NASA and NOAA Fly Unmanned Aircraft Into Hurricane Noel

NASA and the National Oceanic Atmospheric Administration (NOAA) opened a new chapter in the world of hurricane observation by making the first unmanned flight into Hurricane Noel.

An unmanned aerial system, or UAS, flew into the eye wall of the hurricane at altitudes as low as 300 feet.

Using the small, remotely piloted aircraft, scientists were able to make detailed observations of areas of hurricanes that are too dangerous for manned aircraft closing an important gap in obtaining real-time near-surface meteorological and oceanographic data.

“This historic Aerosonde mission into Hurricane Noel is the first time we are able to successfully fly an unmanned aircraft into the inner core of a hurricane. Unmanned flights at very low altitude are important since they give us unique insights and continuous observations in a region of the storm where the ocean’s energy is directly transferred to the atmosphere just above,” said Joe Cione, a hurricane researcher at NOAA’s Atlantic Oceanographic and Meteorology Laboratory, Miami, and the lead scientist on this project.

The UAS was launched from NASA’s Wallops Flight Facility at 2:08 p.m.(EDT), on Friday, November 2.

Detailed observations of the near-surface hurricane environment have been elusive because of the severe safety risks associated with low level manned flight missions.

The unmanned aerial system flew in winds reaching 80 mph in the core of the storm for approximately 7.5 hours providing real-time detailed observations of the near surface, high wind environment to NOAA forecasters at the National Hurricane Center, Miami.

The environment where the atmosphere meets the sea is critically important in hurricanes as it is where the ocean’s warm water energy is directly transferred to the atmosphere just above it. The hurricane/ocean interface also is important because it is where the strongest winds in a hurricane are found. Observing and ultimately better understanding this region is crucial to improving forecasts of hurricane intensity and structure. Enhancing this predictive capability would not only save the U.S. economy billions of dollars, but more importantly, it could save many lives.

In September 2005, the 5-foot-long Aerosonde with a 10-foot wing span, was flown from NASA Wallops Flight Facility into Tropical Storm Ophelia on a 10-hour mission sending back data from readings that were taken and relayed every half-second as the storm moved off North Carolina’s Outer Banks and past the Virginia coast.

Celebrate Wallops Day
November 6

8:15 – 9:45 – Bldg. E-109 Open House

8 to 10 a.m. – Building N-159 Hangar

Wallops Fire Department new equipment on display

Hydrospheric and Biospheric Sciences Laboratories open

OASIS on display

10 to 11:30 a.m. Building E-100 Auditorium

Town Hall Meeting with Dr. Ed Weiler, Director of NASA Goddard Space Flight Center

11:30 a.m. to 1 p.m. — Pavilion

CFC Picnic and Chili Cook-off

Fun Run/Walk

1 to 2:30 p.m. – Building F-7

Balloon Program Facility

1 to 2:30 p.m. – Building F-10

Sounding Rocket Program/NSROC Facility

1 to 2:30 p.m. – Building H-100

Payload Processing Facility
Rain Returns to Delmarva by Ted Wilz, Senior Meteorologist

After three very dry months with well below average rainfall, we finally received some much-needed precipitation during October. The month started out much like the previous three, with only .09 inches of rain occurring through the 18th of the month. The end of the month was wet with nearly an inch of rain occurring on October 24 and the 25, bringing the monthly total to 3.33 inches. This is slightly above October’s average of 2.97 inches.

October also was a very warm month, with temperatures averaging about eight degrees above normal. New record highs were set on four days during October, from the 7th through the 9th, and again on the 24th when the temperature reached 81 degrees. The summer-like 91 degree temperature recorded on the 9th was the warmest day ever recorded at Wallops during October!

As winter approaches, December promises to bring chillier temperatures to the region. Average high temperatures in early December are usually in the low 50’s, cooling to the mid to upper 40’s by the end of the month. Lows usually start out in the mid 30’s, but decrease to around 30 as January approaches. The all-time high temperature for the month occurred when a record 77 degree temperature brought the golfers out on Dec. 7, 1998. The coldest temperature ever recorded during December occurred when we reached a frigid 4 degrees on Dec. 21, 1989, bringing a Canadian chill to the area.

December averages 3.24 inches of precipitation, usually occurring on nine days during the month. It also brings the first significant chance for wintry weather. We average 1.4 inches of snow during the month.

With snow and freezing precipitation becoming more of a reality, now is the time to check for ice scrapers. Make sure your vehicle is road-worthy and ready for wintry weather.

Craft and Shopping Extravaganza

November 7
11 a.m. to 1 p.m.
Building E-2
Training Room

Some of the items to be offered include: cross stitch pictures; jewelry; Christmas baskets, trees, wreaths, and ornaments; baked goods; purses; Swiss skin care products; Raggedy Ann & Andy dolls; floral arrangements; lanyards; handmade cards

Diversity Council Words to Live by

“Outstanding leaders go out of the way to boost the self-esteem of their personnel. If people believe in themselves, it’s amazing what they can accomplish”

……………. Sam Walton

NASA’S 50th Anniversary Web-Site

Over the next year, NASA will celebrate 50 years of scientific and technological excellence.

Visit the NASA history web-site at www.nasa.gov/50th for a calendar of events.