



## STC Making a SPLASH

NASA has been preparing to go back to deep space with the development of the Orion Crew Module, which has gone through changes since the Constellation Program was cancelled. The Orion Crew Module was essentially retained from that program and STC has continued to support various projects associated with Orion. STC has built or been a part of three crew module flight test articles, which have included ARES-1X, Pad Abort 1, and Max Launch Abort System (MLAS). But what goes up must come down and work has been ongoing with drop tests at Langley Research Center (LaRC) in preparation for water landings. STC was instrumental in the fabrication of the Boilerplate Test Article (BTA) (pictured above), which has gone through a series of water impact tests at the Langley Hydro Impact Basin. Since that series of tests, the Lockheed Martin-built Ground Test Article (GTA) has been delivered to LaRC to prepare it for its own series of water impact tests. Lockheed Martin is the prime contractor for the crew modules that NASA will be flying. STC has supported modifications to the GTA and participated in critical lifts to mate and de-mate the GTA with the heatshield. STC has been supporting this effort, led by **Mr. Eric May**. Eric and



Orion Crew Module.

**Mr. Matt Stearman** spent several months working the SPLASH project. Since then, a number of STC staff have supported the project, including **Mr. Max Reid, Mr. Bill Weigel, Mr. Mike Barney, Mrs. Jeri Carter, Mrs. Cathy Kern, Mr. Rick Thomas, Mr. Ron Tucker, Mrs. Brenda Adams, Mr. Bill Girard, Mr. Danny Lovaglio, and Mr. Tom Hall**. This support has been comprehensive, covering mechanical support, machining, instrumentation, laser tracking, and electronics. The SPLASH Project, led by NASA Project Manager **Ms. Ellen Carpenter**, will perform a series of water impact drop tests of the NASA Orion Crew Module mockup with the heat shield from the spacecraft's first flight test, Exploration Flight Test 1 (EFT-1). The integrated Orion mockup and EFT-1 heat shield will be tested in 2016 to simulate water landings during actual missions. According to the NASA SPLASH principle investigator, upcoming water impact tests will provide the data needed to conduct a much more thorough and detailed assessment of the water landing models that was not possible with previous test capsules. Data retrieved will assist in understanding the loads that astronauts will experience when the actual Orion spacecraft lands in the ocean. According to Ellen Carpenter, "it is important to use a heat shield

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that is similar to what will be used on future Orion flights so the data obtained from these tests can be used to validate computer models."

STC staff understands the importance of the project and are putting forth their best efforts to help ensure quality, maintain schedule and prepare for successful water impact testing. That effort is exemplified by the following statement by Carpenter, "STC did an excellent job in getting the two heat shield 4-wire harnesses' KPT connectors replaced, checked out, and delivered to me by 1:00 p.m. on Monday, which was earlier than they had

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## Simulation and Aircraft Services (SAS) is a WIN for STC

**Congratulations to the SAS Team!** STC, as a subcontractor to Unisys, was part of the winning team that was awarded the Simulation and Aircraft Services (SAS) contract at LaRC in January 2016. The new contract started on March 1, 2016 and has a five year period of performance. STC has been part of the Unisys team for a long and successful run. The SAS contract provides analysis, design, development, verification, validation, operations, maintenance, and systems integration for Langley's flight simulation facilities and research aircraft. STC would like to thank all those who have worked so hard every day on the SAFITS, SAFTS, and LSATS contracts that preceded SAS and have represented STC with quality and excellence. **Again, Congratulations to the SAS Team!** □

## EMCHFSS II Awarded to STC

**Congratulations to the EMCHFSS II Team!** STC was awarded the Electronic, Mechanical, Composite Hardware Fabrication Support Services (EMCHFSS) II contract at LaRC in February 2015. The contract started on April 1, 2015 and has a five year period of performance. This is the third iteration of the fabrication contract for STC at LaRC. EMCHFSS II is a comprehensive fabrication contract that includes electronic fabrication of PC boards, cables, instrumentation, and wire harnesses. STC will also provide to EMCHFSS II mechanical fabrication that includes CNC machining, welding, and sheet metal and heavy metal fabrication. Additionally, STC will pro-

vide composite fabrication that includes model making, molds, layup, instrumentation, and composite machining. Thanks to the strong performance of the EMCHFSS Team, STC was able to write a winning EMCHFSS II proposal highlighted with a number of strong examples of our quality work, problem solving, customer relationships, and overall outstanding performance. STC would like to thank all those who have worked so hard every day on the EFS and EMCHFSS contracts and have represented STC in such a positive light. **Again, Congratulations to the EMCHFSS II Team!** □

## WDTC a WIN for STC

### *Congratulations to Team SURVICE!*

On 14 January 2016, the U.S. Army Test and Evaluation Command's West Desert Test Center (WDTC) awarded **Team SURVICE** the Data Collection and Reporting Services TO. Under this 5-year GSA OASIS Task Order, SURVICE will be providing on-site support

at Dugway Proving Ground (DPG), Utah, performing document writing, editing, data collection, and reporting functions. **SURVICE Engineering** along with **STC** put together a teaming agreement in September 2015 that resulted in a successful proposal. This new contract follows the successful Dugway Data Support Services contract that was awarded to STC in February 2006. □

## "Team Member of the Month" Award



Mr. Ryan Spackman

**Dr. Ryan Spackman**, of STC, Research Scientist within OAR's Earth System Research Lab, led the Cal-Water 2015 field campaign to sample atmospheric rivers (ARs) that develop over the Pacific Ocean and bring rain to the West Coast. Ryan's expertise in airborne science missions was invaluable for the numerous critical decisions throughout the campaign to make the best use of NOAA R/V Ronald H. Brown, and aircraft from NOAA, DOE, and NASA, often on tight deadlines and affected by ocean currents and weather. It was vital to sample ARs during their various stages of development and Ryan successfully budgeted flight

hours and hundreds of dropsonde launches, without knowing in advance how many AR events might occur. He led the planning, coordination, and execution of complicated flight plans for up to four aircraft per day, often in coordination with the Ron Brown. Ryan also handled numerous media interviews, enhancing the public's knowledge of NOAA programs and assets. He accomplished all this with incredible energy, persistence, attention to detail, and good humor. Ryan's leadership inspired teamwork across OAR, NWS, NESDIS, and NOAA partner agencies resulting in unprecedented measurements that improve our understanding of AR evolution and eventually will lead to more accurate forecasting for these potentially extreme winter weather events that may trigger West Coast flooding. □

## SECURITY CORNER

Please be aware that if you signed an SF86 since 2010, you agreed to continuous evaluation including credit checks. If you have monitoring set up on your credit because of the OPM breach, or for any other reason, please be aware that you may see inquiries from DMDC or DOD CE on your credit reports, see below.

"In support of Continuous Evaluation (CE), DoD began conducting the second phase of CE checks in December 2015. Subjects that signed the 2010 SF 86 consented to continuous evaluation checks, to include credit checks. Subjects may receive a notification from the credit bureau or credit monitoring service that a Continuous Evaluation check was conducted by DMDC on behalf of DoD. The credit report may list Defense Manpower Data CE and/or DoD CE as the requester."

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planned. Their efforts kept us from getting too far behind schedule."

Long hours and constant effort have been put in by the STC staff, especially from Mr. May, Mr. Stearman, and Mr. Reid. They have been putting in 10-hour days, six days a week for months at a time. They have worked diligently, professionally, and proficiently helping to solve problems and keeping the

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project moving forward. For example, during the mating of the heat shield and the GTA, they had to make sure the pieces were aligned horizontally, vertically, rotationally, and then angularly. During this effort, more than 400 holes were match drilled to assemble the mockup to the heat shield. Match drilling is the process of precisely drilling holes through hardware components and ensures that the parts align properly in the final assembly. This was no simple task and the team had to design and fabricate integration hardware to connect the two pieces. With an accuracy of four thousandths of an inch, a laser tracker located several positions along the Orion mockup and heat shield in order to achieve nearly perfect alignment. Ellen Carpenter

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## NASA Langley Seeking Local Partners

### PRESS RELEASE

NASA Langley Research Center in Hampton could get as much as \$829 million in fiscal year 2016, or about \$60 million more than its current budget.

And it's looking to spend a lot of that money right here in Hampton Roads.

In fact, the center's new Acting Deputy Director, **Mr. Clayton P. Turner**, said they're actively looking for commercial partners from among the Peninsula's 14,000 small businesses as they continue their work in aeronautics, Earth science and space exploration, and technology.

"Langley has a very robust and healthy budget for our contributions to the agency and the nation," Turner said Tuesday. "We have a number of contract opportunities that range from \$9 million to \$400 million that small businesses can partner on and solicit for, and all of those are publicly available."

Turner was speaking before local business professionals at the Virginia Peninsula Chamber of Commerce. Current and upcoming contract opportunities at NASA Langley are listed on the website [procurement.larc.nasa.gov](http://procurement.larc.nasa.gov).

Opportunities range from construction contracts as the center continues its 20-year revitalization plan to tear down aging buildings on campus and erect more efficient ones

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## Report Identity Theft...



and get a Personal Recovery Plan at [IdentityTheft.gov](http://IdentityTheft.gov)

Millions of people are affected by identity theft each year. It might start with a mysterious credit card charge, a bill you don't recognize, or a letter from the IRS that says you already got your refund — even though you didn't.

If someone uses your information to make purchases, open new accounts, or get a tax refund, that's identity theft. Recovering from identity theft often takes time and persistence. That's why today's announcement from the FTC is a big deal: New features at [IdentityTheft.gov](http://IdentityTheft.gov) make it easier to report and recover from identity theft.

## AMS/STC Scholarship Award



Mr. Kurt Hansen

The American Meteorological Society (AMS) has named **Mr. Kurt Hansen** as the recipient of the AMS/STC Freshman Undergraduate Scholarship for 2012. Aaron has now completed his junior year at the State University of New York-

Albany where he is majoring in meteorology. The scholarship awards are announced in a

student's freshman year but are not presented at the AMS meeting until their junior year. This 2015 presentation and meeting was held in Phoenix, Arizona.

The AMS Freshman Undergraduate Scholarship is awarded on merit and is designed to encourage outstanding undergraduates to pursue careers in the fields covered by the award. STC has sponsored the scholarship since 1992. □

## NEW CONTRACTS

- **February 2014** – STC was awarded the Skybox Imaging Earth Observation Constellation and Services Contract with ArgoSat Consulting, LLC.
- **May and July 2015** – STC was awarded the follow-on CRREL contracts.
- **March 2015** – STC was awarded the EMCHFSS II contract at NASA LaRC, which is the follow-on to our EMCHFSS contract. This is a five-year contract.
- **September 2015** – STC was awarded a subcontract with Tempus Global Data, Inc. for "Storm Sensor Global Constellation."
- **February 2016** – the **SURVICE/STC team** was awarded the five-year follow-on contract to the DDST contract in Dugway Proving Ground, Utah.
- **March 2016** – STC was awarded the follow-on subcontract with Unisys for SAS at NASA LaRC.
- **April 2016** – STC was awarded a contract with Google, Inc. for "Loon/STC/NASA Wind Modeling."
- STC continues to be awarded additional delivery orders under our NOAA Ancillary and Engineering BPAs in both Boulder, Colorado and NOAA NESDIS.
- STC was awarded 7 delivery orders under the NOAA SciTech contract.

## Going outside the country?

If you are going outside the U.S., either on business or personal travel, please notify STC's Facility Security Officer (FSO), **Ms. Carol Lightner**, before your trip. She can be reached at **757-766-5815** or [lightner@stcnet.com](mailto:lightner@stcnet.com) or **Ms. Glenda Lissimore** at **410-272-2141 x201** or [lissimore@stcnet.com](mailto:lissimore@stcnet.com). If you are a cleared employee, there may be additional foreign travel briefings required by our customers. Please contact Carol or Glenda for additional guidance.



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to hiring employees with the "emerging skills" that NASA needs to meet 21st century challenges, he said.

"A lot of people, when they think of NASA, they think about the technology and the whiz-bang things that we get to do, which is great," Turner said. "But none of that happens without the people."

Much of the center's 2016 budget is going toward building a 175,000-square-foot Measurement Systems Laboratory, considered a world-class facility for research and development.

"There's a \$94 million price tag on that," Turner said, "and 30 to 45 percent of that investment will be for small businesses in the area. So that's a pretty big chunk."

Construction on the lab is expected to begin in April 2016 and finish in 2018.

But other opportunities abound, Turner said.

NASA Langley announced it awarded a five-year, \$25 million contract to STC in Hampton to build test articles for them under the center's Electronic, Mechanical, and Composite Hardware Fabrication Support Services.

"They'll bring us a concept, a drawing, a one-of-a-kind item that their engineers have come up with, and one of our guys will work doing the welding to metal cutting to machining, developing composite models," said **Mr. Rink Wood**, STC's chief financial officer.

This is the company's third contract with NASA Langley in the past 10 years. In that time, its contracts included work to support such projects as the Space Shuttle, the crew escape system for the new Orion Crew Module and

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## Make it a practice to travel with "clean" devices!



Do you travel outside the U.S. for business? Do you take a laptop or mobile device with you? Do you know what information is on those devices (company proprietary information, personally identifiable information for you, your family or your employees, software, etc.)? Did you know that some software is export restricted? There are several areas of concern for traveling with electronic devices – economic espionage, export violations and identity theft. For example, if you travel outside the U.S. with a laptop that contains ITAR-restricted software or information, you are in violation of export laws! And the fines and penalties for you could be significant – up to 10 years in prison and/or up to \$1,000,000 in fines per occurrence! Do you know who is looking over your shoulder when you are working on your laptop or mobile device while sitting in an airport, hotel, subway or airplane (even while in the U.S.)? Is that person, even a colleague, a U.S. citizen? If not, this "shoulder surfacing" can be an export violation! Make it a practice to always travel with clean devices!

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has been pleased with STC efforts and had this to say, "STC technicians Eric May and Max Reid continue to do an outstanding job preparing the vehicle for testing. This was demonstrated during the hardware build-up that led to the successful final mate between the GTA and heatshield. Eric's leadership is exemplary; he always is thinking ahead and provides solutions, when challenges and problems are encountered. Their workmanship is excellent and they exceed expectations. They are dependable and go above and beyond to get the tasks accomplished within the schedule constraints."

Drop tests will be conducted in the spring 2016 time frame and STC will continue to provide high-quality workmanship in support of the SPLASH project. STC will be available to help with any issues that come up during testing and will help with the de-integration efforts of the GTA and heat shield following the water impact testing. STC, with its high standards, has definitely made a SPLASH. □

## HONORS and AWARDS

STC's Milestone Loyalty Service Appreciation Program awards full-time and part-time employees for their loyalty of service to STC on reaching 3 years, 5 years and every 5 years of service thereafter. Awardees are given the opportunity to select an award item out of the selection of awards available for the Awardees' milestone. The Awards are presented to Awardees at a luncheon held in their honor. □

### 20 YEAR EMPLOYEE



**Jeffrey Manning**  
November 1996

### 10 YEAR EMPLOYEES



**Diana Fitzgerald**  
January 2006



**Julie Maschke**  
May 2006



**Amy Sabo**  
June 2006



**Crystal Davis**  
July 2006



**Larry Russon**  
July 2006

**Not Pictured:**

**10 Year Employees:** *Tod Willardson*, August 2006; *Michael Carlisle*, August, 2006.

### 5 YEAR EMPLOYEES

*Ravi Deepak*, April 2011; *William Girard*, May 2011; *Arnold Consul*, June 2011; *Ryan Spackman*, August 2011; *Kyle James*, September 2011; *John Sullivan*, October 2011; *Ioana Cozmuta*, October 2011.

### 3 YEAR EMPLOYEES

*Jana Andrews*, January 2013; *Terri Geisler*, January 2013; *Nysheema Lett*, February 2013; *Christopher Barnet*, March 2013; *Deborah Butler*, March 2013; *Jennifer Clark*, March 2013; *Kim Hamilton*, March 2013; *Deborah James*, March 2013; *Ajay Subramaniam*, March 2013; *Svetlana York*, April 2013; *Jessica Halso*, May 2013; *Blaine Morriss*, July 2013; *Ben Nikaido*, July 2013; *Donna Marck*, August 2013; *Elizabeth McMichael*, August 2013; *Alex Mountain*, August 2013; *Arlon Sullivan*, September 2013; *Jeffrey Weinrich*, September 2013; *Huseyin Akaydin*, December 2013; *Dorethea Cowan*, December 2013.

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the SAGE III Earth science instrument that's expected to launch to the International Space Station in 2016. SAGE stands for Stratospheric Aerosol and Gas Experiment.

According to **Mr. Timothy Wood**, head of the Advanced Fabrication Processes Section at NASA Langley, such contractors can fill a temporary need at the center that its own civil servants sometimes can't.

"The purpose of this contract is to allow the government to have flexibility and adaptability," Wood said.

Under the new contract, he said, STC will be providing electronics fabrication, cable fabrication for satellite payloads, and some composites fabrication.

According to NASA Langley, in 2014 the center oversaw more than 90 Small Business Innovation Research and Small Business Tech-

nology Contracts worth nearly \$30 million.

As a result of its "aggressive" pursuit of such contracts, Turner said, NASA Langley received the Small Business Administrator's Cup from NASA.

Also in 2014, the center's economic impact in Virginia was more than \$870 million in support of 7,394 jobs. The lion's share of that economic impact was in Hampton Roads, at \$779 million that supported 6,544 jobs. □