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THE AVIATION MAGAZINE is published six times a year, by a Team of Volunteers interested in aviation. We are devoted to cover a wide range of aviation events ranging from air shows, air base visits, military exercises, civilian spotting, pilot and veteran interviews all with exceptional photography. THE AVIATION MAGAZINE is a leader in the emagazine format since 2009, bringing exclusive and fascinating reports to our global aviation enthusiasts digitally.

**Please note:** we do not accept any unsolicited articles or images for publication.

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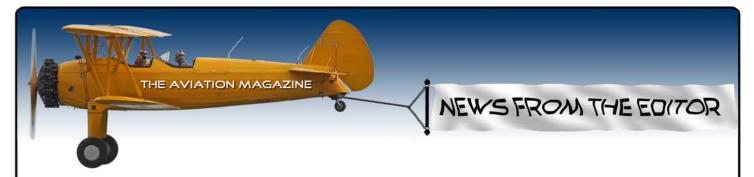
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Welcome to our 58th edition of **THE AVIATION MAGAZINE** which is my last edition as the editor and also on the Joomag reader platform. While we liked the Joomag platform, unfortunately their pricing made it very uneconomical for us to continue with them. I am passing these duties and the layout design to our managing editor Ralf, who will continue in my absence with the 59th issue on the Issuu reader platform. Our new Managing Editor can be contacted at editor@theaviationmagazine.com

To ease our transition to Issuu, we uploaded several back issues of our magazine, and hopefully as time permits, we will upload all of our issues for your convenience, feel free to check the out via this link: <a href="https://issuu.com/theaviationmagazine">https://issuu.com/theaviationmagazine</a>

I will stay part of **THE AVIATION MAGAZINE** to oversee that the quality will remain constant and once in a while may contribute an article or two. I decided to spend more time with my aviation profiles, as they require less interaction and without any time constrain. It has been pleasure to produce since 2009, one of the first internet based aviation magazines and hopefully it will continue for several more years.



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NAS Fallon is located in the Lahontan Valley of west-central Nevada in the remnants of an ancient lakebed. Due to the arid climate, much of the local area around NAS Fallon is irrigated farmland. It is home of the Naval Fighter Weapons School (TOPGUN), the United States Navy's premier air-to-air and air-to-ground training facility, the Naval Aviation Warfighting Development Center (NAWDC), which includes TOPGUN, the Carrier Airborne Early Warning Weapons School (CAEWWS) and the Navy Rotary Wing Weapons School.

The airfield is named Van Voorhis Field in honour of Lieutenant Commander Bruce Van Voorhis (1908–1943) who was awarded a posthumous Medal of Honour.

The Navy relocated its Navy Fighter Weapons School or TOPGUN, from NAS Miramar to NAS Fallon in 1996. In addition to transferring, the NSAWC squadron, a Navy Reserve adversary squadron, Fighter Squadron Composite THIRTEEN (VFC-13), the "Saints," was also permanently relocated from its former base at NAS Miramar to NAS Fallon.



NAS Fallon is home to the "Fighting Saints" of VFC-13, the "Desert Outlaws" of Strike Fighter Wing Pacific Detachment Fallon (SFWPD Fallon) and the Naval Aviation Warfighting Development Center (NAWDC). NAS Fallon serves as the Navy's premier tactical air warfare training center. VFC-13 provides adversary training for Navy and Marine Corps active and reserve fleet and replacement squadrons, carrier air wings and Marine aircraft groups, USAF units, to include Air Force Reserve and Air National Guard, and Canadian Forces. The Fighting Saints currently fly the F-5s Tiger II with Russian Stars on their tails, Russian style red aircraft numbers on their nose with camouflage mimicking the Russian fighters. Their insignia includes the wings worn by the highest classification of Soviet fighter pilot, the "Sniper".





Naval Aviation Warfighting Development Center (NAWDC) at Naval Air Station Fallon is the center of excellence for naval aviation training and tactics development. NAWDC provides service to aircrews, squadrons and air wings throughout the United States Navy through flight training, academic instructional classes, and direct operational and intelligence support. The command consists of more than 120 officers, 140 enlisted and 50 contract personnel. NAWDC flies and maintains F/A-18C/D Hornets, F/A-18E/F Super Hornets, E/A-18G Growlers, F-16 Fighting Falcons and MH-60S Seahawk helicopters.

Prior to June 2015, NAWDC was known as Naval Strike and Air Warfare Center (NSAWC) which was the consolidation of three commands into a single command structure on July 11, 1996. NSAWC was comprised of the Naval Strike Warfare Center (STRIKE "U") based at NAS Fallon since 1984, and two schools from NAS Miramar, the Navy Fighter Weapons School (TOPGUN) and the Carrier Airborne Early Warning Weapons School (TOPDOME).

NAWDC is the primary authority on training and tactics development. NAWDC provides training, assessment, aviation requirements recommendations, research and development priorities for integrated strike warfare, maritime and overland air superiority, strike fighter employment, airborne battle management, Combat Search and Rescue (CSAR), Close Air Support (CAS), and associated planning support systems. The command is also responsible for the development, implementation, and administration of several courses of instruction while functioning as the Navy point of contact for all issues relating to the Air Combat Training Continuum. Additionally, NAWDC is the Navy point of contact for all issues related of the Fallon Range Training Complex (FRTC). For a detailed mission information click here.

#### **Strike Fighter Wing Pacific Detachment (SFWPD)**

A typical cycle at SFWPD Fallon usually consists of at least one two-week FRS strike training (Air-to-Ground) detachment and an eight week TOPGUN SFTI class per quarter. SFTI class includes two week Air-to-Air detachments to various Navy and Marine Corps Air Stations, and a two day detachment to Naval Air Warfare Center China Lake, Calif. This schedule continues year-round. Currently they fly different versions of the F/A-18.

The Aviation Magazine would like to thank Lt Colonel Zip Upham, and his staff for their great hospitality on the base during our visit and the friendly and helpful support.











The Airpark and the Gateguard at NAS Fallon includes many USN aircraft and a good selection of older Soviet era aircraft like the MiG-23 Flogger above, RA-5C Vigilante and the Douglas A4D/A-4 Skyhawk, bottom right image.

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NAVY

VFC-13







#### VISITING THE HELLENIC AIR FORCE AIR BASE AT ARAXOS

ARTICLE AND PHOTOGRAPHY BY PETER THIVESSEN AND WOLFGANG JARISCH

The Aviation Magazine was invited by the Hellenic Air Force to its most modern Air Force Base at Araxos, to get a look behind the scenes. Araxaos is located next to Patras on the Peloponnese peninsula.

Our host, Colonel Dimitrios Sideridis was born in Serres. He is married and blessed with two children. Colonel Sideridis entered the Hellenic Air Force in 1983. He has flown more than 3000 hours, initially the F-104G and since 1990 all versions of the F-16. He has commanded a multiple level of the HAF, including 115CW Training Squadron; Souda AFB.

Prior to this assignment he was the HAF Air Tactics Center Commander, Andravida AFB. He was also Ground Safety Divison Director HTAF and OPS and Training Director, Araxos AFB.



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He attended the NATO AIR & ASAACS TACEVAL SCHOOL and in-residence, the AIR COMMAND AND STAFF COLLEGE (ACSC) USAF, USA, He completed his Master's degree in European and Strategic studies from Pantelon University, Athens, majoring in international relations and strategic studies. He has been assigned to the military delegation in the European Union, Brussels and the Council Security Committee (CSC as well as to the CSC Policy Advisory Group (CSPAG). He was the head of the multinational Steering Investigation (SIB) occasioned by the accident on 26<sup>th</sup> of January 2015 at TLP, Albacete, Spain.

Since July 4th 2017, Colonel Sideridis has been Wing Commander at Araxos AFB and is responsible for approximately 1000 employees.

Araxos is the home of the 116<sup>th</sup> Combat Wing with two Squadrons, 335 "Tiger" and 336 "Olympos". Both Squadrons are equipped with 31 F-16 C/D Block 52+ multirole fighters.

In the wake of the modernization program of the Greek Air Force, and after phasing out the old pattern, like the F-104G and A-7 Corsair, Araxos has become one of the most modern Combat Wings of the HAF.

The tasks are divided between the two units. Main Task of the 335 Sqn., are the Air to Ground and Reconnaissance Missions (using the modern Recce Pod DB-110) and main task of the 336 Sqn., are Air to Air Missions. The QRA missions are performed alternating weekly between both squadrons. For these missions the F-16's are equipped with IIRIS-T and AIM 120 AMRAAM.

Both squadrons have detachments in Castelli (Island of Crete) and Skiros (Island Northwest from Athens). Additionally, they are also doing Air Policing for NATO in southern parts of Europe: Macedonia, Albania, Montenegro and Bulgaria.

The deterrent capacity of the Hellenic Air Force, with the support of Araxos Air Base, is currently at a remarkably modern level and contributes significantly to protecting the sky on the edge of Europe.

We had a great opportunity to look around and learn about the air base's daily operation. We wish to thank all those who were involved, particularly Lt. Col. "Panos" OPS Officer (335 Sqn), Deputy Wing Commander CW 116 and Major "Roody" Deputy Sqn Commander 336, and all of their personnel.

Our greatest gratitude and thank goes to Colonel Sideridis for his hospitality and without his invitation we could have not done our visit.



335 Squadron's wall and speakers' podiums above, and the engine maintenance facility of the base below.





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F-16s of the 336 Squadron in the maintenance hanger above and inside the hardened bunker below getting some attention.





F-16s of the 336 Squadron taxiing out from the bunker above, and taking off below.



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## NOTICE TO OUR SUBSCRIBERS ON JOOMAG PLATFORM!

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Please check for the latest issue of the magazine on ISSUU starting with #58th.

https://issuu.com/theaviationmagazine





#### Frisian Flag 2018

From April 8th to April 20th, Leeuwarden Air Base hosted Frisian Flag, one of Europe's largest international aerial warfare exercises. This year, fighter aircraft from six nations took part in the exercise: France, Germany, Poland, Spain, the Netherlands and the United States of America. More than 70 aircraft gathered at Leeuwarden Air Base for this year's edition of Frisian Flag. Up to around 50 aircraft participated in each training mission, which were flown twice a day.

#### International

The missions of today have an increasingly international focus. Missions are no longer carried out by one country only; instead countries seek cooperation with each other. Such a cooperation starts during the training and instruction stages. In fact, an international coalition has almost become a prerequisite for effective operations. The future capability to perform air defence tasks and conduct international missions will at all times be reliant on training in an international context.

#### Leadership

Today's missions are not only characterized by international cooperation but also by high expectations (international) leadership and precision in execution. Frisian Flag strives to develop the

leadership skills of the participants. While routine daily training missions also include the development of these skills, such missions involve a limited number of pilots and aircraft. During Frisian Flag, experienced pilots are given the opportunity to devise, develop and ultimately carry out a mission in a much larger context. The daily training missions are planned, led and briefed by a different participant/NATO partner each day. This pushes leadership skills to their limits and ensures that everything possible is gained from the training. In this way, the pilots develop leadership skills that can also be expected of them in actual missions.

#### **Exercise missions**

Missions flown during Frisian Flag include air defence missions, offensive (strike) missions, missions to protect other aircraft and missions carried out to eliminate static and moving targets on land or at sea. The purpose of air defence missions is to deny enemy aircraft access to a certain area. When eliminating targets on the ground, fighter aircraft operate independently or in coordination with units of the army or navy (forward air controllers). The Royal Netherlands Navy, its ship HNLMS Evertsen and one of its air defence and command frigates of the Zeven Provincien class also participated in the exercise.

The average flight lasts only for an hour and a half, each flight is preceded by a substantial period of preparation and comprehensive analysis is carried out after each flight to ensure that everyone makes the most of the training exercise. Unlike on other major exercises, this analysis is carried out in a joint area in which all pilots are present. In this way, lessons learned are shared with all exercise participants.

#### Scenarios

During the Frisian Flag exercise, all capabilities of the different fighter aircraft are used to ensure preparedness for any kind of mission. Experience gained during previous missions is analyzed extensively and applied during subsequent missions. During Frisian Flag, larger and more complex scenarios in which the fighter aircraft are exposed to higher levels of air-to-air and surface-to-air threats are also completed. While exercises will never replace the real thing, they are the best way to prepare pilots for deployment during operations.

(credit: Royal Netherlands Air Force)

The Aviation Magazine would like to thank the Public Affairs team of Leeuwarden AB for their hospitality and support.



The French Rafale with 2018 NATO Tiger Meet Markings on the tail above and inset.

The list of operating participants (country and type of aircraft):

operating from Leeuwarden AB		
French Air Force	Rafale B, Rafale C, Mirage 2000D	
German Air Force	EF2000	
Polish Air Force	F-16C Block 52CF, MiG-21A	
Spanish Air Force	EF-18M/BM	
Royal Netherlands Air Force	F-16AM/BM	
U.S. Air National Guard	F-15C/D	

External assets	
French Air Force	AWACS E-3F
NATO	AWACS E-3A
Royal Netherlands Air Force	C-130H
civil - Cobham	Falcon 20EW
civil - Discovery Air	A-4N



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- F-16C-52CF Polish Air Force, above
- F-16BM RNLAF AZ 313 Sqn., below



F-15 Eagles from Oregon ANG (Red Eagles) and Massachusetts ANG (104th Fighter Wing)





© Peter Thivesser





#### **EART 2018**

This year's European Air Refuelling Training (EART 2018) took place from 08 to 20 April 2018 at the Dutch Eindhoven Air Base. EART is a multinational exercise that runs in parallel to the multinational fighter exercise Frisian Flag at the Dutch Leeuwarden AB. With two waves of about 40 fighter jets a day off Leeuwarden air base, there are plenty of opportunities for both tanker and fighter crews to train air-to-air refuelling (AAR) in a realistic and multinational environment. Participants in the EART were tanker aircraft from France (KC-135FR), Germany (A-310 MRTT), the Netherlands (KDC-10) and the United States (KC-135).

The Aviation Magazine was given the opportunity to be on board the German Air Force A-310MRTT tanker during an EART mission. During about 90 minutes in the "ESSO" tanker track off the Danish Coast the A-310MRTT refuelled four German Air Force EF2000 Eurofighter and three Rafale C of the French Air Force.

The Aviation Magazine thanks Capt De Simone, Public Affairs EATC and his tem for their hospitality and their support.

#### **Objectives of EART**

- AAR with multinational and different types of aircraft receivers
- Rendezvous procedures
- Plan, brief, execute and debrief, Multinational Tanker Training and Tanker Operations in large-scale COMAO packages in a realistic scenario
- Practice Tanker-Cell Operations and Tanker to Tanker RV procedures
- Train both Aircrew and Logistics in Quick turnaround execution
- Practice large scale LINK-16 and complex airspace control operations in multinational context
- Tactical Procedures (e.g. authentication, IFF)
- Degraded communication procedures, communications jamming, HAVE QUICK operations

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French Rafael refuelled above from the Germany A-310 MRTT tanker shown right below after landing, and on the left with two Euro fighters at an air show air-to-air refuelling demonstration.



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## BELGIAN AIR FORCE DAYS



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**Article & photography by Geoffrey Arnwine** 

For the first time since 2011, Beale Air Force Base hosted an Open House and Air Show on April 28, 2018. The show featured a variety of different aircraft including the F-22 Raptor Demo Team which flew twice, the Patriots Jet Team, and the U-2 Dragon Lady and T-38 Talon based out of Beale. In addition to the aerial activities, there were also a bunch of static displays for the crowd to visit including the rare NASA Super Guppy aircraft.

Gates opened at 9:00 am to the public and flying officially started at 11:00 am with the singing of the National Anthem. The Wings of Blue Parachute Team jumped during the anthem with each member casting out a flag of each military branch along with the American Flag. The team would later return to the skies to perform their own solo demonstration consisting of many different parachute formations and manoeuvres.





- Super Guppy from NASA, above
- RQ-4 Global Hawk from 9th Reconnaissance Wing, Beale AFB, CA, below



U.S. Army CH-47 Chinook helicopter served as their jump aircraft for the entire show.

To turn up the noise early in the day, the U.S. Air Force F-22 Raptor Demo Team took to the skies for their first performance of the day. The team, based out of Langley Air Force Base, Virginia, performed one of it's first of nearly twenty air shows of the 2018 season at Beale. The pilot of the team is Major. Paul "Loco" Lopez. During the routine, Loco showcased the multiple super manoeuvrability characteristics of the F-22 including tight turns, tail slides, and power loops.

The show featured a variety of different aerobatic performers throughout the day. These performers included Vicky Benzing in her Boeing Stearman biplane, Chuck Coleman in his Extra 300, and the West Coast Ravens formation team which consisted of 16 RV aircraft.

In addition to multiple aerobatics, there was a good showcase of warbird aircraft featured in the sky. A WWII reenactment was conducted resembling a Pacific style battle. The aircraft that participated in the demonstration included the F6F Hellcat, Yak-9U, and PBJ Mitchell. Gregory "Wired" Colyer performed in his Korean War era T-33 Shooting Star trainer jet known as "Ace Maker II." During Colyer's routine, he showcased the many different aerobatic manoeuvres of the Shooting Star and even raced with the Smoke 'n' Thunder Jet Truck.

Team Beale had an impressive showcase of their home based aircraft throughout the day. The U-2 Dragon Lady was a major highlight of the show and performed many touch and go simulations with a Precision Exotics Ferrari as its chase car along the runway. After performing the touch and goes, the jet then lifted off to 70 thousand feet. Later the pilot also conducted a swear in for new recruits of the Air Force. It was a very rare and special way of recruiting new people into the U.S. Military. Other aircraft from Beale that performed flybys included a 4-Ship formation flight of T-38 Talons and a KC-135 Stratotanker. Later, the U-2 and two of the T-38s took back to the sky and performed a very rare formation flight together as a Team Beale tribute.

There were other military flybys throughout the day including a U.S. Coast Guard C-27J Spartan which flew in locally from McClellan Airport in Sacramento. An MC-12 Huron which was formerly based out of Beale also performed a flyby in tribute to the crew that was killed in the Indy 08 crash.

Towards the end of the show, the Patriots Jet Team took to the skies performing in their six black L-39 Albatross Czech trainer jets. The team dazzled the audience with a variety of different formations, head on passes, and even tail slides with the addition of red, white, and blue smoke. The Patriots are locally based out of Byron Airport and perform at multiple air shows across the West Coast every year.

Concluding flying activities was the second performance from the F-22 Raptor Demo Team. Loco showcased the same solo demonstration that he performed earlier in the show, but this time featured the U.S. Air Force Heritage Flight afterward. The Heritage Flight is a special tribute to those who served in the Air Force from past and present by performing a formation flight of active and retired fighter aircraft. In the formation, Loco teamed up with an F-86 Sabre piloted by Kevin Eldridge. After the flying display, Loco visited the crowd line and met with spectators and passed out F-22 Demo stickers.

After the aerial activities concluded, spectators were able to continue visiting the static displays and vendors before gates closed at 5:00 pm. Special thanks to the organizers, volunteers, sponsors, performers, and attendees for making the 2018 Beale Air & Space Expo a success!















## AVATION

#### Article and photography by László Nyáry

In our #50, May-June 2017 issue, one of our journalists István Kelecsényi, covered the Aviation Museum in Szolnok, Hungary. As I had a short visit in Hungary in May this year, I've decided to visit the museum with István and his friend Lajos, to update our previous visit. To see our #50 issue just click here: http://www.TheAviationMagazine.com/50 May June 2017 The Aviation Magazine.pdf

To start, I wish to thank the staff at the museum for giving us a free-pass, due to our media accreditation, while it was not necessary, it was a nice gesture. The regular price of admission is HUF 2000, (about \$8.00 US) and HUF 2500 (about \$10.00 US) on the weekends. Further information about the museum, exhibits, activities and admission discounts is available in English on their website: http:// www.reptar.hu/en/muzeumunk.html

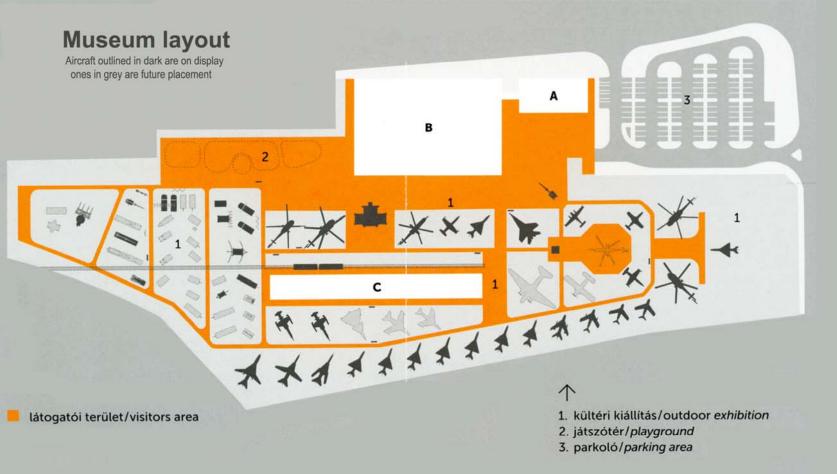
We spent about five hours at the museum, but one can spend a whole day there if they wish to partake in all the activities. My own objective was to take detailed images of the stencilling of various aircrafts on display for reference of future aircraft profiles, stationed outside. We also visited the cafeteria and the gift shop, both are priced reasonably, and with a large selections. The museum is very clean over all. While not all the aircraft are on display from the previous location at the Air Base nearby, let us hope that many of the remaining aircraft will eventually be transferred, as there is sufficient room for them. Regardless I would give the museum a rating of 10 out 10.

If you have a chance to visit Hungary, namely Budapest, it is only about 1.5 hr drive by car to Szolnok, and it is well worth the visit for especially to see so many variations of MiG-21s.

A Mil Mi-24D Hind at a roundabout near the museum.

MILITARY AIRCRAFT MUSEUM

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MiG-21Bis "75AP" NATO "Fishbed-L" with the Shark teeth also know as "Sharky"



A Mi Mil-24V Hind with an Eagle paint scheme known as "Csőrike II" or Beak II in English, it is a more or less copy of the original one which was painted in 2000 to celebrate a national flying day in Hungary.





S-125 Neva (NATO SA-3 Goa) above, with several Almaz S-75 Dvina/Volhov (NATO SA-2) SAMs and related trucks and radar system below.





A Mil Mi-8P transport (NATO Hip) above and a Mil Mi-4 A (NATO Hound) below (complete with underside gunners gondola however these helicopters were not armed in Hungary, thus the guns were removed) ex-East German helicopter, painted to resemble as used during the 1956 uprising.



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MiG-15Bis NATO "Fagot" above, with markings during the 1968 invasion of Czechoslovakia, although the Hungarian air force never crossed the border. A MiG-21bis NATO "Fishbed-L" below from the Witch Sqn.





The Let L-200 D Morava, a Czech made twin engine aircraft used by the Police, above, Su-22M-3 NATO "Fitter-G" below.



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Aero Ae-45S Super Aero, used by the National Ambulance Service above.



A general look from the floor above the main exhibition area: (I to r) Polikarpov Po-2, Kamov Ka-26 (NATO "Hoodlum"), Nord 1002, Mil Mi-1M (NATO "Hare"), Yak-52 Trainer you can sit in it for photo-op, and a Rubik R-26 Góbé glider hung from the ceiling.

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## NTTM2018 Report by István Kelecsényi & photography as noted

The International NATO Tiger Meet 2018 (NTM18) began on May 14 and will run until May 25 at the Polish Air Force 2nd Tactical Air Wing at 31st Krzesiny Air Base near Poznan, Poland. The 31st Air Base is the largest military airfield of the Polish Air Force and it is the home of the 3rd Tactical Squadron and 6th Tactical Squadron both equipped with F-16C/D Block 52 Fighting Falcon.

Twenty-two flying squadrons from Belgium, the Czech Republic, France, Germany, Greece, Hungary, Italy, the Netherlands, Poland, Spain and the United Kingdom and Partners Austria and Switzerland as well as a NATO Airborne Warning and Control System (AWACS) plane – in total approx. 70 aircraft and ten helicopters took part in this largest air training event of the Polish Air Force in 2018.

Unfortunately, the French Air Force's Tigers did not attend only the French Navy did, the Turkish Air Force Tiger squadrons did not attend the event. The MiG-29 fighter aircraft of the neighbouring Slovakian 1st fighter squadron (1. taktická letka) did not even make it to Poland either.

Tiger Meet had two missions per day between 10 am and 1 pm and 3 pm and 6 pm. Almost every squadron attending had a specially painted aircraft for the meeting. The aircraft flew with practice armaments and with one or two drop tanks. The GFD Ltd. Learjet's flew with their targeting equipment to simulate the enemy.

The home 6th Squadron had planned a spotter day for Friday, May 18th. During the day, aviation enthusiasts and photographers could take photos of dozens of aircraft taking off and landings many of them, as usual, had amazing tiger schemes.

The spotters were placed facing into the sun across from the control tower, and they were not happy about this. In fact between the waves of flight they moved to end of the runway which provided a better location.

There were two waves of flight, the first wave was started by the Hungarian 59/1 Puma squadron. During the break between the two waves, we could see the C-295 transport aircraft of the Polish along with the L-410UVP of the Czech the AN-26 of the Hungarian Air Forces.

Better organization could have improved the experience for the spotters/photographers who paid extra fees for better access. Not to mention accreditation for many Western European correspondents was a disaster and many did not attended. Over all it was quite poor as Tiger Meets go!



A Sukhoi Su-22 M-4 Fitter, with Tiger stripes from the Polish Air Force, above

A JAS-39C/D Gripen from the Czech Air Force with the 100 Anniversary paint scheme, below.



A French Navy's Rafale — Celtix Tiger below, the French Air Force did not attend the event this year!



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An impressive variety of warbirds was featured for display including a WWII parade consisting of warbirds from Planes of Fame Air Museum and the Commemorative Air Force including the P-40 Warhawk, F6F Hellcat, T-28 Trojan, and SBD Dauntless. John Collver also performed a solo routine in his SNJ Texan known as the "War Dog." Representing the Korean War era of military aviation was Gregory "Wired" Colyer who performed in his T-33 Shooting Star trainer jet called "Ace Maker II." During the airshow weekend, Colyer staged out of San Bernardino due to the short runway circumstances. The Red Eagles Formation Team also performed in their 4 Yak-52 Russian trainer aircraft. The team flew a variety of manoeuvres including different formations, loops, and head on passes.

One of the major military flybys was from the 144th Fighter Wing of the California Air National Guard in 2 of their F-15C Eagles. The F-15s dazzled the crowd with multiple afterburner passes, dirty passes, and a 2-ship formation flyby. The 144th Fighter Wing is based out of Fresno and has operated the F-15 since 2013.

Representing the Royal Canadian Air Force was the CF-18 Hornet Demonstration Team. Every year, the CF-18 Demo Team has a different theme. This year's theme is the 60th Anniversary of NORAD. The demonstration jet features a full dark blue top side paint job with ribbons, globes, and lightning bolts to commemorate NORAD. The pilot of the team is Capt. Stefan "Porcelain" Porteus. Capt. Porteus performed in the beautifully painted CF-18 and showcased many passes that displayed the magnificent colors of the 2018 demo jet. On Saturday, the CF-18 performed a twilight show which featured full afterburner in the night sky, and on Sunday, it performed a full daylight show.

Highlighting the show was the U.S. Air Force F-16 Viper Demonstration Team based out of Shaw Air Force Base, South Carolina. The F-16, piloted by Maj. John "Rain" Waters, showcased an incredible performance to spectators which included various tactical manoeuvres and high speed passes. In dedication to the late Thunderbirds Slot pilot Maj. Stephen Del Bagno, the team paid tribute with a memorial sticker on their aircraft. After completing the solo routine, Maj. Waters joined with a P-51 Mustang for the Heritage Flight. The Heritage Flight is a formation of fighters from past and present to commemorate the history of U.S. Air Force aviation.

After aerial activities concluded, spectators had plenty of time before gates closed to hear live music from the local bands in attendance, enjoy the beer festival with Hangar 24 crafted brewery, and visit the many vendors. Special thanks to the organizers, volunteers, performers, attendees, and sponsors for making the 2018 Hangar 24 Airfest 10th Year Anniversary a success!





F-16 Viper Demo Team above, F-15 Eagle of the 144th Fighter Wing, Fresno ANGB, CA, below



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T-28 Trojan above, John Collver - SNJ Texan "War Dog" below





USAF Heritage Flight with the F-16 Viper and the P-51D Mustang above, and a Pilatus PC-12/47E owned by Southern California Emergency Medicine, below.





### DUX-ORD, AIR FESTIVAL

Article and photography by Jason Phelan

**D**uxford's Air Festival is the first of three major aerial events to be held at the glorious airfield at the former RAF base at Duxford in Cambridgeshire, United Kingdom. Held over the traditional late May Bank holiday weekend of 26th & 27th May 2018 your reviewer attended on the Saturday. The weather in the early morning was foggy and overcast, but gradually the sun shone, leaving a very hazy afternoon making challenging photography conditions as you shoot into the light for most of the display.

The Imperial War Museum (IWM) Duxford is Britain's best-preserved Second World War airfield, with a fascinating history that dates back to the First World War. Historic aircraft can regularly be seen taking to the skies from Duxford's wartime airfield. Duxford has been witness to world-changing events over the past 100 years where ordinary people have had extraordinary experiences. Exploring state of the art exhibition halls and historic buildings, visitors walk in the footsteps of the men and women who served at RAF Duxford. Through the powerful stories of the men and women involved and the rich displays of aircraft, Duxford tells the story of the impact of aviation on the nature of war and on people's lives.

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The flying display started at 1300 hrs with the Republic P-47D Thunderbolt, a former Duxford resident with The Fighter Collection (TFC) 'No Guts No Glory' and has recently returned from the United States where it was based since 2007. Now in the hands of Air Leasing at Sywell Aerodrome, the aircraft carries the colours of 48th Fighter Groups 492nd Fighter Squadron 'Nellie'. It was great to see the 'Jug' back in the skies of the UK and is a welcome return to the circuit in Europe giving a spirited and well flown routine.

Some of the flying highlights included:

- AeroSuperBatics Flying Circus (formerly the Breitling Wingwalkers), with a new scheme and two new wingwalkers for the 2018 season, Martyn Carrington & David Barrell gave their usual display routine with flare, panache and a nod to the heyday of classic barnstorming of the roaring twenties.
- The seven ship North American T-6 Harvard routine was a very well executed display and with the sight and sound of the radial engines giving that effective rasp as the props went supersonic reverberating around the airfield.
- The Global Stars Team, a mix of CAP232 & Extra aerobatic aircraft presented a very well thought out, award winning routine with some manoeuvres that are unique to this 4-Ship display. This was definitely one of the highlights and one that kept the display tight to the crowd line with effective use of the smoke systems.
- 46 Aviations Farner Werke (F+W) Schlepp C-3605 was displayed by Emiliano Del Buono a highly impressive and captivating display in this highly manoeuvrable aircraft. This aircraft is based in the Swiss town of Sion along with a collection of Warbirds, Aerobatic and Wingwalking types.
- The Bremont Great War Display Team displayed with pyrotechnics and seven dog-fighting aircraft, evoking memories of the Great War. In this, the 100th Anniversary year of the end of the First World War the last post sounded at the end of the display completing a very emotive part of the flying display.
- Many warbirds graced the skies of Duxford throughout the afternoon including the heavies B-17G Flying Fortress 'Sally B' and Consolidated PBY-5A Catalina from Plane Sailing.

The penultimate display came from the French Air Force, Armée de l'Air, who have been a regular supporter to the show over the years (with no less than three display acts in total over the Air Festival weekend). The Dassault Rafale C was the only jet display on the Saturday and gave a loud, lively and thundering display with full afterburners.

Supermarine Spitfire Mk 1a N3200 flown by John Romain flew an evocative and memorable solo display as the airfield fell silent the distinctive elliptical wing Spitfire and sound of the Merlin engine fittingly closed the show. Resplendent in its 19 Squadron markings this airframe had joined RAF Duxford in April 1940 and is now based and owned by the IWM at Duxford and was truly a historic aircraft from World War II.

There was a good mix of aircraft that were well presented from warbirds to Aerobatic displays and extended flying time from previous years. Duxford has a unique atmosphere that hasn't been lost in these times of tighter regulation and rising costs. A visit to an event is highly recommended for the first timer or even the second timer. With so much on offer to see and do to keep the family entertained this show is an all-round event to keep the kids and the bigger kids happy.

Thanks must go to Esther Blaine, Communications Manager and her team at Duxford for all their support, warm welcome and help on the Saturday of the show.

Thanks also to Angelo Cunningham for an impromptu tour around the PBY Catalina at the close of the show which was a nice touch to end an all-round enjoyable day.





Farner Werke (F+W) Schlepp C-3605 above, and a Consolidated PBY-5A Catalina below





Dassault Rafale above, and with a variety of WWII aircraft below



# BY JOE "CHILI" CILIBERTI

Joe was in Japan a few months ago visiting several air bases, and here are some of his images. The F-4 Phantoms were at Hykuri AB, the Eagles at Komatsu AB, and the rest of the Japanese aircarft were at Iruma AB. The USA aircarft were at Atsugi.













#### The Nikon D850 body for aviation photographer!

#### Article and photography by László Nyáry



**B**eing a NPS member has advantages, especially when new camera bodies and lenses come out from Nikon. One can ask for a loaner to try and test out, before making a significant financial commitment for a certain camera body or lens.

When I was invited by the 1st Squadron of the Belgian Air Force for a base visit, I figured this would be a great time to test out the latest D850 from Nikon. Nikon Canada was kind enough to provide the body with a super fast 35mm f1.4 wide angle lens which came in handy for photographing the F-16, as well as other aircraft at the Brussels Air Museum and at additional museums in Germany and Hungary. During my visit I've used the D850 with a variety of lenses that I own from the 14-24mmf2.8,

70-200mmf2.8 to the 200-500mmf5.6 and as well with the loaner 35mmf1.4.

Over all, I've found the D-850 to be very responsive, quick focusing, and easy to set up especially if you are a D800 series user. But with 45MB images sharp lenses are a must and to make sure there is no hand shake. Even at higher speeds a slight amount of handshake will not produce sharp images when looked at 100%.

The colours are fantastic, and very accurate. I tend to shoot jpg at large and fine setting which saves me a lot post processing with 85-90% of the images can be used as shot. Love the excellent ISO capabilities, which came in very handy at the museums (most places do not allow flash) or in darker aircraft hangars. Battery life is very good, improved over the D800, about 15% more images per charge.

The D-850 won me over, and I would recommend this superb camera for aviation photography for several reasons apart from the aforementioned capabilities: one of the main reasons is of course of the 45MB images resulting in 8256x5504 pixel size at 300 ppi full frame format. You do not necessarily need a long lens in the 500mm plus range, because you can crop easily to 5100x3300 at 300 ppi range which is used in The Aviation Magazine, with a 200 to 300mm lens, and still end up with a decent sized image of the aircraft or simply you can just switch over to a DX format, that gives you the 1.5X crop factor. Of course if you end up using a long lens you will get superb close up images (depending on the haze factor, which sometimes is a killer when it comes to sharpness).

While no camera is perfect, the Nikon D-850 comes as close as one can get, as long as one is willing to pay the Canadian \$4,399.95 or US \$3,299.95 MSR.



From 1918 an original Hanriot H-D1 WWI fighter, at the Brussels Air Museum. Nikon D850 with the 35mmf1.4 lens 1/100 f/6.3 ISO 1000, above. An Ilyushin 28 'Beagle' bomber made in the USSR in 1955, at the junkyard of the Szolnok Air Base, Hungary, Nikon D850 with the 200-500mm f5.6 lens at 500mm 1/1000 f5.6 ISO 160, below (10% crop of the original).





