

*Recent activities specific to the Elements include:*

### First Stage (FS)

- ***Deceleration Subsystem (DSS) Test Configuration Review (TCR):*** The TCR for the third Main Parachute drop test (MDT-3) was successfully conducted last week at Kennedy Space Center (KSC). MDT-3 will be the first in the series of the design verification parachute drop tests intended to generate data to be used in verification analysis for the Ares parachute design. The earlier series of tests have been either developmental tests or basic performance tests intended to provide data necessary from which the original design parameters were obtained. MDT-3 will be a design load test of the Ares Main parachute and will be conducted in Yuma, AZ on October 7. The test will use a C-17 aircraft to extract the Jumbo Drop Test Vehicle (JDTV) which will have a total extracted weight of 72,000 pounds for this test. This will be the heaviest single load to ever be extracted from a C-17. A few action items to be closed prior to the drop test were recorded at the TCR, with no technical issues identified.

### Upper Stage (US)

- ***US Manufacturing and Assembly (M&A) Subsystem:*** Non-Destructive Evaluation (NDE) of Common Bulkhead spun-form 2014 domes continues in Building 4705 using the recently installed Common Bulkhead Automated Testing System (CBATS). Domes are installed in the CBATS by test engineers from EM20 and inspected for defects on the outside surface, then turned upside down and inspected for defects from the inside. The first dome was inspected and cleared. It was also part of CBATS acceptance testing. A total of six spun-formed domes will be received and inspected in Building 4705.



*Spun-formed 2014 dome being lowered into the CBATS*

### Upper Stage Engine (USE)

- **USE Assembly & Test:** Recent Stennis Space Center (SSC) Test Stand A-3 construction activities include installation of additional Chemical Steam Generator (CSG) system vessels and tower structure stairs. Two of two isopropyl alcohol (IPA), two of nine water, and one of three liquid oxygen (LOX) tanks have been installed. The installed stairs and tanks, with the exception of the LOX tank, are shown in the top photo below. CSG LOX tank A-3 is shown in the bottom photo.



*Test Stand A-3 construction site*



*First of three CSG LOX tanks delivered to  
Test Stand A-3*



*The TMS being lowered from the TTOS on Test Stand A-1*

- USE Test Stand A-1 Modification:***  
 The SSC Test Stand A-1 is being modified for J-2X development testing. The Thrust Take-out Structure (TTOS) and Thrust Measurement System (TMS) used during the Space Shuttle Main Engine (SSME) test program are being removed. A new TTOS and TMS designed for J-2X will be installed. They are large structures that hold the engine in place, and react and measure thrust during testing.

### Project Integration

- Development Motor 1 Coverage:*** The Ares outreach team employed several venues to inform stakeholders about the Ares Projects Development Motor 1 (DM-1) test. DM-1 updates and video were posted on Facebook September 7–11. The team supported the live broadcast of the static test firing September 10. Post-test DM-1 video was posted to YouTube and Ares web sites on September 11. The associated news release, videos, and photos were posted to the Ares, Constellation, and Exploration web pages. Photos and video were posted to Flickr on September 10. These communications outlets are important outreach avenues for such live events that help maximize the Ares stakeholder audience.
- Space 2009:*** The Ares outreach team supported Ares Projects participation in the American Institute of Aeronautics and Astronautics (AIAA) Space 2009 conference September 14–17 in Pasadena, CA. The team prepared papers and briefings for an Ares Projects panel session that included Ares Project Managers. The team also partnered with the Shuttle Propulsion Office, Johnson Space Center Education and Exhibits Offices, and the Jet Propulsion Lab Education office for a booth in the Education Alley at the conference. The centers highlighted their various



*NASA Deputy Administrator Lori Garver, right, and a member of her staff visit the Education Alley exhibit at Space 2009*



programs and projects with exhibits, interactive displays, and publications. Deputy Administrator Lori Garver visited the booth. More than 2,500 people visited the exhibit during the 3-day period. The Ares Projects is strategically selecting technical conferences, including Space 2009, for key management participation to optimize its outreach with its aerospace government and industry stakeholders.

- **Digital Learning Network:** The Ares outreach team supported a Digital Learning Network (DLN) presentation in coordination with Ames Research Center on September 16. An outreach member shared what it is like to be the Ares historian with schools and students connected with the DLN at Ames Research Center and Marshall Space Flight Center. The DLN is an efficient tool for reaching audiences that might not be possible to reach in person.

***The Ares Projects look forward to the First Stage main parachute drop test #3 at the U.S. Army Proving Grounds in Yuma, AZ in October.***

***...and as of this Ares Projects Weekly Summary, there are only 32 days until the first Ares I test flight, Ares I-X.***

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