



Ad Astra Rocket Company  
 141 West Bay Area Blvd.  
 Webster, TX 77598  
 Telephones:  
 USA: 281-526-0500 (voice) 281-526-0599 (fax)  
 Costa Rica: 506-2666-9272 (voice)  
 European Office: 0049-6192-902591,  
 Frankfurt, Germany.  
[www.adastrarocket.com](http://www.adastrarocket.com)

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**VASIMR™ VX-200 first stage achieves full power rating.**

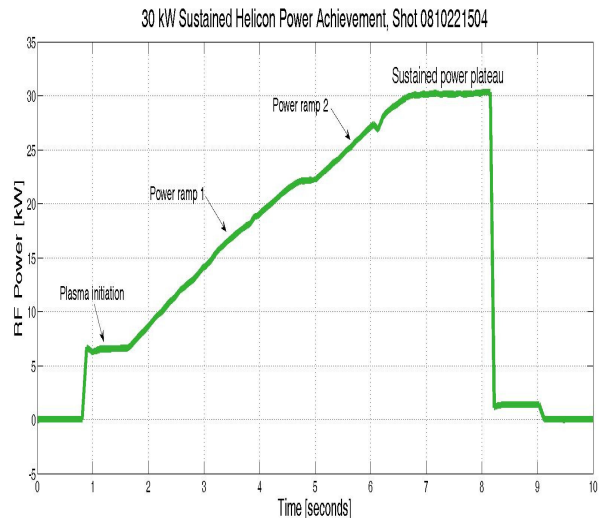
[Houston, TX. For immediate release] – The helicon first stage of the VX-200 VASIMR™ plasma rocket prototype has achieved its full power rating of 30 kW with Argon propellant in tests conducted last Wednesday at Ad Astra’s Houston laboratory. The helicon first stage is an essential component of the VASIMR™ rocket and is responsible for generating the core plasma needed by the engine to operate.



VX-200 first stage full power plasma jet, Oct. 22, 2008

Short for Variable Specific Impulse Magnetoplasma Rocket, VASIMR™ is a new high-power plasma-based space propulsion technology, initially studied by NASA and now being developed privately by Ad Astra. A VASIMR™ engine could maneuver payloads in space far more efficiently and with much less propellant than today’s chemical rockets. Ultimately, VASIMR™ engines could also greatly shorten robotic and human transit times for missions to Mars and beyond.

The successful achievement of this milestone clears the way for the integration of the engine’s 170 kW ion cyclotron resonance heating (ICRH) second stage, which is responsible for accelerating and ejecting the plasma out of the rocket nozzle thereby providing useful thrust. The combination of the 30 kW first-stage and the 170 kW second stage yields the rocket’s full rated power of 200 kW.



First Stage Power Ramp to 30 kW

Reaching the present milestone is particularly significant, as it marks an absolute record for power, using the flight-like radio frequency (RF) solid state power generator developed in partnership with Nautel, Ltd. of Halifax, NS. Canada. The Canadian company is also engaged in the final test phases of the similar but more powerful (170 kW) RF generator needed for the second stage.

The achievement of the present milestone is the result of weeks of intense experimentation with the integrated first stage system and required the

development of new proprietary algorithms to control a number of functions affecting the stability of the plasma source. Coming on the aftermath of hurricane Ike, the present result is particularly significant, as it bears witness to a rapid recovery of experimental operations by the Ad Astra team, after a major disruption caused by the storm.



VX-200i undergoing vacuum chamber tests, Houston Facility.

In the control of the plasma, the start-up phase was expected to be challenging, due to the extreme changes in electrical conditions that accompany the initial creation of the plasma. The new control algorithms, developed by the team, successfully overcame these difficulties and enabled the power ramp to proceed. These advances in system control are also expected to play an important role in the operation of the 170 kW second stage, the next major objective in the VX-200 program.

"We are elated with this achievement and exceptionally proud of the Ad Astra-Nautel team whose diligence and dedication made it possible, in spite of the disruption caused by the hurricane" said Franklin Chang Díaz, Ad Astra's chairman and CEO.

"Nautel congratulates Ad Astra on this outstanding achievement," said Peter Conlon, President and CEO of Nautel. "The ground breaking RF and Plasma technology work resulting from the Nautel and Ad Astra collaboration is a testament to the engineering excellence of the two companies."

## THE TECHNOLOGY

The VASIMR™ 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.

## ABOUT AD ASTRA

Ad Astra Rocket Company is a privately-owned corporation established January 14, 2005 to commercialize the technology of the VASIMR™ 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 NAUTEL LTD.

Nautel is a global leader in the manufacture of AM and FM radio broadcast transmitters, navigational radio beacons, Differential Global Positioning System (DGPS) transmitters, medium frequency (MF) telegraph and NAVTEX transmitters, and high frequency (HF) amplifiers for dielectric heating applications. Thousands of customers in more than 170 countries have discovered that Nautel delivers world class digital radio solutions - systems that meet stringent quality standards at its ISO-registered manufacturing facilities.