



**FLORIDA WEST COAST
CHAPTER
AIR & SPACE FORCES
ASSOCIATION**

NEWSLETTER

Vol. 12, Issue 2 Apr – Jun 2023

IN THIS ISSUE...

- Pg. 1 President's Posts**
- Pg. 2 Memorial Day Parade**
- Pg. 2 Chapter Grows**
- Pg. 2 STEM Awards**
- Pg. 3 The Able Archers**
- Pg. 4 Ukraine: One Year Later**
- Pg. 9 AF Trivia**
- Pg. 9 AF 2024 Budget Items**
- Pg. 10 Stealth Tankers**
- Pg. 11 Blended Wing Tankers**
- Pg. 13 2nd Quarter Factoid**
- Pg. 13 AF Trivia Answers**

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PRESIDENT'S POSTS



**President
Scott Gray**

We had a busy 1st Quarter to say the least. Our Ukraine: One Year Later, series was another hit. Partnering with USF Sarasota Manatee Campus and the Global Interdependence Center we were able to have an incredible 4 part series that focused on the war, national and international repercussions and the financial impacts to world food, oil, gas, rare earth minerals, stocks and bonds.

This is a regional war that has international implications. All Military speakers to include Gen Phil Breedlove, former SACEUR, predict we will be here next year as they see no immediate end in sight.

We also hosted Brain Morra on a Zoom meeting where he discussed his book "THE ABLE ARCHERS." This incredible book details how close we came to nuclear war with the Soviet Union in 1983. Brain has captured a piece of history and has written an incredible novel that tells this story of near doom. If you have not read the book, I encourage you to do so. I hope to see it on the big screen in the future!

Welcome to our 238 new members! I want to try and energize the Club and hope you will be an integral part of our future! We are all volunteers and we are always looking for some help. Also, if you have an interesting story to tell or know someone who does... Speak Up! We would love to put you on a Zoom meeting to share your piece of history!

Mike Richardson has done an amazing job of capturing the highlights in this edition of our Newsletter!

Enjoy!

**And, don't forget AFA'S
Wounded Airman Program!**



CHAPTER NEWS

FLASH

MEMORIAL DAY PARADE

Once again, Dave Downer has volunteered to head up the chapter's entry in Sarasota's Memorial Day Parade on Monday, May 29th. I'm going to join him and he says he still has seats available in his new van if you would like to join us. Even better, you could add another vehicle to our entry if you have one you would like to show off.

*If you are interested, call Dave at **941-926-7815 (H)** or **941-544-3517 (M)** to get the details.*

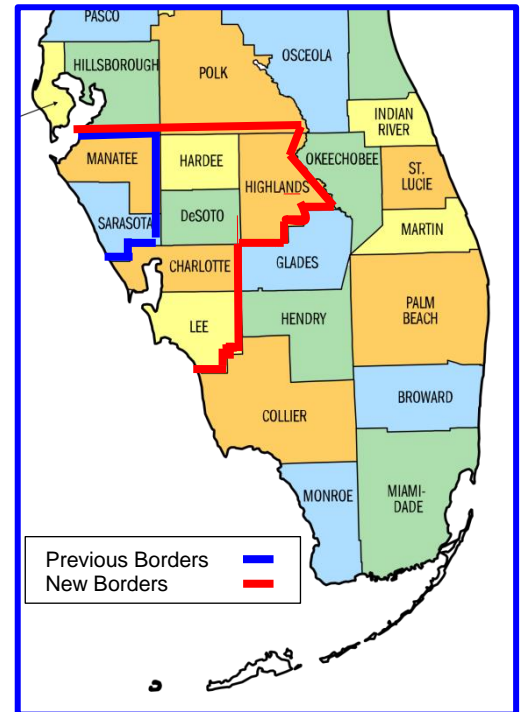
Mike

CHAPTER GROWS BY 238 MEMBERS

On February 15, 2023, AFA National added 238 new members to the Florida West Coast Chapter. This was part of an effort to affiliate every AFA member who was "orphaned" when their local chapter closed with a currently functioning chapter. The additional members brought the chapter's total 517.

As the graphic shows, the Florida West Coast chapter expanded from covering two coastal counties – Sarasota and Manatee – to representing seven counties in southwest and central Florida. The additions include two more coastal counties – Charlotte and Lee -- and three inland counties – Highlands, Hardee and DeSoto. The majority of the new members are located in the Ft. Meyers, Punta Gorda and Cape Coral area.

We want to extend a warm welcome to all of our new members and extend an invitation to become involved in the chapter's activities. Newcomers will be integrated into the chapter's e-mail roster and will begin receiving our quarterly newsletters (like this one) and any other announcements sent to the chapter membership. *(Unfortunately, 75 of the new members, nearly 19%, do not have an e-mail address. That makes it hard to include them.)*



CHAPTER PRESENTS STEM AWARDS

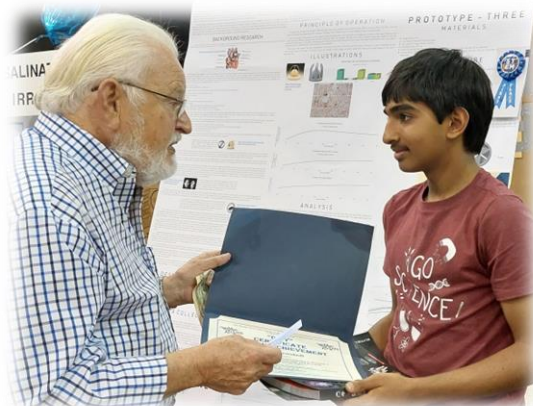
Again this year, the chapter singled out four student projects for recognition in our annual Science, Technology, Engineering and Mathematics (STEM) awards program. As in previous years, we recognized two students – one high school student and one middle school student – from each of our two school districts – Sarasota and Manatee. Our awards typically go to projects that are associated with aeronautics or space issues or with technologies that have applications in those fields, i.e. solar panels, accumulative (3D) manufacturing, etc.



Each winning student received a “Dr. Y Certificate of STEM Achievement”, SPACE -- a visual catalog of the universe published by Scholastic Inc, an eighteen month Space Calendar, a AFA Medallion and a \$50.00 cash award. (Dr. Y is **Dr. Michael Yarymovych**, a noted astronautical engineer and chapter member who served as Chief Scientist of the Air Force from 1973 – 1975.)

The Sarasota School District high school winner was **Ethan Wasserman** from Venice High School. His project was titled “Don’t Drag Me Down”. Wasserman also received an Air Force Certificate of Achievement for an Outstanding Science or Engineering Fair Project that was signed by the Commander of the Air Force Research Laboratory.

His Sarasota Middle School counterpart was **Aadi Bhensdadia** an 8th grade student at Pine View School. His project – which was clearly outstanding – dealt with “Utilizing 3D Additive Manufacturing to Develop a Bio-Compatible, Customizable and Durable Mechanical Aortic Valve”.



Aerospace Education Chair Mike Richardson presents the AFA STEM award to Aadi Bhensdadia

In Manatee County, the Middle School Award went to **Colt Meyer** for his project “Does Size Matter?” For his project he tested the flight characteristics of different sized paper airplanes. Meyer attends Dr. Mona Jain Middle School.

Angel Javier Aurand’s project “Metal Defense” won our High School Award. For his project he tested what coatings best protected an aluminum surface. He attends Southeast High School.

This year the chapter also named a STEM Teacher of the Year (TOY). She is **Mrs. Jennifer Kreisel** who teaches sixth grade Science at Martha B. King Middle School in Bradenton. In recognition of this award, Mrs. Kreisel will receive a \$250 check, an AFA award certificate, an AFA padfolio, a window decal, and a TOY lapel pin.

CHAPTER MEMBER AUTHORS ARTICLE FOR THE AIR AND SPACE FORCES MAGAZINE



The December 2022 issue of the Air & Space Forces Magazine featured an article titled “The Near Nuclear War of 1983” which was written by chapter member Brian J. Morra (at left). It provides an insight to the pivotal role the Air Force played in the events featured in his book, “The Able Archers”. If you would like to read the article you can access it at the following web address:

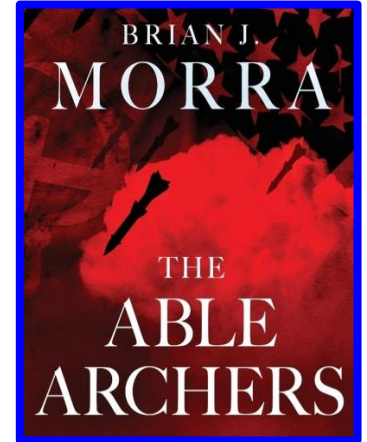
<https://www.airandspaceforces.com/article/the-near-nuclear-war-of-1983/>

Morra is a former USAF intelligence officer and a retired senior aerospace executive. He helped lead the American intelligence team in Japan that uncovered the true story behind the Soviet Union's shoot down of Korean Airlines flight 007 in September 1983. He also served on the Air Staff at the Pentagon while on active duty. As an aerospace executive he worked on many important national security programs. Morra earned a BA from William and Mary, an MPA from the University of Oklahoma, an MA in National Security Studies from Georgetown University, and completed the Advanced Management Program at Harvard Business School.

His book, "The Able Archers" is a historical novel which was published by Koehler Books in 2022. It dramatizes the real events of the 1983 Soviet war scare. The Able Archers has been optioned by Legendary Entertainment to create feature film or television series. An audio book was recently released by Blackstone Publishing.

You can go to Amazon or to Bryan's website -- www.brianjmorra.com -- to order The Able Archers. It's available in hardcover, e-book, and audiobook.

Brian is anticipating "The Able Archers" will be the first of a seven book series that will follow his main character -- Kevin Cattani -- throughout historical events occurring over the past 60 years.



Reviews include those by Former Secretary of Defense William S. Cohen: *"Brian J. Morra is the master craftsman. The Able Archers is brilliant."* and Robert M. Gates, Secretary of Defense 2006-2011: *"... a powerful reminder of the value of human judgment - and the continuing peril posed by nuclear-armed powers."* Brian grew up in Virginia and is married to Tracy, who served as his "outstanding" story editor. They split their time between homes in Virginia and Florida. When Brian isn't writing, he is a corporate board member, enjoys cycling, playing guitar and piano, and visiting with his two grandchildren.

MORRA HOSTS ZOOM CHAPTER MEETING

Days before his return to his summer time home in Virginia, on April 26th, Morra conducted a ZOOM presentation about "The Able Archers" for the chapter members.



UKRAINE: ONE YEAR LATER:

This year's series of programs about the Ukraine – Russian war titled "Ukraine: One Year Later" kicked off on February 16 from the University of South Florida's Selby Auditorium on the Sarasota-Manatee campus. The series was designed to examine the impacts of the war blending the finance and economic issues with the military and defense components. and featured a wide range of expert speakers from many disciplines. This year's programs were presented in a four session series which extended over six days of presentations running from mid-February to mid-April.

As in the previous year, the program was cosponsored by the chapter, USF, the Global Independence Center (GCI), RiskBridge Advisors and Cumberland Advisors, LLC. **Chapter President Scott Gray** (above left) served as a moderator.

The first session on **February 16th and 17th** dealt with “Monetary Policy and Market Implications”. On the first day — **Feb 16th** --, the keynote speaker was **Loretta Mester**, president and CEO of the Federal Reserve Bank of Cleveland (at right). After Mester’s presentation, there were panels dealing with The Effects of the War on Monetary Policy, Investing and the U.S. Defense Budget. Panelists included:



- **Matt McAleer**, executive vice president and director of equity strategies at Cumberland Advisors
- **William Kennedy**, board chair at the Global Interdependence Center, and chief investment officer at RiskBridge Advisors LLC
- **Byron Callan**, managing director at Capital Alpha Partners, LLC
- **Bill Hoagland**, former staff director of the Senate Budget Committee, and senior vice president of the Bipartisan Policy Center
- **Lisa McIntire Shaw** (moderator), managing partner of Cygnus Asset Management and vice chair of programs for the Global Interdependence Center



The second day, the keynote speaker was retired Air Force **Gen. Philip Breedlove**, former Supreme Allied Commander for Europe (at left), who provided an update on the military situation in Ukraine.

Panel discussions on the roles of the financial system and central banks during wartime followed. Panelists included:

- **Danielle DiMartino Booth**, CEO and chief strategist at Quill Intelligence LLC
- **David Berson**, chief U.S. economist at Cumberland Advisors
- **Maryanne Waldman** (moderator), first vice president and financial advisor at RBC Wealth Management, and board member at the Global Interdependence Center
- **Alfonso Prat-Gay**, former President of Central Bank of Argentina and Global Interdependence Center College of Central Bankers fellow
- **Zdenek Tuma**, former governor of Czech National Bank and Global Interdependence Center College of Central Bankers fellow
- **Kathleen Stephansen**, chair emeritus of the Global Interdependence Center and senior economist for Haver Analytics and Trustee of EQAT Trust Funds
-

The second session, entitled “The Tools of War and the Effects of War on Health,” was held on **March 9th**. It featured retired Air Force **Lt. Gen. David Deptula** (at right), a former deputy chief of staff for intelligence, surveillance and reconnaissance, who spoke about drones and emerging technologies. Deptula currently serves as the Air and Space Forces Association’s Dean of the Mitchell Institute for Aerospace Power Studies. Following his presentation, Deptula participated in a panel discussion moderated by President Gray which focused on the use of drones, artificial intelligence and other emerging technologies in warfare. In addition to Deptula, the panel included:



- **Brian Barnier**, head of analytics at ValueBridge Advisors
- **Army Col. Brendan Dunne**, global analytics platform director for U.S. Special Operations Command
- **Mark Grzegorzewski**, senior academic instructor at the Joint Special Operations University

A second panel discussed the effects of the war on health, and the role of the U.S. military in delivering humanitarian assistance. The panelists included:

- **Jody L. McBrien**, a professor in the School of Interdisciplinary Studies at USF Sarasota-Manatee
- **Bob Delaney**, author of “Heroes are Human: Lessons in Resilience, Courage and Wisdom from the COVID Front Lines.”

The day’s presentations concluded with a presentation on the U.S. military and humanitarian relief by **Gen. Scott Gray**, Chapter President and Chairman, President and CEO of the Combat Wounded Veteran Challenge.

The third group of presentations was held on **March 23 and 24**. The overarching topic was to be “Food, Famine and Energy plus the Effects of the War on Central Bank Policy and Financial Markets”. However, reflecting the ongoing fluidity of the Russo/Ukraine conflict, the agenda was revised a bit to focus on Sanctions on Russian Trade, Oil & Energy, Spillover Effects and the ongoing Banking Crisis – both here in America and also in Europe.

The first discussion on the 23rd dealt with “Reactions in World Bond Markets and U.S. Bond Markets.” It was moderated by **Alison Gardner**, Founder & CEO at Sage Advisors LLC. She also serves with MassMutual, Metro NY as Senior Vice President, Head of Wealth Management. Other panel members included:

- **Michael Lee**, Founder of Michael Lee Strategy.
- **Peter Tchir** – Head of Macro Strategy at Academy Securities
- **Patricia Healy** – CFA, Senior Vice President of Research and Portfolio Manager, Cumberland Advisors

The second panel discussed “Reactions in the World Stock Markets in the U.S., Europe, Russia and other Countries”. **Thomas Smith**, Ph.D., Associate Professor and Grant Thornton Fellow at the University of South Florida served as Moderator. The other panel members were:

- **Doug Ramsey**, CIO, The Leuthold Group, LLC
- **Jeremy Schwartz**, Global Chief Investment Officer, WisdomTree Asset Management
- **Todd Engelhardt**, Regional Director of Investments, Cumberland Advisors

The third presentation dealt with “Is Globalization in Retreat? Implications for the US Economy” The keynote speaker was **Jay Bryson**, Managing Director and Chief Economist, Wells Fargo. **Kiyoung Chang**, Ph.D., Professor, Muma College of Business, University of South Florida – Sarasota–Manatee served as moderator. They were followed by **Elina Ribakova** (at right) -- Deputy Chief Economist for the Institute of International Finance which is based in Washington, D.C. She spoke on “Sanctions and Their Impact on Russian Trade”. She focused on Russian Oil, Critical Technology and Foreign “Know How”.



The day's final presentation dealt with "A Global Perspective" and featured **William Kennedy**, Chairman of the Board, Global Interdependence Center and CIO of RiskBridge Advisors LLC. The session was moderated by **David Kotok**, Chairman and CIO of Cumberland Advisors.



The first discussion panel on the 24th focused on "Food and Famine". **William Kennedy**, GIC Board Chair and CEO, RiskBridge Advisors, LLC (at left) served as moderator for this discussion. Other panelists included:

- **Seth Meyer, Ph.D.**, Chief Economist, USDA
- **Brandon Zick, CIO**, Ceres Partners, LLC
- **John Newton, Ph.D.**, Chief Economist, Committee on Agriculture, United States Senate

That discussion was followed by the Oil and Gas Panel. Moderator for this discussion was **Todd Engelhardt**, Regional Director of Investments, Cumberland Advisors. Other panelists included:

- **James Slutz**, Director of Study Operations, National Petroleum Council
- **Christine Tezak**, Managing Director – Research, ClearView Energy Partners, LLC
- **Sam Rines**, Managing Director, CORBU LLC, an investment management firm

That group was followed by a panel that addressed "How do Monetary Policy Makers Deal with Spillover Effects from Food, Energy, and Geopolitical (War?) - Shocks that are Beyond the Policy Makers' Control ?" This discussion was moderated by **Michael McKee**, International Economics and Policy Correspondent for Bloomberg Radio and TV. Panel members were:

- **Catherine L. Mann, Ph.D.**, member of the Monetary Policy Committee of the Bank of England.
- **Katarzyna M. Zajdel-Kurowska**, Former member of the Management Board of the National Bank of Poland and Fellow of GIC College of Central Bankers.

The last presentation of the day dealt with "Bank Panic and Lessons from History" and was presented by **Joseph Mason, Ph.D.**, Professor of Finance at Louisiana State University and Senior Fellow at the University of Pennsylvania's Wharton School and an Academic Affiliate at the BVA Group. **David Kotok**, Chairman and CIO of Cumberland Advisors. moderated the session.

The final group of presentations in this year's series was held on **April 20 and 21**. The overarching theme for the two days was "Cryptocurrencies and the Future of Global Finance."

[The first panel focused on "Cryptocurrency in Investments, Financial Markets and Regulations". The discussion was moderated by **Dr. Eddie Sanchez Jr.**, Assistant Professor of Instruction, Muma College of Business, USF Sarasota-Manatee campus. The panel was composed of:

- **Katie Stockton**, Founder and Managing Partner, Fairlead Strategies LLC
- **Dave Nadig**, Financial Futurist, VettaFi
- **Brent Donnelly, President, Spectra Markets**
- **Ian Katz**, Managing Director, Capital Alpha Partners

The day's second session dealt with "Cryptocurrency Outside the U.S." Panelists included:

- **Nicholas Colas**, Co-Founder, DataTrek Research
- **Jessica Rabe**, Co-Founder, DataTrek Research
- **Paul O'Brien**, Ph.D., Former CIO, Abu Dhabi Investment Authority
- **Michael Drury**, Chief Economist, McVean Trading & Investments

The next presentation was a Special Report on: "Fiat Currencies during the last year and in response to the Russian Invasion" presented by **Brent Donnelly**, President, Spectra Markets. **David R. Kotok**, Chairman and CIO, Cumberland Advisors served as moderator.



Next **David Adler**, Partner at McCarter & English, LLP discussed "FTX Aftermath and Bankruptcy Laws". **Jayne LaVecchia**, Partner, McCarter & English served as moderator.

The last session of the day dealt with "Cryptocurrency and Central Banks". Introductory remarks were made by **Dr. Joni L. Jones**, Campus Dean and Associate Professor, Muma College of Business, at USF Sarasota-Manatee campus while the keynote speaker was **Dr. Christopher Waller** (at left) Governor, Federal Reserve System. **David R. Kotok**, Chairman and CIO, Cumberland Advisors served as moderator.

General (Retired) **Herbert J. "Hawk" Carlisle**, former Commander, Air Combat Command at Langley Air Force Base, Virginia was scheduled to be the morning's keynote speaker on the 25th however he had to cancel at the last minute. Consequently, the program continued with the scheduled panel discussion about China's Economics. **Alejandra Grindal**, Chief Economist for the Ned Davis Research Group served as moderator. Panel members were:

- **Leland R. Miller**, CEO, China Beige Book International
- **Michael Drury**, Chief Economist, McVean Trading & Investments, LLC
- **Malcom Riddell**, Founder, CHINA Debate & Editor, CHINAMacroReporter, Associate in Research, Harvard Fairbank Center for Chinese Studies

That discussion was followed by a special report "Geopolitical View – Focus on China" by **Jonathan Ward, Ph.D.**, Founder and President, Atlas Organization. The presentation was moderated by **Kelly Caldwell**, CEO, President and Senior Trust Officer, Caldwell Trust Company.



Nayantara Hensel, Ph.D., Chief Economist and Senior Advisor at Seaborne Defense followed with a report: "China, Russia and Ukraine: Critical Minerals and Global Supply Chains". Her presentation was moderated by **David R. Kotok**, Chairman and CIO, Cumberland Advisors.

The series' final speaker was **Kevin Rudd, Ph.D., Australia's Ambassador to the United States** (At left). He spoke on the "Outlook on Asia, Global Risk and Policy". He was introduced by **David R. Kotok**, Chairman and CIO of Cumberland Advisors.

AIR FORCE TRIVIA

TRAINERS

Your challenge is to match these pictures of Air Force training aircraft with their manufacturer and nomenclature in the list below.

Answers are on page 8.



Beechcraft T-1A Jayhawk Boeing T-34 "Gator" Cessna T-37 "Tweet" Cessna T-41 Mescalero
Convair T-29 Flying Classroom Lockheed T-33 Shooting Star/T-Bird North American T-28 Trojan
North American T-6 Texan Northrop T-38 Talon

AIR FORCE NEWS



Photo by Aaron Chen
Air & Space Forces Magazine

AIR FORCE WILL ACCELERATE JET PURCHASES

**Kendall Reveals New Details on Air Force Plans:
1,000 CCAs, 200 NGAD Fighters**

Edited from a March 7, 2023 article by John A. Tirpak

AURORA, Colo.—The Air Force will field 200 Next-Generation Air Dominance (NGAD) aircraft and notionally 1,000 Collaborative Combat Aircraft (CCA), and will request funds in the fiscal 2024 budget to develop these new systems. This announcement was made by Secretary of the Air Force Frank Kendall (at left) in his keynote address at the AFA Warfare Symposium on March 7.

The next generation of air dominance will include both the Next-Generation Air Dominance (NGAD) fighter platform “and the introduction of uncrewed collaborative aircraft to provide affordable mass and dramatically increased cost effectiveness,” Kendall said.

The “notional” 1,000 CCA figure was derived from “an assumed two CCAs for 200 NGAD platforms, and an additional two for each of 300 F-35s,” Kendall said. He cautioned that “this isn’t an inventory objective, but a planning assumption to use for analysis of things such as basic organizational structures, training and range requirements, and sustainment concepts.”

Air Force Chief of Staff Gen. Charles Q. Brown, Jr added that, “This is a new thing. It’s a ... way of operating we haven’t actually had an experience with, so we’ve got a lot to learn and that’s going to take some experimentation...some testing and some careful thought. So we put that on the table as a way to structure that planning, around what we think is a reasonable first tranche and a reasonable ratio. And we’ll learn as we go.”

The CCAs will be pursued “competitively,” he told reporters. “There are a lot of candidates. ... People are out there thinking hard about this already, based on what we’ve already put out.” “I want to push the technology without pushing it too far.

Affordability for force-building is one of the drivers behind the push for CCAs, Kendall said—if the Air Force only buys F-35s and F-15EXs, then “we have an unaffordable Air Force.” The goal for CCAs will be to cost “some fraction” of the cost of an F-35. “We’re going to design around that,” he said.



USAF SHAKES UP ITS PLAN FOR TANKERS: FEWER ‘TRADITIONAL’ REFUELERS, FOCUS ON STEALTH FUTURE

Taken from a March 6, 2023 article in Air and Space Forces Daily Report by [John A. Tirpak](#)

AURORA, Colo.—The Air Force is dumping its decade-old strategy of a three-phase tanker recapitalization plan, replacing it with a strategy that will yield about 75 traditional tankers beyond the current run of the KC-46 and then focus on a future, survivable tanker, Air Force acquisition executive Andrew Hunter said March 6.

“We have come to the determination that the kind of KC-X, -Y, -Z strategy that was established in the 2009-2010 timeframe is no longer fit for ... meeting the air refueling needs of the joint force in the 2030s and beyond,” Hunter told reporters at the AFA Warfare Symposium.

The [new Next Generation Air-refueling System](#), or NGAS, is “focused on ensuring” that USAF tankers in the mid-2030s and later “will be able to survive and operate in a much more contested environment than the tankers of the past or the tankers that are in our current fleet,” which include the KC-46, Hunter said.



Through analysis done as part of Air Force Secretary Frank Kendall's operational imperatives, Hunter said there are too many "threats that are posed by potential adversaries to high-value aircraft, including tankers," and USAF needs an approach that addresses those threats while still meeting its obligations to refuel the joint force "in all of the critical operations that are required for high intensity conflict."

Buying 75 further "traditional" tankers beyond the 179 KC-46s, USAF can stick to its schedule of retiring the KC-135 and KC-10, Hunter explained. After that, it will pursue a competitive program for a new airplane, but he indicated the KC-46 offers the best opportunity to "dovetail" with current production and not have a break in tanker recapitalization. The KC-46 has been a fixed-price contract that Boeing knowingly underbid. So far, the company has [taken more than \\$6 billion in losses](#) on the program, costs that USAF might have had to bear otherwise.

BLENDED WING PROPOSAL FOR NEW TANKER

Edited from an Aviation and Space Technology article published
in the April 24 – May 7, 2023 issue.

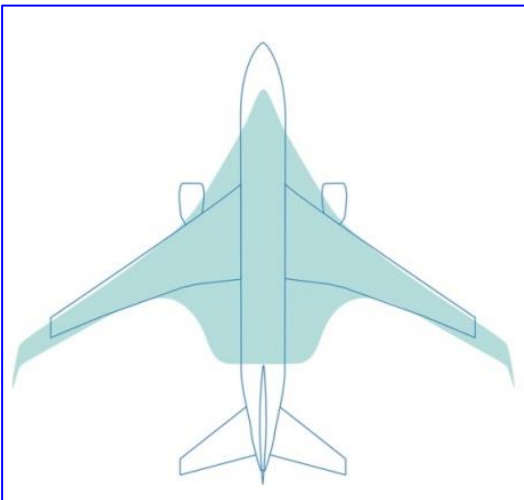
JetZero, a California startup, has emerged to unveil a multi-mission design targeting the midsize commercial and military tanker-transport markets. First appearing as a concept in the late 1980s and studied on and off ever since, the blended wing body (BWB) has failed to gain traction despite promising performance projections.. Now, JetZero says, a yawning market gap for a sustainable midsize airliner and the U.S. Air Force's simultaneous quest for a similarly sized advanced tanker-transport means the stars are aligned for a BWB as never before.

The BWB concept blends the airframe structure and aerodynamics to reduce weight and drag while enabling the fuselage to contribute to lift. Also known as a hybrid wing body, the configuration is usually tailless and more efficient than a conventional tube-and-wing design because of its reduced wetted area, friction drag and lower form drag. BWBs are also inherently quieter than current airliners because the airframe shields most of the noise from engines mounted on the upper surface.



JetZero's Z-5 design, the first in a proposed family of Z-series aircraft, is optimized for a range of at least 5,000 nm and up to 250 passengers. The all-composite aircraft has a wide single deck and high-aspect-ratio wing. Although this extends the wingspan to close to 200 ft., similar to an Airbus A330, the body length is shorter than a Boeing 767. Despite the overall size, JetZero says the midmarket aircraft "will be about half the weight and require half the power of aircraft it replaces, such as the 767."

But the program that could provide a near-term springboard for development of the Z-5 is the U.S. Defense Department's plan for a BWB demonstrator that is to be evaluated as a future tanker and airlifter. The initial goal is to develop the digital design of a prototype, as well as perform initial airworthiness and test planning for a demonstrator, culminating in the "manufacture of a prototype large-scale aircraft for certification and testing," the Air Force says.



Because of its fuel efficiency, the Z-5 can carry up to twice the fuel of the Boeing KC-46 tanker on a maximum-range mission, JetZero says. The aircraft also is designed to use current airport infrastructure. The Air Force is due to select a winning proposal by midyear and plans to begin demonstrator flights in 2027.

The Air Force released its initial solicitation last year, stating that the BWB "is one of the single most impactful technology opportunities for future U.S. Air Force aircraft, both in terms of capability improvement and greenhouse gas emissions reduction." Converting the cargo, tanker and bomber fleets to a BWB design would reduce annual fuel costs by \$1 billion compared with kerosene at current prices, it added.

One of the issues with the BWB proposed by JetZero is its stealth characteristics – or lack there of. While the body shape should provide a basic stealth capability, the high mounted engines introduce two issues: radar reflectivity and an undisturbed exhaust plume; The under wing pods for the probe and drogue hoses present another radar reflective surface. However I anticipate these can be addressed in future design iterations. However, the tall winglets also provide an additional radar reflective surface and elimination of those winglets will decrease the operating efficiency of the aircraft – increasing its fuel requirements and reducing its operating range.

Mike

JACKIE COCHRAN BREAKS SOUND BARRIER

This article draws heavily from Wikipedia.

On May 18, 1953, at Edwards Air Force, **Lt Col Jackie Cochran**, USAF Reserve, became the first woman to break the sound barrier. Cochran took off from Rogers Dry Lake, California, accompanied by Air Force **Captain Charles "Chuck" Yeager**, who six years earlier had been the first man to break the sound barrier. In an F-86 Sabre plane, borrowed from the Royal Canadian Air Force, Cochran surpassed Mach 1. Over the course of her flight, she averaged speeds of 652.337 miles per hour.



Though she was approaching 30 when she began to fly, she quickly made up for lost time, earning her license in 1932, after only three weeks of lessons. Cochran went on to become not only one of the country's most skilled female pilots, but one of the most deft and agile pilots of all time. Today, she still holds more speed and distance records than any pilot—male or female; dead or alive.

Cochran joined the U.S. Air Force Reserve as a lieutenant colonel in 1948. She was promoted to colonel in 1969 and retired in 1970. And she didn't stop there. Cochran went on to break more speed records well into her 50s. "She was as good as the guys were, and being a woman, that didn't make any difference." Chuck Yeager has said. During her career in the Air Force Reserve, she received three awards of the Distinguished Flying Cross for various achievements from 1947 to 1964.

Cochran's achievements -- include being the first woman to reach Mach 2, the first woman to take off from an aircraft carrier, the first woman to make a blind instrument landing, and the first woman to be inducted into the Aviation Hall of Fame at the Smithsonian's Air and Space Museum. Cochran passed away in 1980.



AIR FORCE TRIVIA ANSWERS

1. North American T-28 Trojan
2. Northrop T-38 Talon
3. North American T-6 Texan
4. Convair T-29 Flying Classroom
5. Beechcraft T-1A Jayhawk
6. Cessna T-41 Mescalero
7. Lockheed T-33 Shooting Star/T-Bird
8. Boeing T-34 "Gator"
9. Cessna T-37 "Tweet"



AIR & SPACE FORCES ASSOCIATION



AFA Mission

Our mission is to promote dominant U.S. Air & Space Forces as the foundation of a strong National Defense; to honor and support our Airmen, Guardians, and their Families; and to remember and respect our enduring Heritage.

To accomplish this, we:

- **EDUCATE** the public on the critical need for unrivaled aerospace power and promote aerospace and STEM education for a technically superior and professional workforce to ensure national security;
- **ADVOCATE** and promote aerospace power to favorably shape policy and resourcing decisions to guarantee the strongest aerospace forces in the world;
- **SUPPORT** Airmen, Guardians, and the families of the Total Air Force and Space Force, including Active Duty, National Guard, Reserve, civilians, families, and members of the Civil Air Patrol.

THE FLORIDA WEST COAST CHAPTER OF THE AIR FORCE ASSOCIATION IS INCORPORATED IN THE STATE OF FLORIDA AS A QUALIFIED 501(C)(3) CHARITABLE ORGANIZATION. OUR REGISTRATION NUMBER IS CH48270.

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