# Operationally Responsive Space

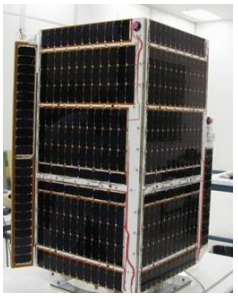
**Assured Space Power Focused on Timely Satisfaction of Joint Force Commanders' Needs**

# *Jumpstart Mission News*

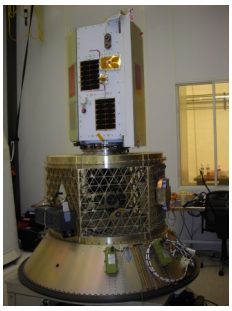
**July 29, 2008**

## Jumpstart Mission...

The Jumpstart mission is a pathfinder mission for the ORS Office to develop and demonstrate processes for rapid integration and launch, and to mature the Space-X Falcon 1 rocket as a viable provider of low-cost space launch. This mission will focus on several key ORS enabling elements: rapid call up of a mission to launch; rapid development, integration and checkout of spacecraft; a concept of operations that allows flexibility late in the payload processing flow to determine mission requirements; efficiencies in processes and procedures to reduce payload integration timelines; and identification and assurance of payload technical readiness. In order to explore this concept, three spacecraft were evaluated to fly on this mission. They were the SpaceDev Trailblazer spacecraft bus, the AFRL Plug and Play bus, and the AFRL/Cornell University nanosatellite CUSat. On May 20, 2008 the SpaceDev Trailblazer bus was selected to fly on the Jumpstart mission based on its relative technical maturity and potential benefit to ORS. This bus will mature the use of low-cost, modular, COTS-based technologies. The payload was successfully integrated to the rocket less than 25 days from the selection date.



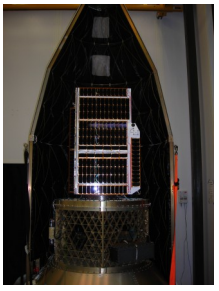
**Trailblazer Bus**



**Integrated Payload**

## Process status so far...

The Jumpstart Trailblazer payload arrived at Kwajalein, Marshall Islands on June 6. After payload functional checks, the Trailblazer as well as the NASA P-PODS with deployable cubesats were mated on the payload adapter. The integrated payload stack has been encapsulated into the launch vehicle payload fairing. The launch vehicle has been erected and is at the pad.



**Payload in Fairing**

### Falcon 1 Flight 3 Mission

Along with Jumpstart, the SpaceX Falcon 1 launch vehicle will deploy 2 Cal Poly P-POD dispensers with NASA cubesats: the PharmaSat Risk Evalution Satellite, and NanoSail-D. These P-PODs are mounted on the Malaysian owned Secondary Payload Adaptor and Separation System. Each of the three separating satellites will be deployed into a 330km x 685km orbit at a 9 deg inclination. After payload separations the upper stage will reignite to circularize the orbit at 685km. In addition to the separating payloads, SpaceX is also flying an Iridium orbital experiment, and canisters from Space Services Incorporated.

## ... the Rest of the Launch Campaign!

The current range period is August 2-6, opening at 1100 local Kwajalein time each day, and lasting 5 hours.

*Note: All dates are listed in Kwajalein time. CONUS dates are minus 1 day. Mountain Time = Kwajalein Time minus 18 hours.*

For further information please contact Dr. Merri Sanchez: merri.sanchez@kirtland.af.mil 505-853-8151