



F-35 Lightning II Program

Public Affairs Release – 2015 06 24

NEXT GENERATION FIGHTER TECHNOLOGIES TESTED DURING ALASKA MILITARY EXERCISE

The past meets the future when a distinctive looking aircraft with the nose and electronics of an F-35 Lightning II stealth fighter and the body of a 1960's passenger jet participates in one of the U.S. military's largest electronic warfare exercises.

A modified BAC 1-11 serves as a flying test platform for the F-35's AN/APG-81 active electronically scanned array radar (AESA) and its AN/AAQ-37 distributed aperture system (DAS) which provides F-35 pilots with 360-degree spherical situational awareness and target tracking capabilities.

"Northern Edge offers an excellent opportunity to observe some of the F-35's electronics in a robust and joint environment," said Air Force Major Scott Fann, F-35 Joint Program Current Capabilities Lead. "During this U.S. Pacific Command exercise, we are focused on some of the advanced capabilities of the distributed aperture system and the jet's electronic counter measures."

While flying over the skies of Alaska, the F-35's radar demonstrated robust electronic protection, electronic attack, passive maritime and experimental modes, and data-linked air and surface tracks to improve legacy fighter situational awareness. It also searched the more than 50,000 square mile exercise area for surface vessels, and accurately detected and tracked them in minimal time.

The F-35's AESA radar and DAS are produced by Northrop Grumman Electronic Systems and work together to simultaneously detect and track air and ground targets within the battlespace. The system enables pilots to see in all weather conditions, day or night. It automatically warns pilots about incoming threats and then pinpoints the location of the threat for tactical maneuvering.

"Having the F-35's flying test platform participate in this joint exercise helps us confirm the maturity and utility of key capabilities," said Fann. "It also helps us identify areas that might need refinement before we enter formal operational testing." Northern Edge 2015 gathered more than 6,000 active duty, National Guard and Reserve component Army, Navy, Marine Corps, Air Force, and Coast Guard military participants the opportunity to train together in Alaska's vast Joint Pacific Alaska Range Complex, including the Gulf of Alaska maritime training area.



John Montgomery, Northrop Grumman fifth generation derivatives and improvements manager and Air Force Major Scott Fann, F-35 Joint Program Office Air System Requirements current capabilities lead, discuss the BAC 1-11 test aircraft capabilities on Joint Base Elmendorf-Richardson during Northern Edge 2015, June 12, 2015. Northern Edge 15 is Alaska's premier joint training exercise designed to practice operations, techniques and procedures as well as enhance interoperability among the services. Thousands of participants from all services; from active duty, Reserve and National Guard units are involved. (U.S. Air Force photo/SSgt William Banton).