



## **F-35 Lightning II Pax River Integrated Test Force Public Affairs Release — 2015 0129**

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### **F-35 Lightning II Nears Completion of All-Weather Climatic Testing**

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For the past four months, an F-35 Lightning II has endured extreme weather temperatures to certify the fleet to deploy to any corner of the world.

An F-35B from the F-35 Patuxent River Integrated Test Force in Maryland has undergone rigorous climatic testing at the U.S. Air Force 96th Test Wing's McKinley Climatic Laboratory located at Eglin Air Force Base, Florida. The laboratory supports all-weather testing of weapon systems to ensure they function regardless of climatic conditions.

With 13 countries currently involved with the program, the F-35 must be tested in meteorological conditions representative of those locations from which it will operate, ranging from the heat of the Outback of Australia to the bitter cold of the Arctic Circle above Canada and Norway.

"We've designed an environment here at the chamber where we can simulate virtually any weather condition—all while flying the jet at full power in either conventional or vertical takeoff mode," said Dwayne Bell, McKinley Climatic Laboratory technical chief.

The F-35B Lightning II was ferried to Eglin AFB in September 2014 to begin a six month assessment of the aircraft's performance in wind, solar radiation, fog, humidity, rain intrusion/ingestion, freezing rain, icing cloud, icing build-up, vortex icing and snow.

"While we are testing in the world's largest climatic testing chamber, we're pushing the F-35 to its environmental limits — ranging from 120 degrees Fahrenheit to negative 40 degrees, and every possible weather condition in between," said F-35 test pilot Billie Flynn, who performed extreme cold testing on the aircraft.

"To this point, the aircraft's performance is meeting expectations", Flynn said. "It has flown in more than 100 degree heat while also flying in bitter subzero temperatures. In its final days of testing, it will fly through ice and other conditions such as driving rain with hurricane force winds."

"We are learning more and more about the aircraft every day," Flynn said. "The future warfighters can be confident the F-35 will perform in any condition they find themselves in for the future."

The F-35 Lightning II is a multi-role, multi-service, single seat, single engine strike fighter featuring next generation stealth technology. By delivering 5th Generation airpower essential to our mutual security strategy, the F-35 is a single solution that yields multi-dimensional capabilities to defeat 21st Century threats and enables joint and coalition partners to conduct shoulder-to-shoulder operations in future conflicts.

Since December 2006, the F-35 Lightning II has surpassed 25,000 combined flight hours with 16,200 hours in the F-35 military fleet aircraft and 8,950 hours of System Development and Demonstration (SDD) testing. To date, 158 F-35 pilots and more than 1,650 maintainers have graduated from training at Eglin AFB. The F-35 has completed multiple weapons tests as well as F-35B and F-35C first-life durability testing. Additionally, the test fleet has conducted two F-35B sea trials aboard the USS WASP (LHD 1), and last November the F-35C completed its first sea trial aboard USS NIMITZ (CVN 68).



Photo by Michael D. Jackson, F-35 Integrated Test Force

**CAPTION:** The F-35 Patuxent River Integrated Test Force in Maryland ferried aircraft BF-05 to Eglin Air Force Base, Florida to undergo climatic testing at the 96th Test Wing's McKinley Climatic Laboratory. During the six-month test, the F-35s will be exposed to extreme wind, solar radiation, fog, humidity, rain intrusion/ingestion, freezing rain, icing cloud, icing build-up, vortex icing and snow.



Photo by Michael D. Jackson, F-35 Integrated Test Force

**CAPTION:** An icing cloud test calibration fixture is shown in front of an F-35B Lightning II aircraft as it undergoes cold weather testing at the 96th Test Wing's McKinley Climatic Laboratory at Eglin Air Force Base, Florida.





**Photo by Michael D. Jackson, F-35 Integrated Test Force**

**CAPTION: An F-35B Lightning II undergoes ice evaluation testing at the 96th Test Wing's McKinley Climatic Laboratory at Eglin Air Force Base, Florida.**