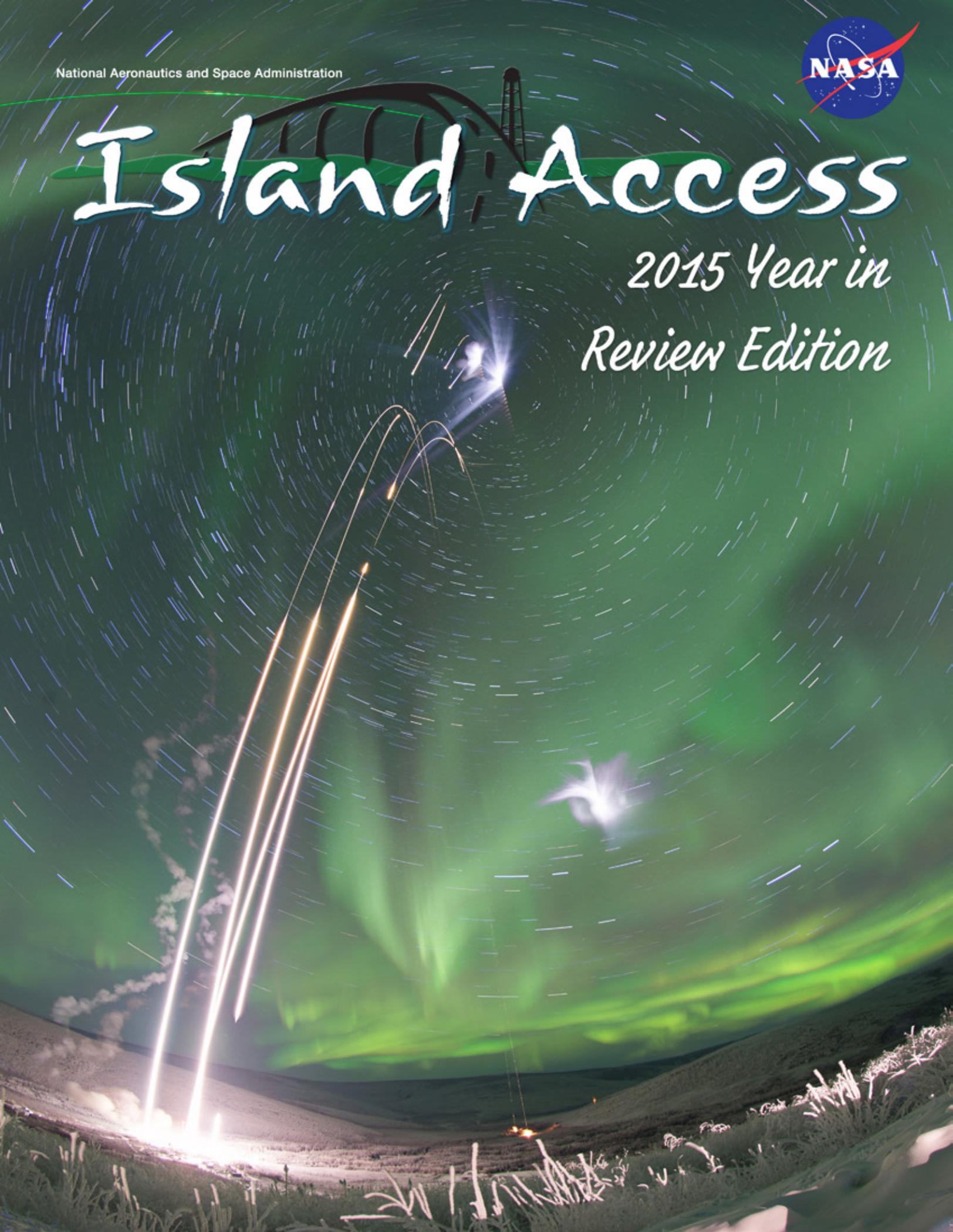


National Aeronautics and Space Administration



Island Access

*2015 Year in
Review Edition*

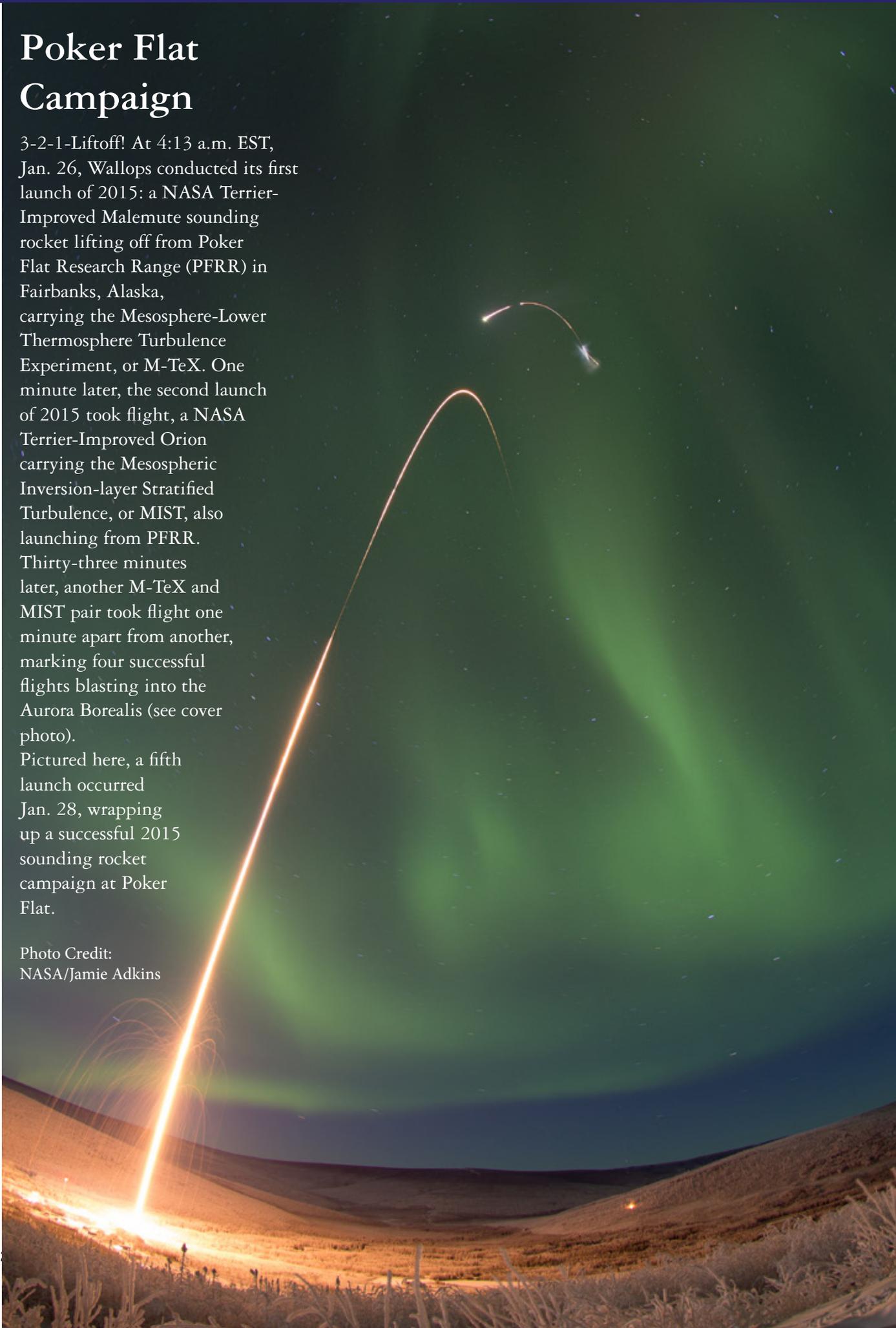


Poker Flat Campaign

3-2-1-Liftoff! At 4:13 a.m. EST, Jan. 26, Wallops conducted its first launch of 2015: a NASA Terrier-Improved Malemute sounding rocket lifting off from Poker Flat Research Range (PFRR) in Fairbanks, Alaska, carrying the Mesosphere-Lower Thermosphere Turbulence Experiment, or M-TeX. One minute later, the second launch of 2015 took flight, a NASA Terrier-Improved Orion carrying the Mesospheric Inversion-layer Stratified Turbulence, or MIST, also launching from PFRR. Thirty-three minutes later, another M-TeX and MIST pair took flight one minute apart from another, marking four successful flights blasting into the Aurora Borealis (see cover photo).

Pictured here, a fifth launch occurred Jan. 28, wrapping up a successful 2015 sounding rocket campaign at Poker Flat.

Photo Credit:
NASA/Jamie Adkins



MDA FTX-19

Throughout the year, NASA Wallops continued long-standing work with the Department of Defense (DOD). From the important work of the Navy's Surface Combat Systems Center at Wallops, to Field Carrier Landing Practice training for Navy pilots, Wallops has a strong partnership with DOD. Pictured here, Wallops supported a three-rocket salvo launch as part of a Missile Defense Agency exercise Feb. 24.

Photo Credit: NASA/Allison Stancil

february





Super Pressure Balloon

A NASA super pressure balloon (SPB) launched at 10:12 a.m. March 27 (5:12 p.m. EDT March 26) from Wanaka Airport, New Zealand, on what would become the most rigorous test of that balloon platform to date.

Following 32 days of flight from New Zealand, across the Pacific Ocean, crossing the tip of South America, over the Atlantic and Indian Oceans, NASA ended the flight after a small leak was discovered on the balloon Monday, April 27, while the balloon was at float over central Australia.

“This balloon accomplished what no other heavy-lift balloon has done by maintaining a constant float altitude for a long duration in the harsh conditions of the Earth’s stratosphere,” said Debbie Fairbrother, NASA’s Balloon Program Office chief and principal investigator for the SPB. “While we hoped for more days at float, we exceeded our pre-established minimum success criteria of 10 days by threefold in the balloon’s most demanding test yet.”

The balloon program office is scheduled to conduct an operational super pressure balloon flight from Wanaka in April 2016.

Photo Credit: NASA

RockSatX Launch

A NASA Terrier-Improved Malemute suborbital sounding rocket carrying the RockSatX payload was successfully launched at 7:01 a.m., Saturday, April 18, from Wallops. The rocket carried experiments developed by undergraduate students from the Universities of Colorado, Northwest Nazarene, Puerto Rico; Nebraska and Virginia Tech as part of the Colorado Space Grant Consortium's RockSat program. Also pictured here is the next generation of scientists, engineers, and explorers who will take NASA back to the moon, to Mars, and points even farther in space in the years to come.

Photo Credit: NASA/Patrick Black

april





Low-Density Supersonic Decelerator

NASA's on a journey to Mars, and one team helping the agency get there are the Wallops engineers. For two consecutive missions, Wallops engineers developed the avionics package for the Low-Density Supersonic Decelerator (LDSD), a space technology development mission designed to land bigger, heavier payloads on the red planet. Pictured here, Goddard Space Flight Center director Chris Scolese (center) and then Associate Administrator for the Space Technology Directorate Mike Gazarik (right) receive an overview from Brian Abresch, engineering lead for LDSD's avionics pallet, on the work conducted at Wallops for the mission. From the engineering support along with expertise from Wallops' balloon, range, and safety offices, the LDSD project is a key step for exploring deeper into space. The bottom photo shows the LDSD payload just after dropping from the scientific balloon that delivered it to an altitude where the atmosphere is similar in density to that on Mars.

Photo Credits: Above: NASA/Jamie Adkins. Below: NASA/JPL



Wallops 70th Anniversary

Wallops celebrated 70 years of operations in support of science and technology with an Open House event in June that brought more than 7,000 visitors to the facility. Guests were fully immersed in Wallops missions, and mission partners also displayed their work at the event. The next open house is scheduled for 2020; in the meantime, the facility is planning an annual 5K run on Wallops' anniversary date to celebrate achievements.

Photo Credit: NASA/Terry Zaperach





Aircraft Office receives top honors

We already knew it, but in 2015 it was fully affirmed that Wallops' Aircraft Office is the best in government. The General Services Administration and the Interagency Committee for Aviation Policy proclaimed Wallops' program as tops over the 18 federal agencies that have aviation programs. The aircraft team has a busy year coming up in 2016 flying Earth Venture missions for the Agency; missions are booked through 2018 for the office.

Photo Credit: NASA/Patrick Black



SHOUT

For a fourth consecutive year, Wallops supported Global Hawk unmanned aerial system operations from the facility. From 2012-2014, Global Hawks took flight from Wallops for the Hurricane and Severe Storm Sentinel mission, and in 2015, Wallops supported National Oceanic and Atmospheric Administration Global Hawk flights for the Sensing Hazards with Operational Unmanned Technology mission.

Photo Credit: NASA/Allison Stancill

HASP Zero Pressure Balloon

A NASA scientific balloon carrying the High-Altitude Student Platform (HASP) payload readies for lift-off from Fort Sumner, N.M. The launch marked the 10th HASP mission since the program's inception in 2005. Since then, more than 830 students from 34 academic institutions from across 19 states and Puerto Rico have developed HASP experiments for flight on a NASA balloon. NASA's scientific balloons offer low-cost, near-space access for scientific payloads weighing up to 8,000 pounds for conducting scientific investigations in fields such as astrophysics, heliophysics and atmospheric research. Standard NASA balloons are very large structures, some as large as football stadiums when fully inflated, comprised of 10 to 50 acres or more of film that can carry payloads to altitudes above 130,000 feet. Balloon film resembles sandwich bags, but is stronger and more durable.

sUAS Flights at Wallops

Unmanned Aerial System (UAS) use at NASA's Wallops Flight Facility (WFF) is an exciting new avenue for environmental studies. Where delineations of habitat types or species distribution typically require manned aircraft or in situ field investigations, UAS offer a quick, convenient, and low-impact means of assessing the environment. For example, surveys of the extent of the invasive species *Phragmites australis* at WFF have historically been conducted from helicopter or on foot. UAS, such as the Phantom 2 quadcopter pictured here surveying phragmites located near Pad 0A, allow for a less-expensive, higher-resolution product to be created in much less time than previous methods. Wallops hopes to be a regional center for UAS testing to include providing operational support for the other two pillars of unmanned vehicle research and development: ground and underwater.

Photo Credit: NASA/Allison Stancill



October



NAAMES liftoff

NASA's C-130H Hercules airborne laboratory took to the skies at 3:23 p.m. Monday, Nov. 9, from Wallops Flight Facility en route to St. John's International Airport, St. John's, Newfoundland, to support the North Atlantic Aerosols and Marine Ecosystems Study (NAAMES) mission.

NAAMES is a five-year NASA Langley Research Center study of the annual cycle of phytoplankton and the impact that small airborne particles emitted from the ocean have on the climate-sensitive North Atlantic. The mission is one of many keeping the Wallops aircraft office busy in 2016 and beyond.

Photo Credit: NASA/Patrick Black



Media Day

The news media had an opportunity to see Pad 0A first hand during a media day Dec. 17 highlighting work completed at the pad following the Orb 3 mishap in 2014. The pad is fully operational and ready to support commercial cargo launches to the International Space Station in 2016. A hot fire test of the Antares rocket is planned in March 2016 with Antares return to flight scheduled for May 2016.



Photo Credits:
 Above: NASA/Chris Perry.
 At left: NASA/Jamie Adkins



Into 2016 ...

Orbital ATK personnel work on the Antares 230 rocket in the Horizontal Integration Facility at Wallops in mid-December 2015. Two Antares first stage cores are seen on either side of the transporter-erector-launcher in the center with the payload fairing seen on the right in the foreground. Orbital ATK has announced that commercial cargo resupply missions to the International Space Station will begin again from Wallops in late May 2016.