

★ screenshot



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*Maj. Matthew Cichowski climbs into the cockpit of an A-10 at Osan AB, South Korea, before a sortie for Beverly Midnight, a weeklong exercise to test Osan airmen's abilities during a heightened state of readiness.*

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### Second Pegasus Takes Flight

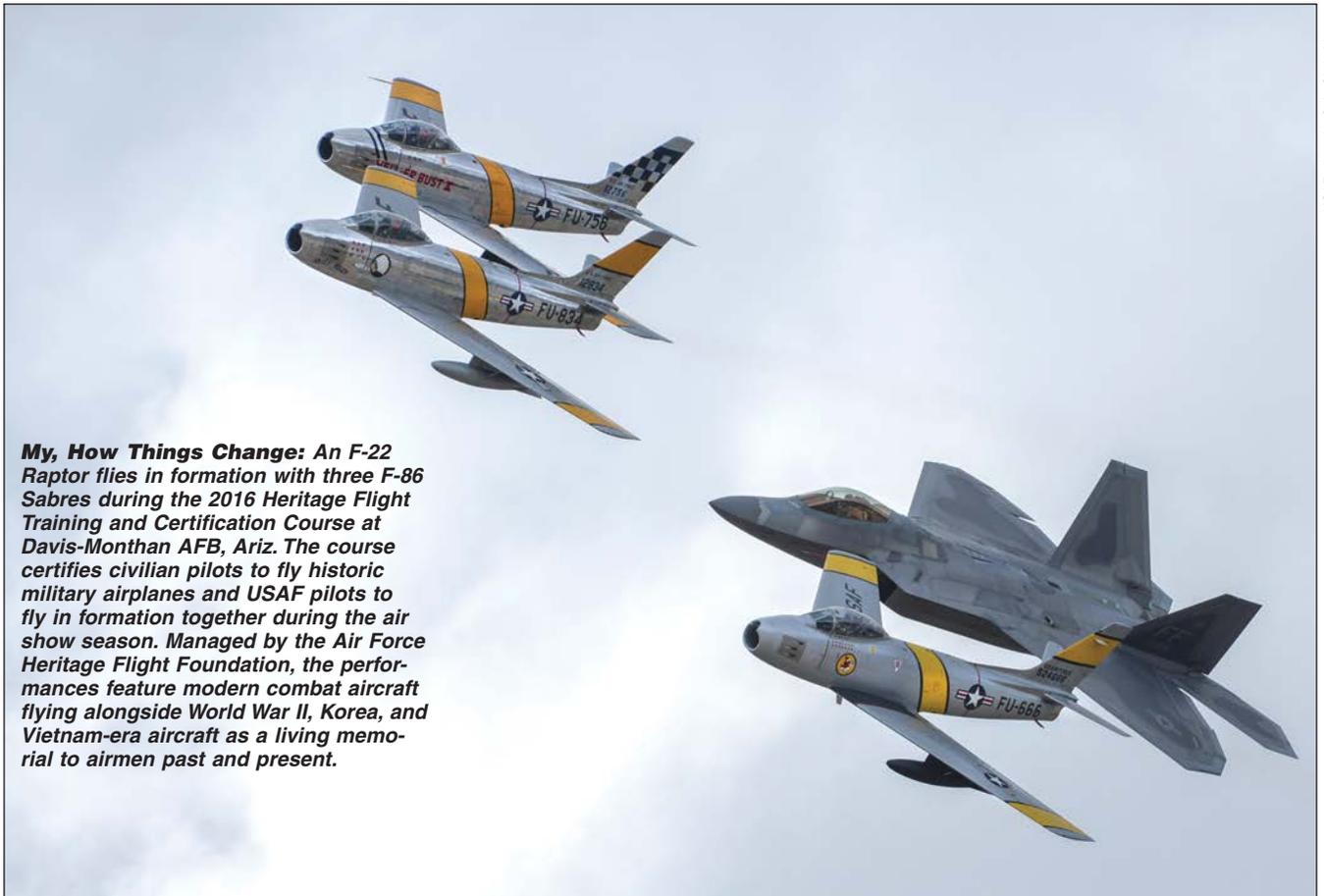
The second KC-46A completed its first flight on March 2, taking off from Paine Field, Wash., and landing near Seattle. “Adding a second tanker to the flight test program is very important as we move into the next phase of testing,” said Col. John Newberry, USAF KC-46 system program manager, in a Boeing news release.

The second KC-46A initially will be used to test mission system avionics and exterior lighting, said Newberry, but it will eventually “share the air refueling effort with the first KC-46,” which already has demonstrated it can refuel a

Navy F/A-18C and a USAF F-16C. Overall, the KC-46 must demonstrate it can refuel 18 different aircraft, states the release. EMD-1, a 767-2C test aircraft, completed its first flight in December 2014 and has flown more than 260 flight test hours as of March 3.

The program’s first KC-46A tanker has completed more than 180 flight test hours since its maiden flight in September 2015.

In another milestone, the Air Force’s first KC-46A on Feb. 13 was refueled for the first time by a KC-10 flying over Washington state, as part of the aircraft’s Milestone C process, according to Boeing.



**My, How Things Change:** An F-22 Raptor flies in formation with three F-86 Sabres during the 2016 Heritage Flight Training and Certification Course at Davis-Monthan AFB, Ariz. The course certifies civilian pilots to fly historic military airplanes and USAF pilots to fly in formation together during the air show season. Managed by the Air Force Heritage Flight Foundation, the performances feature modern combat aircraft flying alongside World War II, Korea, and Vietnam-era aircraft as a living memorial to airmen past and present.

USAF photo by S/A. Chris Massey

### Robinson Tapped For NORAD

Defense Secretary Ashton B. Carter announced March 18 that Gen. Lori J. Robinson will be nominated to serve as the next commander of US Northern Command and North American Aerospace Defense Command. If confirmed, she will become the first woman to head a US combatant command. Robinson, who currently serves as commander of Pacific Air Forces, would replace Adm. Bill Gortney, who has led the command since December 2014. Carter said Robinson “has very deep operational experience” and is now “running air forces in the Pacific, which is a very challenging place for the Air Force and a very intense operational tempo.” In a statement, Carter said Robinson “has served our military with distinction and has been a pioneer and trailblazer from her first days as an officer.”

### Raptors Mean Business

F-22s executed a display of force over South Korea on Feb. 17 in response to recent North Korean provocations, Pacific Air Forces announced.

The four F-22s from JB Elmendorf-

Richardson, Alaska, redeployed to Osan AB, South Korea, from a regular training rotation to Japan. The jets were joined in formation by Republic of Korea Air Force F-15Ks and resident USAF F-16s.

“The combined nature of this flyover highlighted the high level of integration and interoperability between our two air forces, developed through decades of combined training,” noted Osan’s 36th Fighter Squadron commander, Lt. Col. Nicholas Evans.

A B-52 conducted a similar flyby following North Korea’s detonation of a nuclear device in January, and the formation repeated the gesture after the country’s ballistic missile test earlier in the month.

### USAF To Test Integrated Wing

The Air Force will test a new Total Force organizational construct called the Integrated Wing, or I-Wing, later this year, Air Force Secretary Deborah Lee James told the Senate Appropriations Committee’s defense panel on Feb. 10. The I-Wing, to be located at Seymour Johnson AFB, N.C., is “designed to leverage the strengths of each component,

reduce organizational redundancy, and meet mission demands more efficiently,” James said.

The first I-Wing will be the Air Force Reserve’s 916th Air Refueling Wing, but if the organizational construct is effective, the Air Force will “look to apply it more broadly in the future,” James said. The concept evolved from the National Commission on the Structure of the Air Force review and is expected to reach initial operational capability in Fiscal 2017, according to a release.

“We are excited about this opportunity to test our highly successful active association at the 916th with a new Integrated Wing model,” said Lt. Gen. James F. Jackson, the chief of Air Force Reserve. “This pilot program will determine whether additional synergies can be garnered at this unit during the test and whether any lessons learned are repeatable at other locations in the Air Force.”

### The Mechanics of It All

To fill the ranks of F-35 maintainers, the Air Force will draw 1,100 airmen from the A-10, F-16, and C-130 fleets,

the service said in a news release.

The positions will be backfilled by contractor personnel. Lt. Gen. John B. Cooper, the Air Force's deputy chief of staff for logistics, engineering, and force protection, told the House Armed Services Readiness subcommittee on Feb. 12 that the service is 4,000 maintenance airmen short, and the deficit continues to grow because the Air Force is bringing in two F-35s each month, each requiring 20 maintainers.

"We have the force structure that we're not able to divest, and we're growing F-35s," he said, referencing legacy aircraft that are being maintained for the fight against ISIS and which Congress in some cases has barred the Air Force from retiring.

Besides asking for more maintenance billets in the Fiscal 2017 budget, USAF said it will use re-enlistment bonuses to retain maintainers, invite separated personnel to return to Active Duty, and other measures, including "allowing high year of tenure extensions."

### The Rebalance Is Partnerships

The rebalance to the Pacific can be measured in partnerships, Pacific Air Forces Commander Gen. Lori J. Robinson told *Air Force Magazine* at AFA's Air Warfare Symposium in Orlando, Fla., in February. "Sometimes people

## Broncos In and Out of War

A pair of OV-10 Broncos recently returned from a combat proof-of-concept deployment to the US Central Command area of operations. Congress provided funding to "test the use of a small aircraft" for counterinsurgency and close air support, Air Force Special Operations Command boss Lt. Gen. Bradley A. Heithold told *Air Force Magazine* at AFA's Air Warfare Symposium in Orlando, Fla., in February.

The aircraft were upgraded to OV-10G standards with new engines and propellers for earlier counternarcotic operations in Colombia, and the Navy added improved electro-optical/infrared sensors, a modern self-defensive suite, and provisions for precision guided weapons for the trials. US Special Operations Command pilots and support personnel operated the aircraft in theater, and there's been "some discussion" about AFSOC absorbing the aircraft for "joint terminal attack controller training and things like that," said Heithold, but "at this point, I'm not inclined to do that" due to the cost of maintaining such a small fleet. AFSOC has "some utility" for a light counterinsurgency/close air support aircraft for certain missions, but can't truly afford to "keep these capabilities on just because somebody might want it," he said.

The extended user evaluation builds on previous efforts with a modified A-29 Super Tucano in Afghanistan, and the results are due to be briefed back to the Joint Chiefs of Staff later this year.

The OV-10s returned to Pope Field, N.C., and will go "back to NASA" if neither AFSOC nor a joint service partner decides to retain them.

—Aaron M. U. Church

measure [the rebalance] in stuff," she said. "I don't measure it in stuff. I measure it in ... how our partnerships have grown throughout the region."

Robinson said the US presence across the Pacific "enables partnerships" that in turn "allow peace and stability in the region." PACAF has sent F-22 Raptors

from Alaska to Yokota AB, Japan, and then to Okinawa for a training exercise, in addition to sending two Raptors to Singapore for the country's air show.

The command also supports the continuous bomber presence in Guam, sent bombers from Guam to Australia for a training exercise with the Aussies, and



**Top o' the Morning To Ye: TSgt. Benjamin Jonas, a survival, evasion, resistance, and escape specialist, jumps out of a C-130 while it flies over Yokota AB, Japan, during a high-altitude, low-opening airdrop. SERE airmen at Yokota jumped from more than 10,000 feet and parachuted to the base during an offshore rescue exercise. The exercise also included rescue squadron airmen from Kadena AB, Japan.**

USAF photo by SrA. David Owsianka

just completed the multinational Exercise Cope North. “The engagements we have had over time with the different countries has been phenomenal,” she said.

**Right Supplies, Right Place**

Pacific Air Forces is looking for ways to pre-position additional supplies and equipment throughout its area of responsibility so the materiel is ready when needed, PACAF Commander Gen. Lori J. Robinson told *Air Force Magazine* at AFA’s Air Warfare Symposium in Orlando, Fla., in February. While such pre-positioning plans are not nearly as specific as those outlined in the European Reassurance Initiative, the Pacific AOR covers more than half of the globe and the vast majority of the surface area is water.

Robinson said if she looks at the places the US has air bases, and the other places USAF could go but does not have air bases, these represent a small area but still pose difficult logistical problems. It is especially important to have essential supplies in place for humanitarian assistance and disaster relief missions, Robinson said.

PACAF must have “the right supply at the right place for the right reason,” she said.

**Exercise Tests David’s Sling**

The massive Juniper Cobra 2016 exercise, a US-Israel air defense drill, concluded March 3. The drill ended just two days after Israel’s Defense

**Space for New Leadership**

The Air Force will increasingly draw its top leaders from career fields other than pilots, Air Force Chief of Staff Gen. Mark A. Welsh III said in February at AFA’s Air Warfare Symposium in Orlando, Fla. During a panel discussion with most of USAF’s heads of major commands, Welsh said the reason pilots have had the most top leadership jobs in USAF is that they’ve been “at the front end” of the operational force—“which is part of a larger force, a joint force.”

Recently, though, Welsh said, “the space community started having a major impact in that battlespace,” as have the cyber, remotely piloted aircraft, and intelligence communities.

“I think we’re going to find that will change the makeup of Air Force leadership over time,” Welsh said, “because people now understand the full effect ... of everything the Air Force brings to the fight. I think there’s a natural progression already happening.”

Welsh said “the trick” for the Air Force “is making sure that whoever is considered for senior-level positions ... is fully conversant in Air Force operations across the full spectrum of operations.” That means cyber and space operators will have to learn how the aviation world works, and vice versa.

“We now have a space and cyber force that is moving into” senior operating positions, and “they’re going to have to learn what all our other folks do,” perhaps akin to the way the Navy integrates surface, submarine, and aviation officers in a unified leadership corps.

USAF has “a huge education issue facing us,” as the service moves toward “growing general officers who are competent at speaking across that complete range of topics.”

Welsh then asked Air Force Space Command chief Gen. John E. Hyten—and only Hyten—to comment further. Hyten noted that Lt. Gen. John W. “Jay” Raymond, a career missile and space manager, is USAF’s deputy chief of staff for operations.

“He’s a space guy,” Hyten pointed out. “Why is he the director of operations? Because he’s our best operator. It’s really that simple.”

Hyten said that when he started out more than 30 years ago, he never expected that “a space guy” could be the director of operations for USAF. “It’s impossible. Can’t happen,” he said, noting that many junior officers in space and nonrated fields feel the same way now.

“But as you become a multidomain Air Force, it’s essential that we integrate the domains and put the best operators in the best positions,” Hyten asserted.

—John A. Tirpak

USAF photo by SSGT. Jonathan Snyder



Ministry announced it would be enhancing the capabilities of David’s Sling, a system designed to handle Russian- and Iranian-grade missiles, which are notably more advanced than the homemade rockets that Hamas and Hezbollah are known to utilize in engaging Israel, according to the *Washington Post*.

The drill was the first of its kind to include David’s Sling, which is expected to come fully online during 2016, and also the first such drill involving six different air defense systems (Aegis, THAAD, Patriot, Arrow 3, David’s Sling,

**Flash Boom:** A1C Sean Carnes, a 1st Combat Camera Squadron photojournalist, fires an M4 carbine rifle during tactics training for Scorpion Lens 2016. The exercise includes both advanced weapons training and photography and videography training in combat situations.

## The War on Terrorism

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

#### Casualties

As of March 21, 22 Americans had died in Operation Freedom's Sentinel, the mission in Afghanistan, and 15 Americans had died in Operation Inherent Resolve, the mission in Iraq and Syria.

The total includes 35 troops and two Department of Defense civilians. Of these deaths, 14 were killed in action with the enemy while 23 died in noncombat incidents.

There have been 99 troops wounded in action during OFS and five in OIR.

#### Relying on the Raptors

The US continues to send F-22 Raptors in on strike packages throughout Iraq and Syria, Air Forces Central Command boss Lt. Gen. Charles Q. Brown Jr. said Feb. 18. The fifth generation aircraft has constantly been deployed to support Operation Inherent Resolve in Iraq and Syria since the F-22 made its combat debut in September 2014.

The jet has not only conducted air strikes, it has helped to coordinate targets with other aircraft and it repeatedly reroles in flight to assist other missions, such as surveillance and command and control, said Brown. Early in the war, the jet served so well the coalition stopped sending strike packages into certain areas without an F-22 escort, Gen. Herbert J. "Hawk" Carlisle said in September.

#### Winged Answer to Prayer

A tanker crew saved an F-16 pilot from ejecting over ISIS-held territory during a recent strike sortie, officials revealed. The 384th Air Refueling Squadron KC-135 crew—deployed to Al Udeid AB, Qatar, from McConnell AFB, Kan.—broke off refueling a pair of A-10s to respond to the inflight emergency last year. "The lead F-16 came up first and then had a pressure disconnect after about 500 pounds of fuel. We were expecting to offload about

2,500 pounds," 384th ARS pilot Capt. Nathaniel Beer said in a press release Feb. 9.

The F-16 pilot attempted to troubleshoot the problem after a second refueling attempt failed. He deduced that roughly 80 percent of the fighter's onboard fuel was trapped in the wing and external tanks and couldn't be transferred to the F-16's reservoir tanks and onward to the engine. The fighter could only take on 15 minutes of usable fuel at a time, so the KC-135 crew escorted the crippled jet, refueling at intervals all the way to a safe landing back in friendly territory.

#### Chocked Up to Selfless Service

Several maintainers were recognized recently for saving the aircrew of an F-15E Strike Eagle that caught fire shortly after landing at Bagram Airfield, Afghanistan, last year. The aircraft—deployed from Mountain Home AFB, Idaho—suffered a hydraulic leak that ignited on contact with its brakes as it taxied to its parking spot after a Dec. 2, 2015, night sortie.

"As soon as I looked back there was a ball of fire under the jet so I ran over," 380th Expeditionary Aircraft Maintenance Squadron weapons troop SrA. Nash Camden said in a news release. Camden extinguished the initial fire, but it reignited when the pilot used the parking brake in an effort to stop the damaged jet.

When the crew shut the engine down, the aircraft, armed with 3,000 pounds of weaponry, began rolling backward. The maintainers ran ladders to the jet to allow the crew to escape, braving the possibility the jet's tires could explode. The maintainers then repeatedly threw chocks behind the aircraft to slow, and eventually stop, it.

TSgt. Kyle Martin, Camden, SrA. Blake Destasio, and SrA. Matthew Mayo were awarded the Air Force Commendation Medal and Air Force Central Command's ground safety award for their actions in a Feb. 16 ceremony.

and the Iron Dome) in a single simulation, reported the *Jerusalem Post*.

#### A Lightning First

A combat-coded F-35A assigned to Hill AFB, Utah, dropped a GBU-12 laser guided bomb over the Utah Test and Training Range on Feb. 25, marking another first on the way to initial operational capability for the Air Force variant of the strike fighter.

The F-35A had previously only ever dropped weapons in a virtual testing environment. "This is significant because we're building the confidence of our pilots by actually dropping something off the airplane instead of simulating weapon employment," said Lt. Col. George Watkins, commander of the 34th Fighter Squadron, in a news release.

F-35 pilots at Hill will begin flying in the

four-ship formation—the standard combat configuration—as early as March, according to the release.

#### Space Rules of Engagement

The Air Force needs international norms of behavior in space, and the US must define what those are across the world, Air Force Space Command

Commander Gen. John E. Hyten said Feb. 25 at AFA's Air Warfare Symposium in Orlando, Fla.

"We've done that in every other domain we operate in," Hyten said. Those norms are important, he said, because it is hard to develop rules of engagement without international norms. "As we walk into this contested

## By the Numbers

# 277

Total general officers in the Air Force, a number that has largely stayed the same in the past 40 years. The Air Force has 12 four-star generals. In December 2015, the Defense Department had 896 total Active Duty flag officers, 66 less than the maximum allowed by a 2011 Defense Department efficiency initiative.

environment in space, I need to give very specific rules of engagement to the space operators in Air Force Space Command. Everybody that operates in space needs to have rules of engagement.”

Hyten also spoke about the role of the military in space traffic management, saying that he believes the FAA can have a role, but USAF will still have to operate the space surveillance network. “We’re going to continue to do the mission of space situational awareness. We have to do that mission for now and forever,” he said.

**EELV Contract Review**

The Air Force will have three competitive space launches in Fiscal 2017, and is funding the development and integration of a domestically sourced rocket engine,



USAF photo by S/A. Mozer O. Da Cunha

**Longer Live the Legacy Herc**

The Air Force is finally moving ahead with legacy C-130 upgrades and life extensions needed to keep the fleet relevant until it is fully replaced with new C-130J Super Hercules. The service was forced to defer delivery of eight C-130Js over the next three years due to tight budgets.

Lockheed Martin received a \$5.3 billion multiyear contract for additional joint service aircraft, including 72 Super Hercules variants. “The slowing of C-130s [recap] is mostly on the Air Mobility Command side,” Air Force Special Operations Command boss Lt. Gen. Bradley A. Heithold said at AFA’s Air Warfare Symposium in February in Orlando, Fla. “We will modernize the C-130 force, but there are some efforts for modernization that have to be toned down in order for us to maintain readiness and our manpower levels,” he added.

For its part, AFSOC will retain 15 legacy MC-130H Talon IIs “a bit longer” and fast track upgrades to “keep them viable” until they can be replaced.

Avionics obsolescence is a problem fleetwide, and “we have an FAA mandate of 2020 to have everything [communications, navigation, surveillance, air traffic management] compliant,” AMC commander Gen. Carlton D. Everhart II said at the symposium. As a result, the Air Force is relaunching the C-130 Avionics Modernization Program as a two-phase upgrade to bring C-130Hs in compliance, followed by later cockpit enhancements.

“We’ve got the plans and money already programmed” to begin AMP I, he said, and “we’ll meet that mandate.”

AMP II will begin shortly after AMP I is completed in 2020 and notionally includes features such as flat-panel glass cockpit displays, similar to the C-130J, Everhart explained. The C-130 AMP was nixed in 2012 due to sequestration cuts, and after fits and starts, the Air Force opted to pursue the scaled-back Viability and Airspace Access Program to meet the basic mandate, which is now being superseded by the revised AMP.

Structural fatigue is the second key limiting factor, notably for legacy C-130 wing structures. AMC is systematically replacing its fleet’s center wing boxes, while AFSOC is accelerating depot-level upgrades. “They’re getting the aircraft in there, putting new outer wings on them, and getting us back those Talon IIs,” said Heithold.

C-130Hs are also slated for engine upgrades to improve their operating efficiency, starting with Air National Guard aircraft. Rolls Royce delivered the first T56 series 3.5 upgrade kit in February, and “we’re going to get these airplanes up to speed,” said Everhart. Given the cost of operating large fleets of older aircraft, “fuel efficiency is big to me,” he said.

—Aaron M. U. Church

**Down by the Levee:** Airmen from Barksdale AFB, La., and members of the Army Corps of Engineers work together with local citizens to fill sandbags and build a protective barrier over a levee in Bossier City, La. Heavy rains raised the water level in the levee, surrounding bayous, and feeding rivers to record levels and forced the evacuation of thousands of Bossier City residents. At least five people have died so far in the heavy flooding across Louisiana, Mississippi, Oklahoma, and Texas. President Obama has declared several a major disaster areas.

the service’s deputy undersecretary for space said Feb. 10.

The Fiscal 2017 budget proposal fully funds the Evolved Expendable Launch Vehicle program, Winston A. Beauchamp said in a Pentagon roundtable.

The request also includes \$296 million for “further continuation work toward launch system solutions,” after USAF was restricted in the 2016 National Defense Authorization Act from pursuing anything other than rocket propulsion system work, said Maj. Gen. Roger W. Teague, the Air Force’s director of space programs.

A review conducted by USAF and the Defense Department general counsel found that it is possible to terminate United Launch Alliance’s \$800-million-a-year launch capability contract, but it would be expensive, Secretary Deborah Lee James said. James ordered the service’s general counsel to conduct the review after ULA—a Lockheed Martin and Boeing consortium—refused to bid on the GPS III contract, which was supposed to be the first competitive national security space launch. ★