

# Inside Wallops

National Aeronautics and Space Administration  
Goddard Space Flight Center  
Wallops Flight Facility, Wallops Island, Va.



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## Scientific Balloons Achieve Antarctic Flight Record

NASA and the National Science Foundation have achieved a new milestone in conducting scientific observations from balloons, by launching and operating three long-duration flights within a single Antarctic summer.

“Having three long-duration balloon science missions flying simultaneously is a record-setting event. But of greater significance is the increase in science that can be accomplished with only a modest increase in cost to the program,” said David Gregory, assistant chief of NASA’s Balloon Program at Wallops Flight Facility.

Unique atmospheric circulation over Antarctica during its summer months allows scientists to launch balloons from a site near McMurdo Station, the Foundation’s logistics hub in Antarctica, and recover them from nearly the same spot weeks later. During that time, each balloon circles the continent one to three times. Scientists from the United States, Japan, South Korea, France and other countries are using the balloons to investigate the nature of ultra-high-energy cosmic rays and to search for antimatter.

The three payloads will ride the stratospheric winds in the polar vortex, a persistent low-pressure system above the Antarctic continent that will help keep the balloons aloft for up to six weeks. This orbital pattern allows for long and continuous observations of a variety of phenomena from a single instrument at a fraction of the cost of launching a satellite into space.

The payloads launched Dec. 19 - 26 from McMurdo are the University of Maryland’s Cosmic Ray Energetics And Mass (CREAM) experiment, the Balloon borne Experiment with a Superconducting Spectrometer (BESS) developed by NASA’s Goddard Space Flight Center and Japan’s High Energy Accelerator Center

and Louisiana State University’s Advanced Thin Ionization Calorimeter (ATIC).



Photo by Lee Wingfield

**Brian Richardson, (left), and Carl Davis, Engineering Support Center Team, monitor the CREAM flight from Wallops.**

Once the flights are completed, the payloads will be retrieved, brought back to McMurdo, and then returned to the United States, where they can be refurbished and launched again.

“We are extremely proud of our launch crew in Antarctica,” said W. Vernon Jones, senior scientist for suborbital research at NASA Headquarters. “Continuous operations support for three balloons in the air at one time, using the finest balloon vehicle made for this kind of cutting-edge scientific research, led to this major achievement,” he added.

“If all three of these missions achieve their flight goals, this Antarctic campaign will result in almost 90 days of near-space flight at an average altitude of 23 miles, with experiments averaging more than 4,300 pounds,” Jones said.

“This annual scientific balloon expedition demonstrates the deep commitment and very fruitful collaboration between NASA and the NSF that enables a wide variety of forefront scientific research in Antarctica,” said Karl Erb, director of the Office of Polar Programs.

Supporting the three science teams, the staff from NASA’s Columbia Scientific Balloon Facility, Palestine, Texas, traveled to Antarctica to launch the giant helium balloons.

“With the launch of the third balloon, we put 32,000 pounds of hardware, including 13,000 pounds of science instruments, into near space in a span of just over a week. It’s a magnificent accomplishment,” said Danny Ball, site manager for New Mexico State University the operator of the CSBF for NASA. “We’re extremely proud of our personnel who worked through Thanksgiving, Christmas, and New Years in harsh conditions in Antarctica to make this possible.”

Flight durations as of January 7 are 19 days for CREAM, 16 days for BESS, and 12 days for ATIC. To monitor the real time flight tracks of the three payloads on line, visit:

<http://www.csbf.nasa.gov/antarctica/ice0708.htm>

### Our Newest Retirees

Three Wallops civil service employees retired effective January 3 with a total of 108 years of government service. Congratulations to the following:

**Donald R. (Don) Langley** retired with 35 years of government service. Langley retired as an electronics technician in NASA Wallops’ Electrical Engineering Branch.

**Lester A. (Les) McGonigal** retired with 32 years of government service. At the time of his retirement, McGonigal was chief of NASA Wallops’ Safety Office.

**Dr. Frank E. (Frank) Hoge** retired as chief scientist responsible for the Airborne Oceanographic Lidar in NASA Wallops’ Ocean Sciences Branch with 41 years of government service.

## NSROC Presents Years of Service Awards

The NASA Sounding Rocket Operations Contract (NSROC) has awarded years of service certificates for dedicated performance and continuous support of NASA's Sounding Rocket Program to the following employees.

30 Years  
Tom Browne

25 Years  
Bill Payne  
Pam Watkinson

20 Years  
Rick Evavold  
Tom Franko  
Rick Weaver

15 Years  
Paul Evans  
Ronnie Ridley  
Charles Roberts

## EAP Lunch & Learn

"Think Happy"  
January 9, 2008  
11:30 a.m. - 12:30 p.m.  
Williamsburg Room  
Building E-2



Come join the new Employee Assistance Program counselor, Jan Gray, and learn about ways to make oneself "Happy." Gray will share some research on who reports being happy vs. who does not and why.

## American Red Cross

Blood Drive  
January 17, 2008  
9 a.m. to 2 p.m.  
Building F-3, Rocket Club

Donor eligibility questions should be referred to (757) 446-7787.

To schedule an appointment, sign-up at: [www.givelife.org](http://www.givelife.org) The code is Wallops.

For further information call the Health Unit at x1266.

## A Warm, Wet December by Bob Steiner, Meteorologist

Temperatures during December averaged 43 degrees, which was slightly more than 2 degrees above average. December 12 was the warmest day of the month with a reading of 72 degrees. This reading along with a 69 degree reading on the December 10 set new daily records for the dates.

The coolest reading was 21 degrees observed on the morning of December 7. No record lows were set or tied.

Many months of below average rainfall also ended in December. We recorded 4.94 inches of rain in December, which was 1.70 inches above average. Rain fell on 12 days, three more than normal. The wettest 24 hour period was observed between December 15 and 16 when 1.36 inches was measured.

A trace of snow was observed on three days early in the month. This is well below our normal snowfall of 1.4 inches normally occurring on one day in December.

Winds of 30 mph or greater were recorded on eight days. The strongest gust of wind for the month, 51 mph, was measured at 2:12 p.m. on December 3.

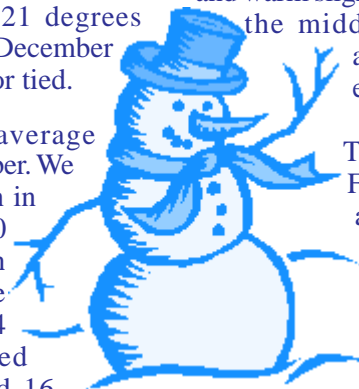
We can look ahead to some of the coldest days of winter in January.

February usually brings average highs of 45 degrees to begin the month and warm to 51 degrees by the end of the month. Overnight lows should be in the upper 20's and warm slightly into the low 30's during the middle of the month before averaging 30 degrees at the end of the month.

The warmest temperature for February is 79 degrees achieved on Feb. 27, 1997 and again on Feb. 1, 2002. The lowest recorded temperature for February is the -4 degree reading occurring on Feb. 2, 1971.

Measurable rain normally falls on nine days during February giving us an average monthly total of 3.02 inches. The wettest February on record occurred in 1998 with 6.06 inches recorded. The wettest day in February was the 4<sup>th</sup> in 1998 when 2.87 inches was measured.

Expect to see two days in February with measurable snowfall for a monthly average of 2.96 inches.



## McCandliss Reports 100% Success

A NASA Terrier-Black Brant sounding rocket was launched from White Sands Missile Range, N.M., on August 12, 2007.

The mission was to observe far-UV emissions from the Trifid nebula.

The instrument, Long-slit Imaging Dual Order Spectrograph, (LIDOS), successfully recorded these emissions and was recovered intact.

"Please extend our congratulations to the NASA Sounding Rocket Operations Contract (NSROC) guidance and navigation team. The stellar performance of the CACS ..... was well worth the wait. Portions of this system may find use in space applications beyond the suborbital programs," said Dr. Stephen McCandliss, principal investigator from Johns Hopkins University. "We are extremely pleased."

## NASA 50th Anniversary T-Shirts

On Sale Now

To commemorate NASA's 50th Anniversary on October 1, 2008, the Wallops Exchange is offering a NASA team member exclusive t-shirt.

The 50th Anniversary t-shirt is 100%, pre-shrunk cotton for \$5 and will only be sold to NASA civil servants and contractors. The deadline to place your order has been extended to January 15, 2008.

To order visit:  
<http://www.tcbspecialties.com/nasa50th>  
or contact the Wallops Exchange at x2020.

Shirts will be available the first week in March. You will be notified in February with specific dates and pick up location.

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