "Bill" McArthur Jr. and Ad Astra CEO Franklin R. Chang Díaz sign the Annex 6 Agreement at the Johnson Space Center.

Among its most significant elements, this Annex provides:

1. Familiarization of JSC S&MA personnel with the unique characteristics, behavior, physics and engineering of high power plasma rockets such as VASIMR®, focusing on those aspects of the technology that will have a bearing on safety, reliability and mission assurance as the technology is matured to flight readiness;

2. Guidance to Ad Astra through the NASA safety process that would be required to prepare such a system for integration and flight test on-board NASA human and robotic space vehicles; and

3 NASA insight and early system design inputs to Ad Astra on the design process of a flight engine in order to enhance and promote the safety, reliability and serviceability of the

VASIMR® technology as it matures to flight readiness.

Ad Astra will familiarize NASA with the physics, characteristics, prototype testing results and anticipated in-space behavior of the VASIMR® system, support joint working sessions on the safety and reliability aspects of the technology and help NASA develop the knowledge base required to efficiently assess the safety and reliability of high power electric propulsion systems such as VASIMR®.

NASA, on the other hand, will familiarize Ad Astra personnel with NASA standards for spacecraft safety and reliability, participate in joint working sessions on aerospace design practices that enhance safety and reliability aspects of space hardware and otherwise provide insights to Ad Astra into safety and reliability aspects of the design and testing of spacecraft and space payloads. NASA will also participate in an advisory capacity in the design activities of the VF-200 flight test article and support Ad Astra's safety process to bring the VASIMR® technology to flight test readiness. The Space Agency is committing 3640 hours of expert personnel time to fulfill the above responsibilities. The Annex defines a period of 1.5 years for completion of all the tasks, beginning in June, 2012 and ending in December of 2013.

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 by radio waves and controlled and guided by strong magnetic fields. The magnetic field also insulates any nearby structure so temperatures well beyond the melting point of materials can be achieved. The plasma can be harnessed to produce propulsion. In rocket propulsion, the higher the temperature of the exhaust gases, the higher their velocity and hence the higher their fuel efficiency. Plasma rockets feature exhaust velocities far above those achievable by their chemical cousins, so their fuel consumption is extremely low.

ABOUT AD ASTRA

Ad Astra Rocket Company was established in early 2005 to commercialize the technology of the VASIMR® engine, an advanced plasma propulsion system with potential to support an emerging in-space transportation market. The company 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. Ad Astra also owns and operates Ad Astra Rocket Company, Costa Rica, a supporting research and development subsidiary in Guanacaste, Costa Rica.