

# Air Force World

## F-35 “Myth Busting”

The program executive officer for the F-35 joint program office shot down some “myths” about the fighter program Sept. 9 during a speech in Washington, D.C.

While most news reports about the program mention cost overruns, the last time the office added money to the development program was in 2010, said Lt. Gen. Christopher C. Bogdan, who said he hasn’t asked for “a single penny” since then—and doesn’t intend to. Additionally, he said, while estimating the costs for everything related to the F-35 program for the next 50 years is “a mighty sketchy endeavor,” the

program has seen a decrease in the estimated operations and sustainment costs of about 13 percent in the last three years and expects that trend to continue.

Bogdan also addressed reports that the F-35 lost in a dogfight to an F-16, saying that while the F-16 and A-10 are “awesome, ... they will not survive in the future battlespace.” Those aircraft can’t do some of the missions the F-35 has been designed to do, or what the services want the aircraft to do, he said, using the analogy of an Olympic decathlete racing an Olympic sprinter in the 100-meter dash. “That’s not what we should measure the F-35 on,” Bogdan said.

★ screenshot

10.14.2015

*A 9th Reconnaissance Wing U-2S Dragon Lady practices landing approaches at Beale AFB, Calif., during an evening training sortie.*



### **Spatial Disorientation Led to Fatal F-16 Crash**

An F-16C pilot lost visual contact with the lead aircraft in his formation and suffered from spatial disorientation during maneuvers, leading to a fatal crash into the Gulf of Mexico on Nov. 6, 2014, according to an Air Combat Command accident investigation board report released Sept. 8.

The pilot, Matthew J. LaCourse, performed a series of dynamic maneuvers during intercept training with another fighter that stimulated fluid in his inner ear canals, states a release summarizing the report. These fluids are crucial to human perception of direction, movement, and gravity—and

the fluid stimulation led him to misperceive his angle of bank, pitch, and position, leading to spatial disorientation. The AIB also determined there was evidence to show the loss of visual contact with his flight lead contributed “substantially” to the crash.

LaCourse was a civilian pilot assigned to the 82nd Aerial Targets Squadron at Tyndall AFB, Fla., at the time of the crash.

### **Gulfstream, Northrop Want Action on JSTARS Recap**

The Air Force plans to award a contract for engineering, manufacturing, and development of its next generation



Staff photo by Aaron M. U. Church



**Into the Briny Deep:** *Combat control airmen perform an open-circuit navigation dive during an amphibious operations exercise off the west coast of Okinawa, Japan, on Sept. 22. The airmen were refreshing qualifications and honing infiltration proficiency.*

JSTARS in 2017, but some contractors are pressing the service to move faster.

One group, led by Gulfstream and Northrop Grumman, said it is to going to move forward with a proposal now. The team, one of three vying for a contract to recapitalize the JSTARS fleet, has been testing a prototype for years, and flew a team of reporters to the Gulfstream production facility in Savannah, Ga., in early September, to display the maturity of the program.

Northrop Grumman has a prototype Gulfstream 550 aircraft, outfitted with a radar canoe and several sensors and radars, which has been in testing, and company officials say their version—with a range of more than 8,000 miles and cruising altitude of 51,000 feet—is ready for the Air Force.

The prototype can fit 10 operators, down from the current E-8C requirement of 18, and though Gulfstream has never produced an aircraft with in-flight refueling capability, officials say they can engineer that into an aircraft. The team is competing against Boeing's planned modified 737 and a joint effort by Bombardier and Lockheed Martin centered on a Bombardier Global 6000 bizjet.

### USAF Advocates for Allied Capabilities

The Air Force wants allied countries to pick up the slack to increase capabilities in intelligence, surveillance, and reconnaissance, air mobility, and command and control as USAF downsizes to its smallest size in history, the service's top international affairs official said Sept 9.

Although allies often are quick to show up to contingencies with equipment, many lack communication links and command and control capability to effectively operate with other countries, including USAF, said Heidi H. Grant, the deputy undersecretary of the Air Force for international affairs, during the ComDef conference in Washington, D.C.

There's a shortfall of air mobility such as tanker refueling if the US isn't available, she said. As the US military shrinks, it's working to get in front of dropping capabilities by working with allies to improve capabilities.

### Rethinking the Space Ground Enterprise

As the Air Force retools its space ground enterprise, it must remain focused on agility, automation, security, and resiliency, the new commander of 14th Air Force (Air Forces Strategic) said Sept. 11 in Washington, D.C.

The current space ground architecture was "designed in a different era for a different time," said Lt. Gen. David J. Buck. However, he said, "like every other environment, space is contested, degraded, and operationally limited."

Maintaining separate ground stations for every satellite system requires individualized operating systems, each operated by proprietary software the government does not own, Buck said. That's why the Air Force is moving toward one system where the government would own the mission data and technical baseline, he said.

The Air Force is also transforming its space training so that after a "Space 101"-type course at Vandenberg AFB, Calif., new space operators will go to a different location for unit mission-specific training.

### KC-46A First Flight

Boeing flew the first all-up KC-46A Pegasus aerial tanker Sept. 25. The jet took off from Paine Field, Everett, Wash., at 1:24 p.m. local time on a checkout flight ending at Boeing Field in Seattle.

During the flight, the company said, technicians checked out basic aircraft integrity and fundamental systems, such as the engines, flight controls, and environmental systems. After the flight, a Boeing spokeswoman said plans call for calibrating instrumentation before the next series of flights, when the refueling boom and probe-and-drogue wing aerial refueling pods (WARPs) will be tried out.

Previous flights have been made with the jet's stablemate, a "provisioned freighter" 767-2C with all the plumbing of the all-up KC-46 but without the fitted military gear and air refueling probe. The test fleet will comprise two 767-2Cs—which will clear all the FAA requirements for the type—and two all-up KC-46s. The 2Cs will be fitted with refueling gear later to join the test program, to be flown out of Edwards AFB, Calif., and Boeing Field. All four of the test aircraft are expected to eventually join the operational force.

Boeing is under contract to build 17 jets, to be delivered by 2017 for initial operational capability, and ultimately will deliver 179 KC-46s under the KC-X program.

USAF plans a follow-on KC-Y and KC-Z program to finish replacing the KC-135 and KC-10 fleets, respectively.

### Beale's Final MC-12 Sortie

The 9th Reconnaissance Wing flew its final MC-12W Liberty sortie from Beale AFB, Calif., ending Air Combat Command's operation of the aircraft on Sept. 16.

"The MC-12 is a great story because it linked those people in the aircraft with people on the ground and it allowed them to carry out a critically important mission," Col. Douglas Lee, the 9th RW commander, said in a news release.

Beale's 427th Reconnaissance Squadron has flown the aircraft since June 2011, following the Air Force's decision to normalize the MC-12 as a permanent fleet. Air Force MC-12s clocked some 400,000 combat flying hours and more than 79,000 sorties over Iraq and Afghanistan since they were first deployed in June 2009, according to officials.

The Air Force is retaining 13 of the 41 aircraft to stand up a special operations-tasked unit with the Oklahoma Air National Guard, while eight MC-12s are transferring to the Army.

### USAF's Extended Range Reaper Operational

General Atomics Aeronautical Systems recently announced its Predator B/MQ-9 Reaper-Extended Range

**New Digs:** Crews at the National Museum of the United States Air Force at Wright-Patterson AFB, Ohio, move a North American X-15A-2 into the museum's new, fourth building Oct. 2. The 224,000-square-foot structure, slated to open to the public in June 2016, will house aircraft galleries dedicated to research and development, space, global reach, and presidential aircraft. The new exhibit space will also host four STEM learning nodes. In all, the museum—the largest military aviation museum in the world—will showcase 360 aerospace vehicles and missiles and thousands of artifacts amid 17 acres of indoor exhibit space.

remotely piloted aircraft has entered initial operational service with the US Air Force.

The Air Force asked the company to produce 38 MQ-9 Reaper-ER variants, a quick reaction capability requirement, in 13 months and declare them operational 18 months after receiving the contract. The MQ-9s deployed operationally last month.

The MQ-9 airframe is made into an ER variant through a modification package featuring wing-mounted fuel tanks—extending the aircraft's range—an improved propeller, a heavyweight trailing arm landing gear system, and an alcohol/water injection system, among other modifications. The ER variant allows the aircraft to mix configurations of both fuel and weapons as well.

The quick reaction contract calls for all 38 MQ-9s to be delivered by July 2016.

### Chinese Fighter Conducts "Unsafe" RC-135 Intercept

A Chinese fighter jet reportedly intercepted an Air Force RC-135 reconnaissance plane in an "unsafe fashion" on Sept. 15 over the Yellow Sea, according to Pentagon officials.

The Chinese crossed in front of the Rivet Joint, prompting concerns from the Air Force crew. While the intercept was deemed unsafe, there was no threat of a collision, Pentagon Press Secretary Peter Cook said.

The Defense Department is investigating the incident.

Chinese aircraft have intercepted US aircraft in a similar way before. Last summer, a Chinese J-11 flew within 20 feet of a Navy P-8 Poseidon in the South China Sea.

### Breedlove: NATO and Russia Need to "Engage"

The US and NATO need to find a way to engage Russia and press that country to "rejoin a community of norms

USAF photo by Ken LaRock



that does not believe in changing international boundaries by force,” said Gen. Philip M. Breedlove, commander of US European Command and NATO Supreme Allied Commander Europe.

Russia has vast energy reserves and a sprawling transportation infrastructure that Europe uses to help its economy grow. However, NATO countries and Russia need to talk at a high level to find common ground so they can work toward a peaceful and prosperous Europe, Breedlove said at the German Marshall Fund of the United States in Washington, D.C., on Sept. 28.

Breedlove’s comments came the same day President Obama met face-to-face with Russian President Vladimir Putin at the United Nations in New York. “We recognize the deep and complex history between Russia and Ukraine, but we cannot stand by when the sovereignty and territorial integrity of a nation is flagrantly violated,” Obama told the UN General Assembly. “If that happens without consequence in Ukraine, it could happen to any nation gathered here today.”

### Space Fence Passes Critical Design Review

Lockheed Martin’s Space Fence System has passed the Air Force’s critical design review, marking the end of the design phase and the beginning of radar production and facility construction, the company announced Sept. 28.

The large-scale digital radar, turnkey facility, and other parts of the system passed the review after a demonstration

**Hundreds of Pieces to This Puzzle: SrA. Cody Bowman (l) and SSgt. Catalina Cornejo disassemble an F110-GE-100C turbofan engine from an F-16 at Eielson AFB, Alaska, Oct. 8. Airmen at the maintenance shop will carefully take apart the engine and examine each component for wear or damage. The preventive maintenance reduces the risk of an aging or damaged part compromising the safety and performance of the aircraft.**

### B-1 Transitions to Global Strike

The 7th Bomb Wing at Dyess AFB, Texas, and the 28th BW at Ellsworth AFB, S.D., held a realignment ceremony Sept. 28, marking the transition of the B-1 fleet from Air Combat Command to Air Force Global Strike Command.

The move means the Air Force’s entire bomber fleet—the B-1, B-2, and B-52—is consolidated under the command of 8th Air Force, but for the roughly 7,000 airmen involved, the transition should be relatively seamless, 8th Air Force (Air Forces Strategic) Commander Maj. Gen. Richard M. Clark told *Air Force Magazine*.

“They will wear a different patch, but aside from that it won’t be a significant change” for the airmen, said Clark. However, “behind the scenes, we’ll have more consolidated advocacy for long-range strike, and a consolidated center for strategic thought for long-range strike and standoff weapons.”

Even though all three of the service’s bombers are “unique weapon systems,” Clark said, “the core competency of long-range strike is something common to all” and the B-1 transition will help “build some synergy” within the bomber community. “In general this is a really great move for the Air Force,” one that brings 8th AF back to its heritage.

of a small-scale system that detected and tracked objects orbiting in space.

The Space Fence will use S-band ground-based radar to detect and track objects and debris in space to prevent collisions, and will replace the existing Air Force Space Surveillance System.

USAF photo by SrA. Peter Reif



# The War on Terrorism

## US Central Command Operations: Freedom's Sentinel and Inherent Resolve

### Casualties

By Oct. 19, 15 Americans had died in Operation Freedom's Sentinel in Afghanistan, and nine Americans had died in Operation Inherent Resolve in Iraq and Syria.

The total includes 23 troops and one Department of Defense civilian. Of these deaths, five were killed in action with the enemy while 19 died in noncombat incidents.

There have been 61 troops wounded in action during OFS/OIR.

### Obama Convenes Anti-ISIS Summit in New York

President Obama convened a summit with representatives from more than 100 countries in New York on Sept. 29 to emphasize the formation of a "global movement that is united by the mission of degrading and ultimately destroying [ISIS]," he said in remarks at the United Nations headquarters during the annual General Assembly.

The summit comes just after the one-year anniversary of the formation of a global coalition to counter ISIS, and though the group marked successes in stabilizing and liberating portions of Iraq and Syria from terrorists, Obama conceded there is a great deal more effort needed. "This is not a conventional battle. This is a long-term campaign—not only against this particular network, but against its ideology," he said.

Obama praised the growth of the international coalition to some 60 nations, and the military contributions from nearly two dozen countries. In a nod to the recent increase in Russian activity in Syria, he declared the US is also "prepared to work with all countries, including Russia and Iran, to find a political mechanism in which it is possible to begin a transition process."

### NATO Hands Off Control of Afghan Airspace

Afghanistan on Sept. 22 took control of its own airspace after 13 years of NATO support, the alliance announced.

Turkish Maj. Gen. Cahit Bakir, Resolute Support commander for Kabul International Airport, praised the occasion as a "historical milestone for Afghanistan."

Aviation is critical to both transportation and economic activity in the landlocked country, and the projected growth of aviation over the next two decades in Asia gives Afghanistan an opportunity to become a key partner in the region, said Mohammad Daud Sultanzoy, the chair of Afghanistan's airport development project.

Afghanistan's airspace control is not only critical to safe military and civilian traffic, it is tied to revenue from overflight of commercial traffic and is a vital part of training for Afghan air traffic controllers and airport workers, Bakir said.

### Petraeus: US Not Where It Should Be in ISIS Fight

In his first testimony to an open session of Congress in three years, retired Army Gen. David H. Petraeus urged increased support to Iraqi security forces, Sunni tribal

forces, and Kurdish Peshmerga.

"Some elements of the right strategy are in place" in the fight against ISIS, he told the Senate Armed Services Committee, but several elements are under-resourced or missing altogether. "We are not where we should be at this point," he said.

While he said he would not embed US personnel at the Iraqi battalion level, he would recommend embedding US advisors down to brigade headquarters level for the Iraqi security forces fighting ISIS. "The center of gravity of the sustainable defeat of ISIS in Iraq lies in Baghdad," Petraeus said, and the "key" is to strengthen "those in Baghdad who are prepared to pursue inclusive politics and better governance."

### CSAR Airmen, Aircraft Deploy to Turkey

The Air Force will begin combat search and rescue operations from another base inside Turkey, Gen. Philip M. Breedlove, commander of US European Command and NATO Supreme Allied Commander, said Sept 29.

The Air Force has moved people and assets to Diyarbakir Airport in the southeast region of the country to expand Operation Inherent Resolve, Breedlove said at an American-Turkish Council conference in Washington, D.C.

Some 300 airmen, HH-60G Pave Hawks, and HC-130s "will be on station to provide rescue capabilities to coalition recovery efforts in the fight against [ISIS]," Defense Department spokeswoman Laura Seal told *Air Force Magazine*.

US troops "will be guests of the government of Turkey" and there is no plan for a permanent presence at the base. In addition to the new deployment, the US will increase the contingent of strike aircraft flying out of Incirlik Air Base to "step up the fight against [ISIS]," officials said.

### Electrical Failure Caused Predator Crash

Complete electrical failure caused by a short circuit brought down an MQ-1B Predator on March 1 in the US Central Command area of responsibility, the Air Force announced. The Predator was flying a "combat support" mission in an undisclosed area when it crashed.

According to the Air Force investigation, a short circuit in the aircraft's onboard printed wiring board caused electrical generation to exceed the capacity of both the Predator's alternators, draining both batteries. Without power, the aircraft couldn't fly and crashed, according to an abbreviated accident investigation board report released Sept. 9.

The aircraft was assigned to the 432nd Wing at Creech AFB, Nev., and was operated by the 196th Reconnaissance Squadron at March ARB, Calif. The Predator was destroyed with losses estimated at \$3.9 million. No injuries or damage to private property was reported, states the release. The Air Force did not disclose if the Predator was armed at the time of the crash.

Lockheed Martin in March began construction on a Space Fence site at Kwajalein Atoll in the Pacific Ocean. Initial operational capability is now scheduled for late 2018.

### Senators Endorse Need for Bomber Recap

The Air Force Association's Mitchell Institute for Aerospace Studies on Sept. 10 rolled out a new study exploring the

need for and capabilities of a next generation long-range strike aircraft.

A bipartisan group of senators and congressmen also offered remarks during the Capitol Hill event, saying the US must ensure the success of the Long-Range Strike Bomber.

Bombers bring enormous value to the United States and its ability to project power around the globe, including

### Competing NSS Launches

The Air Force released the final request for proposals for GPS III services on Sept. 30, officially opening the door to competition for national security space launches.

Companies have until Nov. 16 to submit proposals, though California-based SpaceX and the United Launch Alliance are the only entities certified for military space launches, according to a Sept. 30 press release.

The Air Force will evaluate the proposals and award a “firm-fixed price contract” that will cover launch vehicle production, mission integration, and launch operations for a 2018 Global Positioning System III satellite launch, states the release.

“Through this competitive solicitation for GPS III launch services, we hope to reintroduce competition in order to promote innovation and reduce cost to the taxpayer while maintaining our steadfast laser focus on mission assurance and assured access to space,” said Lt. Gen. Samuel A. Greaves, Space and Missile Systems Center commander and Air Force program executive officer for space.

This is the first of nine competitive launch services planned under the Phase 1A procurement strategy; previously United Launch Alliance was the only certified launch provider.

long-range strike and loiter capability, the ability to reassure and shape pre-conflict scenarios, unrivaled capacity, and limited vulnerability to adversary attack, said Sen. Marion M. Rounds (R-S.D.).

The bomber force and air superiority are key to maintaining the overmatch against potential adversaries around the world, and preserving this overmatch is vital to shaping potential global threats, he said.

Rounds praised the study, adding that it would inform the “doctrinal underpinnings” of how the LRS-B will be acquired and employed, helping to keep America’s bomber force credible.

### F-35 Ejection Seat Issue Grounds Lighter Pilots

The Defense Department has restricted pilots weighing less than 136 pounds from flying the F-35 because of an issue with the ejection seat, the F-35 program office told *Air Force Magazine*.

Lighter pilots are at greater risk of injury if they have to eject at low speed, so the services restricted such pilots from operating the jet beginning Aug. 27. At least one pilot is affected. All variants of the F-35 use the same Martin Baker US16E ejection seat system, said Joe DellaVedova, a spokesman for the F-35 program office.

He noted that the aircraft is still in the developmental phase, “where discoveries are expected to happen. That’s why we test: to make things better for the warfighter.” Still, he stressed, safety is critical. “The F-35 Joint Program Office, Lockheed Martin, and Martin Baker continue to work this issue with the US services and international partners to reach a solution as quickly as possible,” he said. ✪

### Senior Staff Changes

**RETIREMENTS:** Maj. Gen. Terrence A. **Feehan**, Maj. Gen. Jim H. **Keffer**, Brig. Gen. Jeffrey R. **McDaniels**, Brig. Gen. David R. **Stilwell**, Brig. Gen. Kevin B. **Wooton**.

**NOMINATION: To be ANG Major General:** Stephen E. **Markovich**.

**CHANGES:** Lt. Gen. Anthony J. **Rock**, from Chief, Office of the Defense Representative-Pakistan (ODR-P), CENTCOM, US Embassy, Islamabad, to IG of the AF, OSAF, Pentagon.

**COMMAND CHIEF MASTER SERGEANT RETIREMENTS:** Walker H. **Cottingham Jr.**, Victoria V. **Gamble**, James A. **Laurent**, Peter B. **Stone**.

**CCMS CHANGES:** CMSgt. Troy L. **Eden**, from Command Chief, Natl. Air & Space Intel. Center, DCS, ISR, USAF, Wright-Patterson AFB, Ohio, to Chief, AF CMSgt. Mgmt. Office, DCS, Manpower, Personnel, & Svcs., USAF, Pentagon ... CMSgt. Shelina E. **Frey**, from Command Chief, 7th AF, PACAF, Osan AB, Korea, to Command Chief, AMC, Scott AFB, Ill. ... CMSgt. Terrence A. **Greene**, from Command Chief, 51st FW, PACAF, Osan AB, Korea, to Command Chief, 5th AF, PACAF, Yokota AB, Japan.

**SENIOR EXECUTIVE SERVICE RETIREMENT:** Edmundo A. **Gonzales**.

**SES CHANGES:** Charles D. **Ebersole**, to Exec. Dir., Air Force Research Lab, AFMC, Wright-Patterson AFB, Ohio ... Stephen R. **Herrera**, to Exec. Dir., AFSOC, Hurlburt Field, Fla. ... Charles W. **Perkins**, to Principal Dep. Dir., Emerging Capability & Prototyping, USD, Acq., Tech., & Log., Washington, D.C. ... Douglas D. **Sanders**, to Dep. Gen. Counsel (Instl., Energy, & Env.), Office of the General Counsel, OSAF, Pentagon ... Donna C. **Senft**, to Chief Scientist, AMC, Scott AFB, Ill. ✪

## By the Numbers

Active B-52Hs slated to be converted to carry only non-nuclear weapons in compliance with the New START arms reduction agreement with Russia.

The first, serial No. 61-1021 of the Reserve’s 307th Bomb Wing at Barksdale AFB, La., began conversion in September. An additional 12 B-52Hs in storage at Davis-Monthan AFB, Ariz., will also be converted to spare them from destruction.

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