

Inside Wallops

National Aeronautics and Space Administration
Goddard Space Flight Center
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Max Launch Abort System Development

Early last year, the Wallops Flight Facility embarked on a challenging effort to support NASA Engineering and Safety Center (NESC) with the development of a composite crew module for the Exploration Orion spacecraft.

The NESC will design, develop, and test an alternate concept launch abort system (LAS) for the Orion crew module (CM) as a risk mitigation for the Orion Project's LAS development.

Having an effective means for the crew to escape in an emergency during launch is critical in establishing launch system reliability and crew safety for the Ares-I launch vehicle.

An alternate LAS design could reduce overall schedule risk by providing the Constellation Program management with a fallback design concept.

Due to LAS complexity, a flight demonstration is necessary to validate design and performance assumptions in a safety-critical system such as the LAS.

An alternative LAS also must meet all performance requirements of extracting the Orion CM from the launch vehicle at any time from crew ingress at the launch pad through staging and successful ignition of the second stage of the Ares-I.

Using an intra-agency technical team and working with industry partners, the NESC is developing a launch abort concept that can be used for all launch abort conditions and for a nominal launch consistent with Constellation Program requirements.

The concept is known as the Max Launch Abort System (MLAS).

It will be designed to lift the Orion CM from the launch pad to an altitude high

enough and with enough distance downrange to permit the CM to execute a nominal landing.

In addition to a wealth of solid rocket motor knowledge and experience at Wallops, the NESC found an engineering staff well-suited to rapid-response system development. Personnel from many Wallops organizations have joined the MLAS team.

The Wallops' Guidance, Navigation & Control and Mission Systems Engineering Branch, have supported design and flight dynamics analysis.

Representatives from NASA's Advanced Projects Office and the Range and Mission Management Office have continued their project and vehicle management roles.

Team members from the Electrical Engineering Branch are designing the avionics system and electrical GSE.

The System Software Engineering Branch is supporting test and verification of vehicle avionics and providing Mission Planning Lab resources for project simulation and presentation.

Mechanical Systems Branch (MSB) personnel are designing mechanical GSE for testing, integration, handling, and transportation, as well as working with the Northrop Grumman group on vehicle mechanical interfaces and designing the custom MLAS launch pedestal.

MSB personnel also are designing the coast ring chute separation system and the landing parachute experiment system in addition to providing technical oversight on the reorientation drogue system.

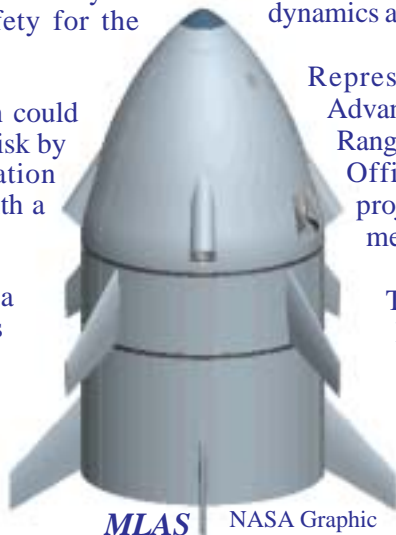
Representatives from the Sounding Rockets Program Office and NASA Sounding Rocket Operations Contract, (NSROC), have provided technical support associated with the solid rocket motor systems. NSROC will play a major role in vehicle hardware and mechanical GSE fabrication.

Team members from the Facilities Management Branch are responsible for procurement and construction of a custom launch pad shelter and for infrastructure improvements related to transportation of the MLAS demonstrator from the Wallops Main Base to the launch site on Wallops Island.

MLAS performance will be evaluated through an actual pad abort test from Wallops Island in Fall, 2008.

Wallops personnel can be proud of their accomplishments thus far as they mark another milestone in supporting manned spaceflight.

Looking back to 1959, Wallops Island was the test site for Little Joe, the subscale demonstration vehicle for the Mercury launch abort system. Have we come full circle?



Employee Coffee

Bring your questions to a morning coffee with Wallops Director, Dr. John Campbell, from 8 to 9 a.m., this Thursday, March 27, in the cafeteria.

Dr. Campbell will provide updates on the latest items in the news impacting Wallops. His remarks will begin at 8:30 a.m.

Coffee will be provided by the Wallops Exchange and Morale Association.



PI Comments on Norway Launches

Scott Robertson
University of Colorado at Boulder

NASA Terrier-Orions, 41.069 and 41.070 UE, were launched on August 3 and 6, 2007, respectively, from the Andoya Rocket Range, Andenes, Norway.

“We had very good interactions with the engineers on the project. Shane Thompson was particularly helpful in finding a design for the forward deck and nosecone that accommodated the long E field booms along with the other instruments and in finding a design for the aft section that had both E field booms and a photometer.

Launch preparation and launches went very well. Both rockets were on the launch rail when expected. We had good attitude control on both rockets and this gave us a very nice data set. Scott Hesh was very helpful to us in getting the data extracted from the telemetry file. We met our comprehensive success criteria.

I had very good interactions with Bill Payne at all phases of the campaign. I also was very happy with the support provided by the Andoya Rocket Range.”



Remote Access and Securid Token Users

After-hours support is now available through the ODIN help desk for remote access. The help desk also can reset PINs for securid tokens for all ITCD securid token users.

The ODIN help desk is available from 5 p.m.- 8 a.m., Monday-Friday, all day on weekends and holidays at x66-3100 or toll free at (866) 835-0701.

The ODIN help desk will continue to reset passwords for Goddard domain and e-mail accounts. This service is extended to all Goddard customers.

Inspire the Next Generation Day

The 2008 “Inspire the Next Generation Day” event will be held on April 17.



Children must be in grades 4 through 12.

If you plan on sponsoring a child, fill out a registration form and return it **NO LATER THAN** April 4, 2008. No late registration forms will be accepted.

If the child you are sponsoring attends a Worcester County Public School, the student will be responsible for completing an assignment in order for the day to be counted as an excused absence.

Contact Rebecca Powell at x1139 for an assignment and a registration form.



Chincoteague apartment. Available in April. Spacious 2 BR, appliances, good location. \$550 + dep. + elec. Call Jerry. Leave a message 757 894-5914.

Contracting Officer Technical Representative (COTR) Certification

April 9 – 10
8:30 a.m. - 4:30 p.m.
Bldg. E2, Training Room

Participants are required to take the SATERN training module at: <https://satern.nasa.gov/elms/learner/logout.do> This online training must be passed with a minimum of 70% prior to taking the COTR Certification course. The online component and the instructor-led component are necessary to become certified as a COTR. If you miss more than 2 1/2 hours of the instructor-led portion, you will not be certified as a COTR.

For more information contact: Qiuna Harris at x66-3061.

“Keeping It Cool” Contest

With global warming and the 2008 elections heating up, the Wallops Environmental Office is sponsoring a “Keeping It Cool” contest.

Photo Contest
Submit photos that relate to the “Keeping It Cool” theme and win prizes.

Brainstorm Contest
Submit ideas on “Keeping It Cool” for the Wallops Flight Facility and win prizes.

Contest submissions and winners will be posted at the Environmental Office Booth at the Pavilion on Earth Day, April 17

Submit photos and brainstorms by April 11 to Shane Whealton, Building F-160 Room, C134 or by email to: jonathan.s.whealton@nasa.gov

For further information contact, Whealton at x1090.



Inside Wallops is an official publication of Goddard Space Flight Center and is published by the Wallops Office of Public Affairs, Extension 1584, in the interest of Wallops employees. Recent and past issues of *Inside Wallops* also may be found at: <http://www.nasa.gov/centers/wallops/news/newsletters.html>

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