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NASA Launch Services Program Initiates High Altitude Demonstration Mission for Nano-Technologies

20 December 2012:
The NASA Launch Services Program (LSP) at Kennedy Space Center in Florida has initiated a new high-altitude launch service for demonstration NanoSatellites. This service is intended to provide streamlined, introductory launch opportunities for the growing number of academic, business and research organizations that are developing CubeSat and NanoSat-class payloads.

The first flight under this program took place on Saturday, Dec.8, and featured the Prospector 18D (P-18D) suborbital reusable launch vehicle (sRLV) originally developed and previously flown three times by a team consisting of Garvey Spacecraft Corporation (GSC) and California State University, Long Beach (CSULB). Manifested payloads included a "PhoneSat" experiment from NASA Ames Research Center in California and several instrumentation packages put together by students from the California State Polytechnic University, San Luis Obispo (Cal Poly SLO) and CSULB. Launch took place at the Friends of Amateur Rocketry (FAR) test site outside of Mojave, Calif.

LSP project manager Garrett Skrobot noted that the significance of the mission is that it verified the feasibility and value of having responsive, dedicated launch services for the emerging nanosat community. "Today, nanosat developers still depend on secondary ride opportunities to get to orbit. There are several operational issues with that approach. In response, with projects like this, we are taking the first steps with Garvey Spacecraft and other small launch vehicle developers to explore alternatives that could eventually lead to dedicated launch services that are tailored to the requirements of this market."

The P-18 is the latest in a series of GSC / CSULB test vehicles that are establishing the foundation for an operational nanosat launch vehicle (NLV) capability. "Up to now, our team has concentrated primarily on the launch vehicle part – the rocket, new technologies, support infrastructure and regulations ," remarked GSC's CEO John Garvey. "Now our focus is starting to shift to operations and payload accommodations. The lessons from this program are already having an impact on our plans for future launch systems."

Another LSP objective is to stimulate STEM opportunities for the next generation of launch vehicle engineers. "The pioneering efforts by Cal Poly SLO in CubeSats has revolutionized spacecraft-related STEM opportunities," says CSULB professor Eric Besnard. "By working with NASA and Garvey Spacecraft, Cal State Long Beach has been able to address the other part of the equation, which is launch. The much greater size of a launcher compared to a spacecraft creates a unique set of challenges, but as this flight again demonstrates, our team has been able to handle them."

NASA LSP already is firming up plans for the next launch. It is scheduled for late spring 2013 and will carry payloads from Merritt Island High School and Cal Poly SLO.

Garvey Spacecraft Corporation photo

P-18D in Flight

Additional information can be obtained at:

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Garvey Spacecraft Corporation photo

CSULB and Cal Poly SLO Launch Team Members

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P-18D Descending Under Parachute