





## PRESS RELEASE 090508, May 9, 2008

# Ad Astra Rocket Company and Costa Rican consortium CORAAL S.A. sign collaborative agreement for the design of a research platform for the International Space Station.

[Liberia, Costa Rica. For immediate release] - Ad Astra Rocket Company and Costa Rican Aerospace Alliance (CORAAL) have signed a Collaborative Agreement for the design of a power and propulsion test platform for the International Space Station (ISS). The Platform would house the VF-200-1 VASIMR<sup>TM</sup> engine, a new plasmabased space propulsion technology currently under development by Ad Astra.

The agreement was signed today at Ad Astra's Costa Rica subsidiary near the City of Liberia, Guanacaste by CEOs Angela García León (for CORAAL) and Franklin Chang Díaz (for Ad Astra). It is being hailed as historic for Costa Rica, marking a formal entry by that country into the field of space technology.

Principal elements of the agreement include the participation of CORAAL as a member of an Ad Astra-led design team, which includes US collaborators Alliant Techsystems (NYSE: ATK) and NASA and it envisions the utilization of CORAAL's extensive expertise in design and high precision machining and manufacturing for the design of the platform structure and associated hardware.

The power and propulsion research platform is a structural and utility support module that would house Ad Astra's VF-200-1 VASIMR<sup>TM</sup> engine, which the company plans to deploy in space in early 2012 and which would become the first space

demonstration of this new plasma propulsion system. In addition, the platform would also provide a research venue for testing a number of other space technologies and basic research of interest to the commercial, academic and public sectors.

"This collaboration benefits both parties in many ways" said Dr. Chang Díaz. "Ad Astra will benefit from CORAAL's extensive expertise in design and precision machining and manufacturing while CORAAL will gain entrance into new markets in the field of space technology. We are very enthusiastic about the prospects for this relationship" he added.

"We are excited about this collaboration and honored at the opportunity to work together with Ad Astra Rocket and the US collaborators in the development of the platform structure," said Ms. García León. "This will be the first step for CORAAL to work in this new technological field and we are ready for this new challenge" she added.

Costa Rica's president, Dr. Oscar Arias Sánchez, attended the ceremony and expressed his strong support for this collaboration. "I have repeated tirelessly that, as a country, we must substantially increase our investment in research and development: today we dedicate less than half a point of our GDP each year to this task. If we continue to maintain such level of investment we will see how the gates of prosperity will close upon us. To say that there are no resources to invest in research

and development is to say that there are no resources to secure the future of Costa Rica and my government will not choose to adjourn the opportunity of this country."

"This laboratory is the paradigm of the type of science and technology investment that Costa Rica can and must stimulate. If I had set out exhaustively to find the best example, I would not have found a better one. This project brings together high technology, private investment, knowledge transfer and a highly skilled workforce who is also committed to the community and to the development of the rural areas. To this type of project, a testimonial of Faith in Costa Rica, we deliver the baton of our national concert" he said.

Also in attendance were: Costa Rica's Minister of the Presidency, the Vice Minister of Foreign Trade, and the CEO of the country's Trade Promotion Agency. Other leading personalities in the country's government, technology, investment and finance communities were also present.

#### ABOUT AD ASTRA

Ad Astra Rocket Company is a privately-owned corporation established January 14, 2005 to commercialize the technology of the VASIMR<sup>TM</sup> engine, a plasma propulsion system originally studied by NASA 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. Ad Astra also owns and operates Ad Astra Rocket Company, Costa Rica, a supporting research and development subsidiary in Guanacaste, Costa Rica.

### ABOUT CORAAL

Costa Rican Aerospace Alliance (CORAAL) S.A. was formed on March 26, 2008 as a private consortium of six high technology companies in Costa Rica: FEMA, PRENASA, FORTECH, AKA Precisión, Olymplic Precision Machining, and

Mechania Engineering. The alliance is designed to join together the multiple skill mix of its partners to produce a more capable company, able to be competitive in an increasingly sophisticated global high technology and aerospace market.

## THE TECHNOLOGY

The VASIMR<sup>TM</sup> engine works with plasma, a very hot gas at temperatures close to the interior of the Sun. Plasmas are electrically charged fluids 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 and the resulting 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 and their fuel-related costs substantially reduced.