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**THE ITALIAN AIR FORCE
COMPLETED THEIR
NATO AIR POLICING
MISSION IN ROMANIA**

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BALTICA 2023

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BIAS 2023

PAGES 38-41



MAGAZINE EDITED BY
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COVER III: USAF F-16 AT 86th AFB
PHOTO: 86th AIR FORCE BASE
COVER IV: C-27J SPARTAN AT BIAS 2023
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**THE SIGNING OF THE LETTER OF INTENT
ON THE ESTABLISHMENT
OF THE F-16 PILOT TRAINING CENTER**

“By establishing the F-16 Pilot Training Center, Romania will provide a high-quality training environment both to the Romanian pilots and to those from the Allied and partner states, including Ukraine” – Angel Tîlvăr

In the context of the participation in the Informal Meeting of the EU Defence Ministers, held in Toledo, in Spain, Minister of National Defence, Angel Tîlvăr, signed on Tuesday, August 29, during a ceremony, the Letter of Intent among the Romanian Ministry of National Defence, the Defence Ministry of the Kingdom of the Netherlands and Lockheed Martin Company regarding the F-16 Pilot Training Center in Romania.

“The Letter of Intent that I have signed concerns the establishment of the F-16 Pilot Training Center in Romania, an initiative designed to support the development of the Romanian pilots’ skills with respect to operating the F-16 aircraft, in the performance of a wide spectrum of strategic missions. Through this center, Romania commits to provide a high-quality training environment, with access to technical resources and state-of-the-art know-how not only for the Romanian pilots, but also for those from the Allied and partner states, including Ukraine” the Minister of National Defence stated.

In order to implement this project, the Royal Dutch Air Force will contribute by deploying some F-16 aircraft to the 86th “Lieutenant Aviator Gheorghe Mociorniță” Air Base, thus facilitating the effective training of the Romanian pilots. Lockheed Martin Company will also provide the highest-level technical support through flight instructors and technical-engineering personnel. This solid cooperation ensures complex training, in accordance with the international standards.

The F-16 Pilot Training Center from the 86th Air Base will become a relevant regional center, a fact already consolidated by the signing of the Joint Declaration during the Vilnius NATO Summit, in July 2023.

Through this agreement, Romania joins other Allied nations, such as Belgium, Canada, Denmark, Luxembourg, Norway, the Netherlands, Poland, Portugal, Sweden and the United Kingdom of Great Britain and Northern Ireland, in supporting the training of Ukrainian pilots for the future use of the F-16 aircraft.

“I express my hope that the F-16 Pilot Training Center in Romania will demonstrate its strategic importance, which aims at meeting the complex security requirements established by Romania and its Allies and partners from the region. This joint effort consolidates Romania’s position as a regional leader in the training of F-16 pilots, contributing to the Alliance cohesion, demonstrating unity and strengthening the Euro-Atlantic defence”, Minister Angel Tîlvăr said.

Not only does this project underline Romania’s commitment to collective security, but also reflects the solid support provided to our partners. Through the F-16 Pilot Training Center, Romania consolidates its role as a security provider, by substantially contributing to supporting Ukraine’s capabilities in the collective efforts made for stability and security.

Romanian MoD Press Office





ALLIES COME TOGETHER FOR NATO AIR CHIEFS SYMPOSIUM

"Through innovative cooperation, we integrate our tactics, techniques and procedures, we share our intelligence and exchange data and we enhance our common understanding of our capability needs and challenges."

RAMSTEIN, Germany - On September 27 and 28, Commander Allied Air Command, General James Hecker, hosted senior leaders of NATO's Air Forces for the second NATO Air Chiefs' Symposium of 2023.

The senior representatives from 30 Allied nations and three Partner nations alongside Allied command authorities convened to engage in Air and Space power-related discussions strengthening relationships and improving communications among each other.

"I am deeply convinced this event remains the ideal forum to facilitate frank, open, and fruitful discussions in these uncertain times," said General Hecker. "This second symposium in 2023 is about operationalising integration among our organisations and forces. Through innovative cooperation, we integrate our tactics, techniques, and procedures, we share our intelligence and

exchange data and we enhance our common understanding of our capability needs and challenges. All this brings us even closer to the goal of operating integrated by design," he added.

Topics focused on Agile Combat Employment and how Ukraine empowers its enlisted to achieve battlefield success. Additionally, AIRCOM's subject matter experts briefed on the Integrated Air and Missile Defence, the Ballistic Missile Defence Strategic Plans, and other themes from exercises to readiness.

This is a semi-annual forum hosted by AIRCOM to discuss Joint and Air domain issues and Air Power's asymmetric advantages. AIRCOM's representatives touched on strategic outlook and provided operational updates on accomplishing its missions, integrating emerging tasks, and responding to the changing security environment.

AIRCOM COMMANDER BUILDS RELATIONS FOR MORE ROBUST AND UNIFIED ALLIANCE

General James B. Hecker, Commander Allied Air Command, traveled to Latvia (Aug 17), Iceland (Aug 28-29), Estonia (Aug 30), and Lithuania (Aug 31) to conduct high-level key leader engagements with each nation's defence and air force leadership.

General Hecker discussed readiness, training, agile combat employment, and interoperability issues during these meetings and conducted tours of the Air Policing units stationed in the locations.

"In my recent visits to Latvia, Iceland, Estonia, and Lithuania as Commander of NATO's Allied Air Command, I witnessed firsthand the unwavering commitment of these nations to NATO's critical mission and our 360-degree approach to defence," said General Hecker.

"These interactions reinforced the vital role each nation plays in building a more robust and unified alliance. Together, we are dedicated to growing and modernising our Integrated Air and Missile Defense network. NATO must prioritise interoperability, resilience, and building capacity to negate any opponent's reliance on Anti-Access Area Denial methods, ensuring the security and stability of our shared region," the General added.



Besides meeting Estonian Defence Forces' leadership, at Ämari Air Base, Estonia, General Hecker had an opportunity to discuss with members of the Spanish Eurofighter detachment deployed here for NATO Air Policing. Photo courtesy Estonian Defense Force



At Siauliai Air Base, Lithuania, General Hecker was engaged in talks with the Lithuanian Air Chief, Colonel Antanas Matucis (centre) and Colonel Federico Sacco Maino, Commander of the Italian Eurofighter Detachment leading NATO's Baltic Policing mission. Photo by Aurimas Sutkus/Lithuanian Air Force



US F-16 JETS ARRIVE IN ROMANIA FOR NATO AIR POLICING

Four U.S. Air Force F-16 Fighting Falcons assigned to the 480th Fighter Squadron at Spangdahlem Air Base, Germany, sit at the 86th Air Base, Romania, in support of NATO's enhanced Air Policing (eAP) capabilities, Sept. 22, 2023. U.S. European Command and our NATO partners and allies continue to strengthen our deterrence efforts and adapt through improving readiness and responsiveness.

"I welcome the United States' deployment of additional F-16 fighter jets to NATO's air policing mission in Romania," said acting NATO Spokesperson Dylan White. "This sends a clear message that we will protect every Ally. As Russia continues its brutal war of aggression against Ukraine, we have seen a number of strikes on Ukrainian infrastructure very close to NATO territory. We remain vigilant

and in close contact with Allies in the region," he added.

Following Russia's full-fledged invasion of Ukraine, NATO has reinforced its presence in the eastern part of the Alliance, including with new multinational battlegroups, more air and maritime presence, and regular surveillance flights.

Photo credit: RoAF 86th AFB

NATO AND ALLIES CONDUCT LONG-RANGE DRILLS TESTING INTEROPERABILITY OVER ROMANIA

On August 24, NATO Allies conducted verification testing above Romania on how their air assets work together to protect NATO airspace with Integrated Air and Missile Defence (IAMD) assets.

This mission was extremely beneficial for all participating air forces to execute and achieve integration and interoperability

The verification test saw fighter and air-to-air refueling aircraft from France, Spain and Türkiye come together over Romania, improving the readiness and interoperability of NATO IAMD alongside additional assets such as surface-based air and missile defence (SBAMD) systems. During the mission, NATO Allied Air Command via the Combined Air Operations Centre at Torrejón oversaw the procedural test analysing how these assets can be brought to work together efficiently.

"NATO IAMD provides a highly responsive, time-critical and persistent capability to achieve a desired level of control of the air, this ensures the Alliance is able to achieve freedom of action to conduct the full range of its missions, safeguarding and protecting Alliance territory," said Brigadier General Christoph Pliet, Deputy Chief of Staff Operations at Allied Air Command. "This mission was extremely beneficial for all participating air forces to execute and achieve integration and interoperability," he added.

Once activated, SBAMD units provide their data into the NATO IAMD network which comprises national and NATO-provided sensors, command and control assets, and weapons systems. This joint and combined defensive network compiles the data received into one recognised air and missile picture. "The participating fighter jets operated out

of their home or deployed bases and flew in to Romania with the help of critical air-to-air refueling aircraft and integrated with in-place SBAMD units. This complex mission demonstrated that NATO and its Allies are capable of conducting long-range flexible deterrence options in addition to maintaining an overall posture ready to deter and defend every inch of NATO territory," General Pliet added.

NATO IAMD is a defensive component of the Alliance's Joint Air Power, which aims to ensure the stability and security of NATO airspace by coordinating, controlling and exploiting the air domain. It is an essential, continuous mission in peacetime, crisis and conflict, conducted using a 360-degree approach across NATO territory, and is prepared to address the full spectrum of threats.

Archive photo of a French tanker aircraft by the French Air Force



ALLIES CONTINUE TO SAFEGUARD NATO SKIES ON THE BALTIC SEA TOGETHER



On August 3, Portuguese and Romanian detachments at Šiauliai and the Royal Air Force detachment at Ämari ended their four-month tours safeguarding the airspace of NATO's Allies on the Baltic Sea and handed the baton to incoming detachments from Italy and Spain, respectively. Photo courtesy of the Lithuanian Air Force



Air Marshal Johnny Stringer speaks to an audience at Amari Air Base, Estonia during the Hand over Take over ceremony between the Royal Air Force and Spanish Air Force. Photo courtesy of Estonian Air Force

The Alliance's enduring Air Policing mission in the Baltic region continues as outgoing air force detachments hand over the responsibility to incoming Allies at Šiauliai, Lithuania, and Ämari, Estonia.

On August 3, Portuguese and Romanian detachments at Šiauliai and the Royal Air Force detachment at Ämari ended their four-month tours safeguarding the airspace of NATO's Allies in the Baltic Sea and handed the baton to incoming detachments from Italy and Spain, respectively.

At Šiauliai, Italy took over the responsibility from Portugal as Baltic Air Policing; Italian Eurofighters – after an 8-month deployment for the NATO enhanced Air Policing mission in Romania – will be securing skies above Estonia, Latvia, and Lithuania in the coming four months. This is the ninth Italian deployment to the Baltic region besides protecting their skies at home and above Albania, Montenegro, and Slovenia with their Eurofighters under NATO Air Policing arrangements. Earlier in the day, the Royal Air Force Typhoon detachment handed

their mission to incoming Spanish Eurofighters. The Spanish Air Force first deployed fighter jets to the Baltic Sea region in 2006 in support of both NATO's Baltic Air Policing and enhanced Air Policing – five times as lead nation and five times augmenting the mission – with their F-18s and the Eurofighter.

NATO and the Allies have been conducting Baltic Air Policing since April 2004 as a regional arrangement of peacetime Air Policing demonstrating the ability to share and pool existing capabilities. In 2014, enhanced Air Policing was introduced under NATO's Assurance Measures to demonstrate the collective resolve of Allies, show NATO's commitment to collective defence, and deter Russia from aggression or the threat of aggression against NATO Allies. Starting in February 2022, NATO has substantially increased the number of fighter jets on alert across Eastern Europe in response to Russia's unprovoked attack on Ukraine. In addition to the Air Policing mission, the Alliance has introduced Air Shielding efforts representing a long-term increase in the air and missile defence posture along the eastern flank of the Alliance.

THE ITALIAN AIR FORCE COMPLETED THEIR EIGHT-MONTH NATO AIR POLICING MISSION IN ROMANIA



Italy's Task Force "Gladiator" had completed their eight-month enhanced Air Policing mission in Romania, which concluded with a ceremony held at the Mihail Kogalniceanu airport on August 3.

Attending the prestigious ceremony had been Lieutenant General Achille Cazzaniga, Head of the Operations Department of the Italian Joint Operational Command (COVI), and Romania's Secretary of State for Defence, Mrs. Simona Cojocaru, who had reflected on the busy Enhanced Air Policing period.

It had been a demanding and very formative mission both from a personal and from a professional point of view. They had brought home the experience gained, passed on the lessons learned to those who had not had this opportunity, and had been bearers of the highest values of the Air Force, as they had been doing for 100 years.

Lieutenant General Achille Cazzaniga had addressed the men and women of the Italian Task Force, saying, "It had been a demanding and very formative mission both from a personal and from a professional point of view. They should bring home the experience gained, pass on the lessons learned to those who had not had this opportunity, and be bearers of the highest values of the Air Force, as they had been doing for 100 years now...". And, to Col. Massara, Commander of the TFA-R Gladiator, he had said, "...my personal thanks for the work done, you worked well and you were appreciated. Well done Antonino, your contribution to the security of NATO's skies had been of fundamental importance".

During the period of December 1, 2022, to July 31, 2023, Task Force "Gladiator" had flown over 1700 flight hours to support the defense of the Romanian skies, responding to numerous Quick Reaction Alerts while also participating in multiple NATO exercises, including Dacian Strike, Air Defender, and Neptune Strike.

Close Air Support missions had also been flown in support of an international Joint Terminal Attack Controller component, as well as training and integration with artillery fire, Personnel Recovery exercises in conjunction with rotary wing assets from the Host Nation and the US.

Lieutenant General Viorel PANĂ, Chief of Staff of the Romanian Air Force, had underlined that the Russian aggression in Ukraine had increased the risks and threats for Europe and NATO; therefore, cooperation through enhanced Air Policing and enhanced Vigilance Activity operations had become of fundamental importance for Collective Defence within the Alliance.

Enhanced Air Policing aims to strengthen the NATO collective defence in countries directly facing the eastern flank, sending a strong message that NATO remains united from east to west and north to south and ready to deter and, if necessary, defend its territory against any aggression or threat of aggression.

Photo: Gian Carlo Vecchi & Adrian Sultănoiu



Italy's Task Force "Gladiator" completed their enhanced Air Policing mission in Romania, which concluded with a ceremony held at the Mihail Kogalniceanu AFB on Aug 3

NATO ALLIES COOPERATE 24/7 SAFEGUARDING ALLIED SKIES



Romanian Air Force F-16 fighters from NATO's Baltic Air Policing mission escorted the MMU A-330 MRTT plane in Lithuanian airspace. Photo by Arnaud Chamberlin

International media on-board an A-330 MRTT aircraft saw first-hand how NATO Allies collectively conduct NATO's Air Policing day in day out preserving the integrity of NATO airspace and safeguarding Allied skies. The Swedish Air Force also joined the flight demonstrating cooperation and interoperability with the Allies.

Allied Air Command (AIRCOM) in close cooperation with the Multinational Multi-Role Tanker Transport (MRTT) unit (MMU) and the European Air Transport Command (EATC) conducted the media flight with an MMU A-330 MRTT aircraft on July 4, 2023. The Grand-Duchy of Luxembourg sponsored the flight, and the Combined Air Operations Centre (CAOC) at Uedem, Germany, coordinated the fighter activity with the Nations.

"Besides the enduring Air Policing mission, NATO and the Allies have been focusing on a further increasing of our ability to coordinate and execute complex multinational deterrence and defence operations," said Major General Harold Van Pee, Commander of NATO's northern

Combined Air Operations Centre at Uedem, who joined the flight. "We conduct enhanced Vigilance Activities in compliance with international laws and standards. They are a clear expression of NATO's commitment and readiness to enhance regional security and stability," General Van Pee added.

During the flight from Eindhoven via Šiauliai Air Base and back, virtually around the Baltic Sea, Allied fighter jets from eight nations and Partner Sweden simulated aerial interceptions of the A-330. Several of the fighters conducted air-to-air refueling with the plane showcasing how NATO's interoperable and interconnected air forces manoeuvre closely coordinated across borders in a safe, defensive and professional manner.

While stopping over at Šiauliai Air Base, the international journalists visited the Portuguese and Romanian fighter jets currently deployed in Lithuania patrolling the skies above the Baltic Allies and demonstrating Alliance cohesion and commitment.

"Today NATO and our Allies demonstrated to you that Allied Air Power

has the capability, readiness and legitimacy to defend the territorial integrity of NATO Nations particularly on the eastern flank," General Van Pee summarised the flight. "Together, we are going to continue promoting peace and stability as a unified Alliance across the Euro-Atlantic area. You have seen what our capable, professional and interoperable air forces are able to achieve in support of the NATO Alliance's overall aim to protect the people in our member countries," he concluded.

On behalf of the Supreme Allied Commander Europe, NATO's Allied Air Command, via its two CAOCs at Uedem, Germany, and Torrejon, Spain, conducts Air Policing in order to safeguard the airspace over European NATO Allies. NATO's CAOCs initiate and monitor all launches of NATO-assigned Quick Reaction Alert (QRA) (I) and report to AIRCOM where all information about intercepts are registered. With this task, the air forces of the Allies under NATO command and control reliably ensure security and protection while at the same time demonstrating a credible capability to deter potential aggression and, if necessary, defend NATO members' territorial integrity.



Two Royal Netherlands Air Force F-16s were the first jets to simulate the intercept of the MMU A-330 MRTT aircraft after taking off from Eindhoven, the Netherlands Photo by Arnaud Chamberlin



Some fighters, like this Royal Air Force Typhoon jet conducted air-to-air refueling demonstrating this critical enabling skill for NATO Air Power. Photo by Arnaud Chamberlin



Swedish Air Force JAS-39 Gripen fighters demonstrated their close cooperation and deep interoperability with NATO Air Forces. Photo by Arnaud Chamberlin

NATO ALLIED AIR FORCES CONDUCT ELECTRONIC WARFARE EXERCISE IN BALTIC SEA REGION



Ramstein Guard concentrates on the employment of defensive self-protection measures to overcome interference that would impact on the Alliance's ability to conduct the tracking operations necessary to maintain a recognised air picture. Archive photo

From July 17 to 21, Exercise Ramstein Guard offered an opportunity to Allied forces in Lithuania to conduct Electronic Warfare (EW) drills exercise under the command and control of NATO's Combined Air Operations Centre in Uedem (Germany).

We hugely benefited from training with our Allies and applied common tactics, techniques, and procedures.

Exercise Ramstein Guard was a NATO-sponsored electronic warfare exercise series coordinated by Supreme Allied Command Europe and included in the NATO Electronic Warfare Force Integration Programme (NEWFIP). The Exercise series was designed to improve the effectiveness and capability of the NATO

Integrated Air and Missile Defence System (NATINAMDS) units and trained Allied forces to operate effectively in a hostile EW environment.

The July iteration involved the use of a ground-based jamming station and an electronic jamming aircraft to train forces to operate in an adverse EW environment while providing timely briefings and reports using surveillance radars. Ramstein Guard exposed Allies to a wide variety of EW tactics in a controlled environment and provided integrated and coordinated training to operate in hostile electromagnetic environments.

"We are conducting exercise Ramstein Guard 2023 just after the NATO Summit held at our Capital, and I am proud of my troops who have prepared

intensively and are motivated to complete their tasks. We are hugely benefiting from training with our Allies and applying common tactics, techniques and procedures. Our surveillance radar operators will learn to adapt to a real-time EW environment. It will be important for us to accomplish training on how platoons interact with tactical operations centres," said 1st Lieutenant Aleksas Vaikutis, Commander of the Lithuanian Surveillance Radar Battery.

"We conduct this exercise about 12 times a year to provide tailored training in an electronic warfare environment to Allied forces all over Europe," said Lieutenant Colonel Fredrik Thomter, project officer at Allied Air Command responsible for scheduling the exercise series.

"This is actually more of a continuous training programme the Alliance offers to forces assigned to NATINAMDS," he added.

The focus of the exercise had been on maintaining command, control, and information transfer between NATINAMDS units. Specifically, this exercise had concentrated on the employment of defensive self-protection measures to overcome interference that could have impacted on the Alliance's ability to conduct the tracking operations necessary to maintain a recognised air picture.

NATO Allies take every opportunity to train together, demonstrating Alliance cohesion and interoperability across all domains



The primary jamming platforms utilized in this year's Ramstein Guard exercise included the Dassault Falcon 20 aircraft (right) operated by the British civil contractor Draken Europe and the cutting-edge STARKOM mobile communication jammer mounted on the Tatra Force 8x8 chassis (left), employed by the Opava 532nd Electronic Warfare Battalion. Photo: 212th Tactical Squadron and Army of the Czech Republic





Transmitting and exchanging tactical data fast and in a secure manner is key to Allied air operations in support of deterrence and defence missions over NATO territory. Also known as military Wifi, Link 16 operations are used by NATO forces to transmit and exchange real-time tactical data across different networks. Photo courtesy Portuguese Air Force

NETHERLANDS SUPPORT NATO INFORMATION EXCHANGE IN THE BALTIC SEA REGION

The Royal Netherlands Air Force has deployed a National Data Link Management Cell (NDMC) to Rukla in Lithuania for the next months to ensure NATO Allies deployed in the Baltic region can exchange and share operational information.

"We deployed the NDMC at the request of Allied Air Command in Ramstein, Germany," said General Onno Eichelsheim, the Netherlands Chief of Defence. "Our intention is to contribute to the tactical data

link network that is crucial for NATO's air operations in the region; I also see the opportunity to work with Lithuania through knowledge transfer so that this country can build its own data link management capacity," he added.

The NDMC supports so-called Link 16 operations; it operates as the Baltic Regional Interface Control Cell (BRICC), callsign "Time Bandit". The BRICC enables planning, coordinating, managing and controlling Link 16 networks that allows weapon

platforms and units to exchange information during operations. The container-based equipment offers a deployable capability worldwide wherever needed.

The Dutch NDMC will remain deployed in support of NATO air operations in the Baltic region until next year when Germany is scheduled to deploy a similar unit that will ensure seamless information exchange enabling NATO's deterrence and defence mission along the eastern flank.

NATO DEPLOYABLE RADAR SUPPORTS INTEGRATED AIR AND MISSILE DEFENCE IN THE NETHERLANDS



The DADR convoy ready to leave garrison at Poggio (up-left) and NATO's DADR site at Leeuwarden with the system in full configuration (down-left). Besides static radar stations, the DACCC's deployable systems together with NATO AWACS and NATO AGS airborne systems play a central role in monitoring airspace and controlling military operations. Photo courtesy DACCC



NATO has set up one of the Deployable Air Defence Radars (DADR) assigned to the Deployable Air Command and Control Centre (DACCC) at Leeuwarden Air Base, the Netherlands to further improve sensor coverage and capacity in the region maintaining integrity of NATO-assigned airspace.

DACCC's Deployable Sensors Branch has two DADR systems and two Deployable Passive Emitters Trackers (DPET) which they use to provide sensor data to the DACCC and therefore to the Alliance

"Radar is an essential element of NATO's air defence capability, enabling full interoperability in peacetime and during multinational operations," said Major General Denny Traas, Commander of the DACCC. "These sensors can be used for exercises and real operations inside or outside the garrison to provide air surveillance," he added.

NATO's and the Allies' air command and control depends on coverage through active and passive detection capabilities that provide a Recognised Air Picture. Besides static radar stations, the deployable systems of the DACCC together with the assets of NATO's Airborne Early Warning and Control System (NATO AWACS) and the NATO Alliance Ground Surveillance System (NATO AGS) play a central role in monitoring airspace and controlling military operations.

These assets demonstrate NATO's ability to facilitate multinational cooperation and reap the benefits that pooling resources can bring. They are key to ensuring NATO fighters, missiles and sensors are employed efficiently.

NATO DRONE UNIT HAS PROVIDED HUNDREDS OF FLYING HOURS COLLECTING CRITICAL INTELLIGENCE FOR THE ALLIANCE



The NATO RQ-4D High-Altitude Long-Endurance aircraft are launched and controlled from Sigonella Air Base. They operate at a flight level above 50,000 feet – well above civilian air traffic – over NATO Allies' territories and international waters. Archive photo courtesy NAGSF



An RQ-4D being towed at the AGS Main Operating Base at Sigonella, Italy. NATO operates a fleet of these drones which are key contributors to Alliance situational awareness. Archive photo courtesy NAGSF

Since the beginning of 2022 and Russia's invasion of Ukraine, NATO's Alliance Ground Surveillance Force (NAGSF) has conducted many missions and accumulated hundreds of flying hours on the eastern flank. Flying at high altitudes above Allies territories and in international airspace, the NAGSF RQ-4D remotely piloted aircraft collected hundreds of Intelligence, Surveillance and Reconnaissance (ISR) data sets that are used by all Allies to prepare activities supporting deterrence and defence of NATO member countries.

"The NATO RQ-4D is a key contributor to the situational awareness of the Alliance and the NAGSF team of multinational experts at the AGS Main Operating Base at Sigonella processes these ISR products and collates them with data from other sources," said Brigadier General Christoph Pliet, Deputy Chief of Staff Operations at Allied Air Command, Ramstein, where RQ-4D operations are controlled. "Final products are then distributed to the 31 member nations of NATO and used to

inform decisions for military operations to protect our Allies," he continued. "NAGSF is a prime example of member nations successfully working together to preserve the integrity of Allied territory," said Brigadier General Andrew Clark, NAGSF Commander. "We will continue exploiting our unique and critical capability to deter our adversaries and defend the Alliance," he added.

NAGSF regularly operates their RQ-4Ds during extended missions and makes legitimate use of international airspace. Succeeding in military operations requires continuous and comprehensive situational awareness. NAGSF is an asset NATO employs to achieve an understanding of movements in the air, on land or at sea, to enable our planning, concept and effective operations. As NATO's intelligence hub, NAGSF collects, collates, exploits and distributes products that further enable us to prepare and react appropriately to changes in the security environment at the tactical, operational and strategic levels.

NATO SURVEILLANCE DRONE CONDUCTS FIRST MISSION OVER FINLAND

On September 13, 2023, a NATO surveillance drone concluded a flight over Finland, the Alliance's newest member. The unmanned aircraft, traveling at high altitudes above Allies' territories and in international airspace, collected data for Allies to support their collective deterrence and defence.

This mission was the first time a NATO Alliance Ground Surveillance Force (NAGSF) RQ-4D drone flew over Finland. This mission came as NATO Air Forces continue to step up their reconnaissance missions on the Alliance's eastern borders in the wake of Russia's full-fledged war against Ukraine. Since 2022, NATO's fleet of Alliance Ground Surveillance drones has conducted multiple missions on the Alliance's eastern flank, predominantly in the Black Sea region. The flight on September 13 also helped NAGSF operators to familiarise with the new terrain.

Nicknamed "Phoenix", the RQ-4D remotely piloted aircraft are among the world's most advanced drones, providing intelligence, surveillance and reconnaissance over a wide area. The NATO-owned and operated aircraft are based in Sigonella, Italy and can stay in the air for more than 30 hours at a time. Surveillance and reconnaissance data collected by the aircraft and analysed by NAGSF experts are made available to all Allies to inform Alliance decision-making processes.



NATO AGS pre-flight preparations at Sigonella for the first flight of an RQ-4D Phoenix aircraft over Finland. Photo by Fernando Sanchez Arjona



INTEGRATED BY DESIGN – NATO AIR FORCES PRACTICE COMBINED AERIAL DRILLS IN LITHUANIA

Allied aircraft from Italy, Spain and Lithuania flew training missions above Lithuania on September 12, simulating close formation flight and aerial combat drills to demonstrate combined capabilities in support of NATO deterrence and defence.

A Lithuanian Air Force C-27 transport aircraft took off from Siauliai Air Base and conducted the training with Italian and Spanish Eurofighters to enhance pilot skills and readiness to execute combined missions.

According to a NATO official at Allied Air Command at Ramstein, Germany, integrated and combined training events are an excellent opportunity for Allied aircrew and are also beneficial for aircraft controllers who make sure the training is conducted safely and professionally.

Four Italian Eurofighters are presently deployed in Lithuania leading NATO's Baltic Air Policing mission securing the skies over the three Baltic Allies. During the training,

two of the jets were joined by two Spanish Eurofighters which are augmenting the enduring Allied mission out of Āmari, Estonia.

"To us it is key that we regularly train in a combined – that is multinational – setting," said Colonel Federico Sacco Maino, Commander of the Italian Eurofighter detachment at Siauliai. "Our pilots gain a lot of experience during missions like the one conducted on September 12. The experience to work with our professional colleagues from Lithuania and Spain enhances our skills and showcases we are stronger together," he added.

"What is important here is that our forces are training in an integrated multi-domain manner. We train as we fight to make sure we are ready to function when required," said Lieutenant Colonel Luis Borque Torres, Commander of the Spanish Eurofighter detachment at Āmari.

Besides ensuring the territorial integrity of NATO airspace in the region and

providing a 24/7 response capability, Italy and Spain make time for constant training. Drills are conducted not only with Lithuanian or other regional air forces, but also with Allied ground forces for example during Air-Land Integration manoeuvres with the deployed NATO enhanced Forward Presence battlegroups practicing Close Air Support with Joint Terminal Attack Controllers.

Since 2004, with Estonian, Latvian and Lithuanian accession NATO, Allies have taken turns to safeguard the skies along the Baltic Sea with fighter aircraft deployments. Initially flying jets out of Siauliai only, the Alliance – after Russia's occupation of Crimea in 2014 – added Āmari, Estonia, as a second Air Policing base. In addition to the enduring Air Policing mission, NATO augmented its deterrence and defence posture after Russia's war in Ukraine significantly increasing its presence along the eastern flank.

Photos by Giovanni Colla.



COMMAND AND CONTROL OF ALLIED AIR OPERATIONS CONTINUES DURING MAJOR STRATEGIC NATO EXERCISE

For two months, the German Joint Force Air Component or JFAC – under arrangements of the NATO Response Force – takes over command and control of Allied air operations from Allied Air Command enabling the staff to prepare for and participate in an annual major NATO command post exercise.

"Exercising is important and key for all NATO forces and command and control entities. It is a constant process that empowers the experts the Nations make available to NATO's integrated command structure to accomplish their mission in support of Alliance operations," said Brigadier General Christoph Pliet, Deputy Chief of Staff Operations at Allied Air Command. "That is why AIRCOM appreciates the offer from to assume our role of overseeing real-world operations as long as our staff undergo proficiency training in their specialised skills during the strategic NATO exercise Steadfast Jupiter," he added.

Since Russia started its brutal war against Ukraine, AIRCOM has stood up and operated the NATO Command Structure JFAC at Ramstein, Germany. The JFAC is manned with international experts who plan, coordinate and control Allied air operations along the eastern flank involving thousands of sorties of Allied fighter, tanker, transport, intelligence and surveillance and airborne control aircraft ensuring credible deterrence and defence for the Alliance.

Besides the NATO Command Structure JFAC at Ramstein, several nations have established NATO Force Structure (NFS) JFACs that are trained and stood up to serve as command and control unit for the NATO Response Force. The German JFAC has this responsibility for the NATO Response Force 2023.

"Taking over the real-world operations from AIRCOM temporarily is what the German JFAC is well prepared for," said Brigadier General Holger Radmann, Director of the German JFAC HQ. "We went through a comprehensive preparation and

successfully completed a NATO certification process. During the German-led multinational "Air Defender 23" we prepared, planned, coordinated and executed live-fly operations with 25 Nations and 250 aircraft," he added.

"The possibility to assign command and control of our real-world operations to the capable German JFAC for two months demonstrates three things," said General Pliet. "First, NATO's Air and Space Power has comprehensive resilience and can both flexibly handle critical training requirements and provide sustained command and control for ongoing air operations. Second, as a culmination of its preparation process, DEU JFAC has the capacity to apply common NATO Tactics, Techniques and Procedures for combined air operations in a sustained manner. Third, the arrangement turns into practice the requirements of the NATO Response Force and demonstrates the reliability, credibility and capability of NATO Air and Space Power," he concluded.

COLLABORATION AND COOPERATION ARE TOPICS DURING INAUGURAL CONFERENCE ON SPACE

Stakeholders from 21 nations and 15 organizations participated in the inaugural Space Operations Commanders' Conference at Allied Air Command. Photo by Arnaud Chamberlin



NATO and Allied stakeholders from 21 nations and 15 organizations participated in a historic conference at Allied Air Command. The inaugural conference was convened by the NATO Space Component Commander who hosted 75 participants including 30 General Officers and a three-time in space Italian astronaut. They all met on September 6 and 7, 2023, to debate on how to enhance the Space domain through collaboration, cooperation and information exchange.

"The Space Operations Commanders' Conference was a truly historical event as for the first time we convened such a comprehensive group of Space domain stakeholders from Nations and NATO organisations focusing on operations," said Colonel John Patrick, Director of the NATO Space Centre. "We had excellent exchanges, including discussion about responsible behaviour in Space which also involves the increasing number of objects in space and how to protect Allied Space systems," Colonel Patrick added. The two-day conference at Ramstein was a kick-off event and will be held annually underscoring

the need to strengthen Space efforts and collaboration in a high-level Alliance forum.

"Space, as one of NATO's operational domains, is essential for deterrence and defence," said Colonel Patrick. "It enables and impacts on our navigation and the tracking of forces, satellite communications and detection of missile launches. Evolution in the use of Space and rapid advances in technology create new opportunities, but also impose risks for the Alliance. That is why coordination and cooperation among Allies Space stakeholders is so important, and we are facilitating this process with our conference," he added.

The NATO Space Centre, hosted at Allied Air Command, is staffed with a multinational team of Space experts. It collaborates with Allies and partner nations to provide Space-related products and services in support of NATO operations, missions and activities and helps coordinate Allied Space activities, support NATO missions and operations from Space and enhance Alliance deterrence and defence by sharing information about potential threats.



GERMAN PATRIOT TASK FORCE HELPS PROTECT NATO'S EASTERN FLANK

For more than 18 months, Germany has forward-deployed an Air and Missile Defence Task Force comprised of Phased Array Tracking Radar to Intercept on Target – in short PATRIOT – systems supporting NATO's deterrence and defence mission along the eastern flank and executing enhanced Vigilance Activities.

Besides a PATRIOT deployment to Sliac in Slovakia until the end of June 2023 under the enhanced Vigilance Activities Battlegroup, Germany deployed another PATRIOT Air and Missile Defence Task Force to Zamość in Poland.

"Russia's war against Ukraine, especially the missile that hit the Polish village Przewodow in November 2022, has shown that the protection of NATO airspace along its eastern flank is of utmost importance", said Colonel Jan-Henrik Suchardt, commander of the German Air and Missile Defence Task Force in Poland. "The deployment of our PATRIOT Air and Missile Defence Task Force demonstrates Alliance solidarity and Germany's unbroken commitment by providing efficient defensive capabilities to our exposed Allies," Colonel Suchardt added.

After an expedited deployment to Poland, the three German PATRIOT firing units and one support unit at Zamość reached full operational capability on January 20, 2023, establishing a posture that allows the protection of Polish airspace and critical infrastructure near Zamość. The German PATRIOTs are firmly embedded in the Polish air defence, which in turn is tied into NATO's



Integrated Air and Missile Defence architecture protecting Alliance populations and territory.

The Polish defence authorities certified the German PATRIOT Task Force to NATO standards the same day and the PATRIOTs have since been participating in integrated air and missile defence training activities on an almost daily basis. To ensure 24/7 operational readiness, the 350-strong Task Force works 12 and 24-hour shifts and work closely and seamlessly with their Polish and other Allied air defence forces.

During NATO's Summit in Vilnius in July, Germany ended the deployment to Slovakia

and relocated the PATRIOTs to Vilnius International Airport as an integral component of NATO's integrated air and missile defence for the high-value event.

In the wake of Russia's brutal war against Ukraine, NATO has considerably increased its collective defence capabilities e.g. by enhanced Vigilance Activities. All Allied assets contributing these activities are fully integrated and coordinated underscoring commitment and readiness. The German PATRIOT Air and Missile Defence Task Force is but one element of this collective defensive effort.

Photo courtesy Bundeswehr

Two German PATRIOT launcher units during sunrise in Poland. The systems have regularly participated in integrated air and missile defence training activities



CZECH-LED EXERCISE AMPLE STRIKE

The Czech-led exercise Ample Strike offers multinational JTAC training and has been an integral Air-Land Integration event in the Allied exercise calendar. Photo by Inka Budikova

For the tenth time, the Czech Armed Forces hosted the traditional exercise Ample Strike which offered training opportunities for Joint Terminal Attack Controllers (JTACs) at the multinational level.

"Called AMSE Lite 2023, this year's edition of the multinational air-land exercise Ample Strike saw a rather limited number of participants, but it has for sure maintained its ambitions to offer challenging, intense and realistic training for JTACs," said Ample Strike Exercise Director Colonel Aleš Čápal. "From September 11 to 15, we have once again verified interoperability of air power, JTACs and land forces," he added.

The scenario seeks to achieve the same objective: to integrate JTAC activities with aircrews and tactical commanders on the ground in a multinational environment. Around 300 Czech service members and more than 60 colleagues from NATO Allies Germany, Poland and the United States were grouped

into four JTAC teams controlling over 190 successful runs onto targets with air support involving five rotary wing aircraft, six fixed wing aircraft and three tankers. Allied pilots logged over 110 flight hours.

Scenarios were executed at the Boletice Military Training Area, and supporting aircraft took off from 22nd Helicopter Air Force Base Náměšť, 21st Tactical Air Force Base Čáslav and from Pardubice airfield.

Live-fly air support including air-to-air refueling for AMSE Lite 2023 was performed by Czech Air Force L-159 ALCA light fighters, German Air Force Eurofighter jets and an A-400 tanker aircraft, and United States F-16 fighters, AH-64 helicopters and a KC-135 tanker. The Multinational Multi-Role Tanker Transport Unit (MMU) contributed an A-330 MRTT tanker offering an additional in-flight refueling capability.

"As a premiere during this year's edition that we practiced dropping GBU12 laser

guided bombs from an L-159 aircraft onto targets that were laser designated by a U.S. AH-64 helicopter. For the first time in the history of the Czech Air Force we exploited this multiplying effect of using advanced assets in the battlefield," underlined Exercise Air Operations Director, Captain Pavel Staněk.

"I am proud to say that Czech JTACs were able to control the use of two GBU-12 bombs on two different targets at the same time, which is also a remarkable achievement. This is not something you train every day," admitted a Czech JTAC.

"During so-called Hot-Pit refuelling, U.S. Air Force F-16 fighter jets received gas on the flight line with engines running was rehearsed at Náměšť. This was an excellent opportunity for our Czech ground crews to see these expeditionary procedures also with a view of support Agile Combat Deployments of our Allies down the road," said the Exercise Director Colonel Aleš Čápal.



A Czech AH-12 Viper attack helicopter firing in support of JTAC training during exercise Ample Strike 2023. Photo by Inka Budikova

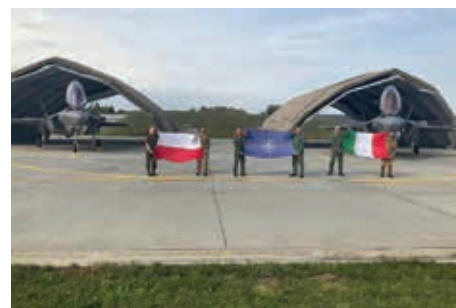


During so-called Hot-Pit refueling, U.S. Air Force F-16 fighter jets received gas on the flight line at Náměšť Air Base with engines running practising the Agile Combat Employment concept. Photo by Inka Budikova

ITALY DEPLOYS F-35 FIGHTERS TO POLAND IN SUPPORT OF NATO DETERRENCE AND DEFENCE

The first two Italian F-35A fighter jets arrived at Malbork Air Base on September 13, 2023. The jets - augmented by two other aircraft - will patrol the skies over the European eastern flank.

"The deployment of modern 5th generation fighter aircraft to Poland – just half a year after the end of a similar deployment by Royal Netherlands Air Force F-35 – demonstrates NATO's ability to forward position advanced fighter capabilities in a flexible manner," said Major General Gianluca Ercolani, Chief of Staff at Allied Air Command. "It is another proof of



the fact that Allies are operating integrated by design under efficient air command and control arrangements to execute meaningful deterrence and defence along the eastern flank," he added.

"With the offer of our 5th generation fighter aircraft to NATO, we underscore that Italy is fully committed to supporting the Alliance's collective enduring missions", said Lieutenant Colonel Ciro Maschione, Commander of the Italian F-35 Detachment "Task Force Air – 32° Wing". "Since 2019, the Italian Air Force has seamlessly deployed their F-35s to NATO Air Policing and Air Shielding missions in Iceland and Estonia – as a matter of fact our Eurofighters are leading the 63rd rotation of NATO's Baltic Air Policing in Lithuania in parallel to this F-35 deployment", he added.

The Italian Air Force F-35s will conduct familiarization flights and will establish a full operational capability in the coming days after the deployment of the others two F-35s. Besides joining Polish and other regional fighters in flying NATO Air Policing



missions, they are also scheduled to contribute to flexible training missions the Alliance conducts under its enhanced Vigilance Activities.

Italy was the first Ally to deploy their F-35s to a NATO mission - in Iceland – trailblazing the integration of modern 5th generation aircraft into Alliance air operations alongside the Netherlands, Norway, the United Kingdom and the United States.

Photos: Italian Air Force

ITALIAN F-35 CONDUCT FIRST LAUNCH OUT OF MALBORK AIR BASE UNDER NATO ENHANCED AIR POLICING

In the afternoon of September 21, 2023, two F-35 of the Italian Air Force Task Force Air-32nd Wing executed their first alert scramble out of Malbork Air Base, Poland under NATO orders.

NATO radars picked up the tracks of Russian aircraft flying in international airspace over the Baltic Sea close to NATO borders. Launched by NATO's Combined Air Operations Centre at Uedem to investigate the incident, the Italian F-35s intercepted and identified two Russian Federation Su-30 FLANKER fighter jets which were not on a flight plan and had not contact to Air Traffic control.

Upon identification, the F-35s escorted the Russian jets towards national Russian borders. The encounter was conducted in a professional manner and the NATO F-35/ returned to Malbork Air Base upon completion of the mission. At no time did the Russian aircraft enter NATO airspace.

NATO fighter jets regularly launch for such routine missions along the Alliance's borders e.g. on the Baltic Sea shores to keep Alliance populations and territories protected.

The Italian F-35 detachment, called Task Force Air 32nd Wing, is currently deployed in Poland under NATO's enhanced Air Policing available 24/7 to support Alliance deterrence and defence activities.



Aircraft ground crew finalising aircraft mission preparations for the first Italian F-35 alert scramble at Malbork, Poland. Photo by Stefano Lulli, Italian Air Force



An Italian F-35 taxis for take-off at Malbork, Poland. NATO's enhanced Air Policing mission underscores commitment and cohesion among Allies and ensures deterrence and defence. Photo by Stefano Lulli, Italian Air Force



F-35A TOUCH DOWN ON HIGHWAY DEMONSTRATING AGILITY AND FLEXIBILITY

On September 21, two Norwegian F-35As landed on a highway in Tervo, Finland. This is the first time a Lockheed Martin F-35A fighter jet landed on a highway.

The fighter jets landed around 04:00 PM local time on a motorway in Tervo, after taking part in joint training with Finnish F-18s. Immediately after landing, refueling was carried out with the engines running - a so-called "hotpit refueling". Shortly after the F-35s took off and were ready for new missions.

The aircraft type is delivered in several variants. This Royal Norwegian Air Force F-35 landing on a Finnish motorway is a first-time event for this aircraft type. The US has previously landed on highways with some of its F-35Bs, but this is a so-called STOVL version (short takeoff / vertical landing), which can land more or less vertically, for example on aircraft carriers and roads.

"This is a milestone, not only for the Norwegian Air Force, but also for the Nordic countries and for NATO. This demonstrates our ability to execute a concept of dispersal. Fighter jets are vulnerable on the ground, so being able to use small airfields – and now motorways – increases our survivability in war. In addition, this is also a demonstration of the exciting development we have initiated within the military-air cooperation in the Nordic region," said Major General Rolf Folland, Chief of the Royal Norwegian Air Force.

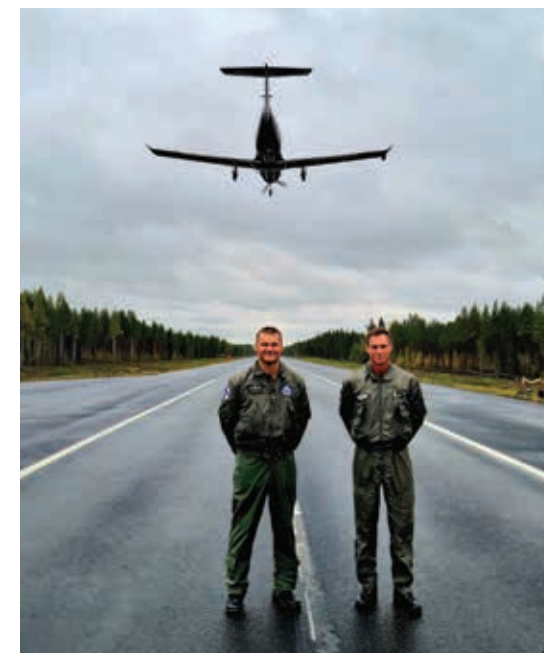
"F-35As operating out of Tervo road base verifies that the F-35 is suitable for

the Finnish Air Force's dispersed operations combat method," said Major General Juha-Pekka Keränen, the Commander of the Finnish Air Force.

The Arctic region carries significant strategic interest: maritime routes, resource access, climate conservation, and territorial claims, the High North is an important priority for NATO. NATO is increasing its presence and vigilance across the Alliance including in the High North. With strength and unity, NATO and the Allies continue to deter aggression, protect common values and interests, and keep people in the member States safe.

"With Finland's entry into NATO and Sweden's imminent membership, the Nordic countries have a particular responsibility for developing and coordinating NATO's deterrence in the northern regions" said Norwegian Defense Minister Bjørn Arild Gram.

The F-35 combat aircraft holds unique characteristics that make it one of the best combat aircraft ever built. Up until the summer of this year, the F-35 nations accumulated over 650,000 flight hours. The F-35 can operate from many bases and locations, but the limitations are related to how long the aircraft can operate without resupply of weapons, fuel and technical ground support. Allies who operate the F-35 are testing and practicing common solutions including Agile Combat Employment and Aircraft Cross Servicing procedures. This cooperation between Finnish and Norwegian Air Forces is one example



Major General Juha-Pekka Keränen, the Commander of the Finnish Air Force and Major General Rolf Folland, Chief of the Royal Norwegian Air Force. Photo Courtesy The Finnish Air Force

NOTE: All the news for which the source is not indicated in the NATO AGENDA section (pages 4-17) have as their source the information provided by the Allied Air Command Public Affairs Office.

#WEARENATO

BALTICA 2023



— MISSION ACCOMPLISHED —

Story by Laura Baştorea

*Photos by Laura Baştorea, HesjaAir-Art
Photography, Bogdan Pantilimon, Laurențiu Turoi,
Adrian Sultănoiu*

In the timeframe of April to July 2023, the Carpathian Vipers detachment from the Romanian Air Force, comprising four F-16 multirole fighter aircraft and a contingent of 100 military personnel, executed a deployment to Šiauliai Air Base, Lithuania. During this period, they assumed responsibility for the reinforced Air Police Service in the Baltic States.



Air Policing operations in the Baltic States represent one of the five regional NATO Air Policing missions, alongside missions in the Eastern Adriatic, the Western Balkans, Iceland, and Benelux. This mission constitutes a collective duty carried out by NATO member states, entailing the continual presence of combat aircraft and their crews. The primary objective is to maintain a state of readiness known as Quick Reaction Alert (QRA) to swiftly respond to potential airspace violations within the Alliance member states.

Air Policing operations in the Baltic States are conducted as part of NATO's integrated air and missile defense network. This effort is coordinated by the Supreme Allied Commander Europe (SACEUR) and executed under the leadership of the Allied Air Command (AIRCOM), with operational oversight from the Combined Air Operations Center (CAOC) located in Uedem, Germany.

Over the course of the 122-day mission, the Romanian aircraft of the Carpathian Vipers detachment completed a remarkable 344 sorties, amassing a total flight time of nearly 600 hours. The very first interception mission was conducted during the initial week of assuming responsibility from our French partners.

Throughout the four-month deployment, the F-16 fighter jets maintained a specific state of battle readiness known as Readiness Status (RS). They stood at the ready 24/7, prepared to respond at any hour of the day or night. The Combined Air Operations Center (CAOC) in Uedem, Germany, possessed the authority to issue orders for intercept missions against aircraft attempting unauthorized entry into NATO airspace. The Romanian aircraft's execution of operational tasks was directly tied to the response to 25 alerts transmitted by the NATO Air Operations Center in Uedem, Germany.

The detachment's mission revolved around safeguarding the airspace integrity of the Baltic States, signifying a vital element of NATO's unwavering commitment to its member nations. The F-16 fighter jets maintained a continuous vigil, offering early warning and intervention capabilities to clarify the aerial situation. They employed lawful measures to deter and address any aircraft attempting unauthorized entry into Baltic airspace.





The repatriation ceremony for the soldiers of the Carpathian Vipers detachment occurred on August 8th at the headquarters of the 86th Air Base "Lieutenant Aviator Gheorghe Mociorniță" in Borcea. This marked the successful culmination of the Romanian F-16 aircraft's maiden deployment in a theater of operations for the execution of a NATO mission. During the ceremony, the leadership and members of the detachment received congratulations from various dignitaries, including the Minister of National Defense, Mr. Angel Tîlvăr, the Deputy Chief

of the Defense Staff, Lieutenant General Gheorghîță Vlad, the Deputy Commander of the Joint Forces Command "General Ioan Emanoil Florescu," Brigadier General Cătălin Băhneanu, and the Chief of Staff of the Air Force, Lieutenant General Viorel Pană. "In the approximately 600 flight hours logged during our deployment in Šiauliai, encompassing over 20 real Air Police missions and numerous training and instructional flights, you have demonstrated your unwavering professionalism. Moreover, you have underscored Romania's

resolute commitment to its role in the NATO collective defense framework. Just as the air forces of our allied nations have joined us within our borders to bolster their own airspace defense efforts, the Romanian Air Force, for the second time, has contributed to the air defense of our three Baltic allies from the Šiauliai Air Base," remarked the Minister of National Defense during the ceremony. Highlighting the current contribution of the Romanian contingent to safeguarding the airspace integrity of the Baltic States, Lieutenant General

Gheorghîță Vlad also recalled Romania's prior mission in 2007 to reinforce the Air Police Service in the Baltic skies. He emphasized the importance of Romania's consistent and continuous participation in international commitments as a testament to their dedication in ensuring regional stability. Furthermore, he stressed that missions and training conducted within a multinational context serve as vital conduits for enhancing interoperability among military structures and fostering mutual trust among armed forces.

Among the speeches delivered during the ceremony, the closing remarks from the detachment commander carried profound emotion and resonance for each member of the detachment. The voice that once echoed over the airwaves in Šiauliai with the words, "Good morning, vipers!" now marked the conclusion of an unforgettable experience. Given its significance to the 100 members of the detachment, the message is presented in its entirety, allowing us to connect emotionally to this remarkable journey over time.

"Mr. Minister, esteemed generals, esteemed guests, dear colleagues,

I stand before you today with a heart brimming with pride and gratitude for how we, together with my comrades, have executed the entrusted mission. As the commander of the F-16 Detachment "Carpathian Vipers," it is my privilege to recount a tale of professionalism, collective dedication, and triumph. Over the past four

months, I've had the honor of leading an exceptional team of military aviators in the Enhanced Air Policing mission across the Baltic States. This mission will be etched in our memories for years to come, much like our proud recollections of Baltica 2007. Throughout this duration, we collectively experienced both challenging moments and professional fulfillment in equal measure. Together, we surmounted hurdles, gleaned wisdom from every task, and emerged as a stronger, more cohesive unit. Today, I wish to share some of the experiences and insights I've gained during this remarkable period.

First and foremost, I've learned that unity and mutual trust form the bedrock of any successful mission. Regardless of the challenges we encountered, it was our collective solidarity and unwavering efforts that allowed us to triumph. Each one of us brought our own unique skills and qualities to this team, and for that, I extend my heartfelt gratitude.

Secondly, I've come to appreciate that perseverance and unwavering determination are indispensable for accomplishing our objectives. Day in and day out, we committed ourselves to training, striving to enhance our abilities and continually push our personal limits. This relentless dedication served as the linchpin of our success throughout our mission.

We also extend our sincere gratitude to our colleagues at the 86th Air Force Base, the Air Force Staff, and the Joint Forces Command for their tireless efforts in promptly providing the necessary resources in the theater. Furthermore, we deeply appreciate the steadfast support and trust of our commanders. They not only guided us but also stood by us every step of the way, ensuring we were well-prepared and equipped with everything essential for our success. I would like to extend a special thought to those who remained on the home front, to our families and friends. Even though they were far away, they provided us with unwavering moral support throughout the mission.

Last but certainly not least, I want to express my gratitude to the Minister of National Defense for being here with us today. Your presence here is a testament to the sacrifices and efforts made by the soldiers of the detachment during this mission. We remain committed to serving with the utmost professionalism and dedication, and we appreciate your trust in the Air Force.

Ladies and gentlemen, today's ceremony marks a significant moment in the annals of Romanian aviation: the official conclusion of the mission of the F-16 "Carpathian Vipers" Detachment in the Baltic States. As we conclude this mission, I can confidently affirm that the first deployment of F-16 fighter jets to a theater of operations was an unequivocal success, setting a high standard for future Air Force missions.

On behalf of the dedicated airmen of the detachment, I am proud to report to you: mission accomplished!



"... you have demonstrated your unwavering professionalism; moreover, you have underscored Romania's resolute commitment to its role in the NATO collective defense framework." – Angel Tîlvăr, Minister of National Defense



In a retrospective view, moving in reverse chronological order, the subsequent significant event in the Carpathian Vipers detachment's mission history is the Handover-Takeover ceremony held on August 2, 2023. This ceremony unfolded at the Šiauliai Air Base in Lithuania, where Romania and Portugal formally transferred the reins of leadership for the 63rd rotation of the mission tasked with safeguarding the airspace integrity of the Baltic States, operating under NATO's command. Over the course of four months, from April to July, these two allied nations collaborated closely, with the Romanian detachment executing the Enhanced Air Police mission and the Portuguese detachment fulfilling the Air Police mission. During this ceremonial event, Colonel (AF) Cosmin Vlad, leading the Carpathian Vipers, and Major Tomás Virgilio, heading the Portuguese detachment, symbolically handed over the Key to the Baltic Airspace to their Italian counterparts. The key serves as both a symbol and a guarantee of NATO's steadfast commitment to ensuring the protection and integrity of member states against any conceivable aerial threat.

Among the attendees at this momentous occasion were Brigadier General Valerică Vrăjescu, the commander of the Joint Forces Command, as well as representatives from the Romanian Embassy in Vilnius, the Allied Air Command (AIRCOM), and delegations from Italy, Lithuania, and Portugal.



Brigadier General Valerică Vrăjescu, commander of the Joint Forces Command



Colonel (AF) Cosmin Vlad and Major Tomás Virgilio symbolically handed over the Key to the Baltic Airspace to the Italian allies



The final day of the Carpathian Vipers detachment's Enhanced Air Police mission in the Baltic States served as a moment of recognition for the commendable achievements and professionalism of the Romanian military, as well as the fruitful collaboration between these allied nations. Consequently, on July 31st, at Šiauliai Air Base, Lithuania, a mission completion ceremony was held, during which several military awards were bestowed. Lieutenant Colonel Eligijus Rukšnaitis, the commander of the Lithuanian base, honored all Romanian military personnel with the NATO medal for Air Police Missions in the Baltic States. In this celebratory atmosphere, underscoring the outstanding cooperation between the two nations, Colonel (AF) Cosmin Vlad, the detachment's leader, presented Lithuanian soldiers with the Emblem of Honor of the Air Force, an accolade conferred by the Chief of Staff of the Romanian Air Force. Additionally, numerous Romanian soldiers received well-deserved promotions to the next rank as scheduled.

The concluding ceremony of this four-month mission served as a testament to the unwavering professionalism and dedication displayed by the soldiers of the Carpathian Vipers. Pride and gratitude radiated from the eyes of all present. The inaugural deployment of F-16 fighters to a theater of operations was a resounding success and has set a high standard for future Air Force missions.

The base commander, Lieutenant Colonel Eligijus Rukšnaitis, awarded the NATO Air Police Missions in the Baltic States medal to all Romanian military personnel



"The accomplishments you and your comrades have achieved in missions here and in other theaters of operations, your exceptional professional qualities, and your unwavering moral fortitude exhibited day in and day out, even in arduous missions far from home and loved ones, have earned you the respect of your counterparts in the allied armed forces. And when you are respected, Romania is respected!"
— declared Minister Tîlvăr.

An noteworthy event that transpired during the execution of the detachment's mission was the NATO Summit, held this year in Vilnius, the capital of Lithuania. Carpathian Vipers played a pivotal role in enhancing the security of the Baltic States' airspace during the Summit by executing the reinforced Air Police mission alongside combat aircraft from various allied nations.

Directly following their participation in the Vilnius Summit, Minister Angel Tîlvăr, accompanied by the Chief of the Defense Staff, General Daniel Petrescu, and the Chief of the Air Force Staff, Lieutenant General Viorel Pană, paid a visit to the detachment on July 13th. The official delegation received a briefing on the NATO-led reinforced Air Police missions conducted by the detachment, toured the operational and accommodation facilities, and observed an alert exercise.

Minister of National Defense, Angel Tîlvăr, extended his heartfelt congratulations to all the Romanian military aviators for their unwavering professionalism in executing their missions, which included the crucial task of safeguarding airspace security during this year's most significant NATO gathering. In his address during the meeting, Angel Tîlvăr also referenced the high praises offered by the top representatives of allied nations during discussions with members of our delegation concerning the Romanian Army's soldiers. He emphasized,

The detachment's leadership subsequently provided officials from the Ministry of National Defense (MAPN) with an overview of the primary activities undertaken during the four-month mission, which included several joint exercises and training sessions conducted

alongside allied air forces, all yielding highly commendable results.

"The exercises and training sessions in which you actively participated were invaluable experiences in your individual career development, contributing significantly to enhancing the interoperability of the Romanian Air Force. As you return home, you do so not only as stronger and better-prepared professionals but also as highly motivated individuals poised to advance further in your already impressive careers," stated the Minister of Defense.

General Daniel Petrescu underscored that assuming the critical responsibilities of safeguarding allied airspace in the Baltic region, as part of the reinforced Air Police mission under NATO command, reinforces Romania's position as a steadfast ally and a cornerstone of stability on NATO's Eastern flank. He continued, "Through your real-world missions executed during the four-month deployment, and through your exceptional performances in joint exercises and training alongside some of the most advanced allied military aviation units, you have once again demonstrated the remarkable interoperability of the Romanian Air Force with similar structures within NATO. You have reaffirmed the exceptional value and professionalism of Romanian military aviators."

Within this official context, the Minister of National Defense and the Chief of the Defense Staff extended their congratulations to the detachment's commander, Colonel (Air Force) Cosmin Vlad, commending him for the exemplary professionalism he demonstrated while leading the mission. As a token of appreciation, an exchange of honorary plaques took place.



The planning and execution of the redeployment of the Romanian contingent represented a complex logistical undertaking. This operation demanded significant effort, meticulously coordinating the transportation of soldiers and military equipment. The transportation of the entire detachment was accomplished in a staged manner, employing two primary methods: land and air. By air, personnel, supplies, and military equipment were conveyed using C-17 Globemaster aircraft, supplemented by a C-130 Hercules aircraft flight. Overland redeployment was facilitated with the assistance of colleagues from the Joint Logistics Command, with a military convoy covering a distance of 2400 kilometers between Lithuania and Romania.



Throughout the NATO summit, the Air Police mission in the Baltic States received enhanced support from various allied states. Notably, the Finnish Air Force and the French Air Force temporarily stationed their assets at Šiauliai Air Base. Within this operational framework, Romanian and Portuguese pilots conducted joint missions alongside their counterparts flying F-18 Hornet and Dassault Rafale aircraft

During the execution of the reinforced Air Police mission in the Baltic States, the "Carpathian Vipers" detachment's pilots regularly conducted joint training exercises with military personnel from allied countries. One of the most noteworthy multinational air exercises of 2023 was Air Defender 23.

Within this exercise, Romanian pilots executed close air support missions in coordination with ground forces, working alongside a JTAC (Joint Terminal Attack Controller) in Lithuania's airspace. Lithuanian JTACs and detachment pilots simulated precision strikes on land-based targets and ensured the

security of Lithuania's territorial waters in the Baltic Sea under complex tactical conditions. The missions undertaken during Air Defender 23 significantly enhanced interoperability among the Allies, serving as a vivid demonstration of NATO's unity and its capacity for coordinated action.



On June 26th and 27th, the personnel of the Carpathian Vipers detachment were actively engaged in the second 2023 iteration of the Ramstein Alloy 23-2 (RAAL23) exercise. The participating detachments responsible for the Air Police mission in the Baltic States, along with military units from Lithuania, Latvia, Germany, and Turkey, were all part of this joint exercise

From June 26 to 27, the personnel of the "Carpathian Vipers" detachment actively participated in the second 2023 iteration of the Ramstein Alloy 23-2 (RAAL23) exercise. This exercise brought together not only the detachments responsible for executing the Air Police mission in the Baltic States but also forces from Lithuania, Latvia, Germany, and Turkey.

The training scenarios encompassed a variety of rapid reaction alert exercises, including situations such as loss of radio communication, combat search and rescue operations, interception of low-speed aircraft, close air support missions, and mid-air refueling exercises. The Ramstein Alloy exercise served as an exceptional opportunity to hone the skills of the participating forces in executing Air Policing missions while showcasing the high level of training, interoperability, and cooperation among NATO member states.

Another multinational exercise in which the "Carpathian Vipers" detachment actively engaged, from June 4 to 15, was BALTOPS 2023. With a history spanning over 50 years, BALTOPS is the preeminent

NATO maritime exercise in the Baltic region. This 52nd edition attracted participation from 19 allies, featuring 51 ships, 25 aircraft, and over 6,000 military personnel. Joint training exercises unfolded across the Baltic Sea region, encompassing the land and airspace of Germany, Poland, Estonia, Latvia, and Lithuania.

BALTOPS presented an invaluable opportunity for allied and partner nations to collaboratively train and assess their capabilities. NATO's air, land, and sea forces had the chance to evaluate the interoperability of their assets and capabilities. The exercise scenarios spanned various domains, including air defense, demining operations, explosive ordnance disposal, countermeasures against unmanned underwater vehicles, and medical response procedures. This rigorous training environment closely mirrored real-world operational conditions.

Participation in multinational exercises played a pivotal role in the training and professional development of the "Carpathian Vipers" detachment's pilots, particularly in air and anti-aircraft combat training activities.



The Romanian Aviation and Air Force Day was commemorated by the members of the "Carpathian Vipers" detachment through a military ceremony and a series of sports activities. This occasion is observed annually on July 20, coinciding with the celebration of the Holy Prophet Ilie Tesvitean, the spiritual patron and guardian of aviators. This year held special significance as it marked 110 years since the inception of the first Military Aeronautical structure—a cause for celebration not only for Romanian Aviation but especially for the military personnel who had the opportunity to observe it while serving on one of the Romanian Army's most crucial missions abroad.

Following tradition, the Force Category Day featured the organization of a military ceremony where several honors were bestowed. Exceptional members of the detachment were presented with the Air

Force Badge of Honor and the Emblem of Merit in the Service of the Romanian Army, 3rd class. During the ceremony, the F-16 aircraft operated by the Romanian detachment, in conjunction with their Portuguese counterparts, executed a flyover over the ceremony site, contributing to the commemorative atmosphere emblematic of the Air Force's anniversary.

The sports events arranged in honor of this celebration unfolded over two consecutive days and featured competitions in football, table tennis, and foot tennis. Invitations were extended to the Portuguese and Lithuanian partners to partake in these activities. The camaraderie shared among representatives from these three nations during the games transcended the final team rankings.



On July 4, the "Carpathian Vipers" participated in a comprehensive media event, known as NATO Media Day, organized by the Allied Air Command (AIRCOM) in collaboration with the European Air Transport Command (EATC). This activity, which preceded the NATO Summit in Vilnius, entailed a flight over the territories of countries bordering the Baltic Sea, including a stopover at the Šiauliai Air Base. Its objective was to illustrate how the Air Police mission is carried out by NATO member states. The Combined Air Operations Center (CAOC) in Uedem, Germany, orchestrated the flight operations of the participating aircraft during the interception exercises.

The event unfolded in several stages. Initially, international media personnel boarded an A330MRTT aerial refueling aircraft at Eindhoven, Netherlands, destined for Lithuania. Upon arrival at Šiauliai Air Base, journalists had the privilege of observing the alerting process for the Romanian F-16 aircraft, which were preparing for an Air Police mission. Additionally, a press conference was organized on this occasion, featuring the participation of representatives from both the Romanian and Portuguese detachments stationed at the base.

During the flight from Eindhoven to Šiauliai Air Base and the return journey over the Baltic



Sea, our fighter planes, alongside aircraft from seven other allied and partner nations—including the Netherlands, Germany, Poland, Portugal, Great Britain, Finland, Sweden, and Denmark—simulated aerial interceptions of the A-330MRTT aircraft.

This immersive experience provided approximately 30 international media representatives with a firsthand look at how allied nations collectively execute the Air Police mission in the Baltic States.



On June 30, the members of the 53rd Warhawks Fighter Squadron celebrated the day of this significant entity within Romanian aviation at the Šiauliai Air Base. Since 2016, the legacy of the 53rd Fighter Squadron, which notably achieved the remarkable feat of downing 52 Soviet aircraft during the 1941 Campaign while suffering only a single aerial defeat, has been carried forward by Romanian F-16 pilots. Presently, the 53rd Warhawks Fighter Squadron, part of the 86th Borcea Air Base, is equipped with the most advanced fighter aircraft in the Romanian Air Force. This distinguished unit, under the command of the General Staff of the Air Force, was thus chosen for the reinforced Air Police mission in the Baltic States. Consequently, 82 years after the pivotal date in the history of the 53rd Fighter Squadron, namely June 30, 1941, the squadron's commander, pilots, and technical personnel were actively involved in either defending the airspace of the Baltic States as part of the "Carpathian Vipers" detachment or maintaining control of the national airspace while operating from the 86th Air Base. In doing so,

they continued to uphold the storied legacy of the squadron whose name they proudly bear.

In accordance with tradition, the squadron paid tribute to the heroes of June 30, 1941, simultaneously commemorating the anniversary of this emblematic subunit of the Romanian Air Force. During the ceremony held for this purpose, Squadron Commander Colonel (Air Force) Mihăiță Marin underscored the significance of the occasion. While honoring the memory of the heroes of June 30, 1941, he also paid tribute to the trailblazers who authored enduring chapters in the history of Romanian Aviation. In his patriotic address, Colonel (Air Force) Marin passionately emphasized the importance of the current squadron members, both pilots and technical personnel, having the opportunity to contribute to history as their predecessors did during the Second World War. He urged them to take immense pride in being part of this symbolic unit within Romanian Aviation and to serve as genuine professionals who proudly represent Romania.



Another significant date on the Romanian military calendar was National Flag Day, commemorated each year on June 26. This occasion provided a fitting moment to pay tribute to the significance of the nation's most prominent symbol and to honor the memory of those who served under the same flag, accompanying us on a mission far from our homeland. In this spirit, the youngest member of the detachment, Military Foreman 5th Class Cătălin Mușat, was symbolically presented with a national flag that had flown over the Baltic States by the most experienced technician, Senior Military Foreman Mihai Constantin. He received an order from the commander to uphold it with honor throughout his military career. The commander's initiative infused an even greater sense of patriotism into the moment, which resonated with all the gatherings and actions during the mission.



The Romanian flag was raised at Šiauliai Air Base on April 1, where it proudly flew alongside the Lithuanian flag at the entrance to the deployment zone. However, its significance extended beyond this physical presence; it was carried in the hearts of the detachment members and worn on their uniforms. It graced their desks and adorned their walls, a constant companion throughout their daily mission.

"Carpathian Vipers" - Mission Accomplished!

ITALIAN AIR FORCE AIR FORCE

TASK FORCE AIR "GLADIATOR"

The Air Force again engaged in NATO for the protection of the eastern borders of the alliance. This time in Romania, on the borders of the "hot" area of Ukraine.

By Gian Carlo Vecchi



The Italian Air Force finds itself once again engaged outside national borders as an integral part of the NATO border protection system of the Atlantic Alliance. The mission of the Task Force Air "Gladiator" began in December 2022 with the detachment of four EF-2000 Typhoons from the 4th Wing of Grosseto, 36th Wing of Gioia del Colle, 37th Stormo of Trapani-Birgi and 51st Stormo of Istrana, with 170-220 soldiers from 30 organizations, a CAEW Gulfstream G-550 (in two distinct periods in February and May) and a

Multi Data Link Processor (MDLP). The latter is a data link station that acts as a modular structure that elaborates and re-launches the air situation in real time towards the Poggio Renatico Aerospace Operations Command, guaranteeing the possibility of carrying out Command and Control of air operations in all parts of the world, directly from the motherland.

All these assets have been dislocated on the Romanian base of Mihail Kolganiceanu, located a few kilometers from the city of

Costanza, on the Black Sea, to defend the southeast flank of NATO.

The first redeployment of the Air Force as Air Policing in Romania dates back to 2019, the second ended a few months after the start of the war between Russia and Ukraine, when the Italian Eurofighters were replaced by those of the Royal Air Force and followed by the Canadian CF-18 (F-18) until the end of November 2022.

Following a scrupulous "site-survey", aimed at verifying the feasibility of the operation, all

the material arrived at MK Air Base thanks to the C-130s of the 46th Air Brigade of Pisa and the KC-767s of the 14th Wing of Pratica di Mare; the Third Division of the Logistic Command together with the 3rd Wing of Villafranca contributed to setting up the necessary infrastructures and the 3rd Field Engineering Department of Bari carried out important building works for the construction and strengthening of the parking aprons and the taxiways of the flight line, all to ensure the operability of the Italian EF-2000s and the CAEW.

This once again demonstrated the Air Force's ability to redeploy its assets quickly and effectively in any part of the world.

The MK base is one of the warmest of the Atlantic Alliance as it is only 70 km from the southern border of Ukraine and the Odessa district, as well as 370 km (just 20 minutes by flight) from Crimea, the latter home to three Russian air force bases, Belbek, Saki and Krymsk, which host Su-27, Su-30 and Su-35, from which most of the Russian air operations are carried out on Ukraine. MK is also within

the range of the Russian federation's Anti Access Area Denial (A2AD) systems.

From this point of view, the MK base is an object of great interest from the Americans and NATO, which are financing its radical restructuring and modernization, with works in progress to make it capable of accommodating various units of the US Army, being in fact the first western outpost on the Black Sea.

Together with the Romanian F-16s and the Spanish F-18s, based a few kilometers



from them on the Borcea-Fetesti base, the EF-2000s of the Air Force carried out missions to defend Romanian and therefore NATO airspace, in a climate of growing international tensions. Russia has issued a NOTAM where it declares that the FIR on the border with Romanian airspace is a zone of military operations, inviting people to keep away.

As Col. Antonino Massara, commander of the TFA "Gladiator", «In the Black Sea at the level of the FIR (Flight Information Region) it is "wall against wall", as here NATO airspace borders with the Russian one. However, the NATO watchword remains de-escalation. Never allow the Russians to say that there has been an aggressive or provocative attitude on NATO's side, it is a fundamental rule of the

Alliance. When the Russian airplanes approach the border of the Romanian FIR, the scramble starts and the Italian planes put themselves in a holding position, as a deterrent, and the Russian aircraft turn around and do not enter the Romanian FIR».

The commander continues: "Compared to the Baltic, where there is a greater activity of identification of Russian military air traffic (to and from Kaliningrad), on the Black Sea the aspect of deterrence is more privileged". «In collaboration with Romanians and Spaniards we carried out 2vs2, 4vs2, 6vs4, 8vs4 and CAS training missions, force integration training, personnel recovery with Romanian and American helicopters, COMAO, USAF B-52 escort and we participated in the Air Defender

and the Dacian Strike, the two major NATO exercises of 2023, in which the emphasis was placed on integration with the forces of land and the training resulting from the violation of Article 5 of the Atlantic Charter". «The defense part consists in having two EF-2000s constantly ready to take off on alarm 24/24H, 7/7 days, while the deterrence part is made up of exercises carried out massively to demonstrate Russia's presence on Romanian territory. From this point of view, those aimed at dropping inert, laser-guided bombs should also be seen; these activities also fall within the concept of deterrence».

In these months of activity, from December 2022 to June 2023, the EF-2000s of the AM were the protagonists of Alfa Scramble, the

orders for immediate take-off imparted by the CAOC (Combined Air Operations Center) of Torrejon, in Spain, the NATO body responsible for the southern European sector, which "tasked" the Italian fighters to monitor those aircraft which, potentially, they could have interested the Romanian FIR, becoming, in that case, a real threat to security. To give an idea of the effort made, just think that the European airspace sees an average of over 35,000 movements a day.

These numbers make it one of the busiest airspaces in the world.

Any unidentified aircraft, due to the intentional loss or omission of communication with air traffic control, flying within or approaching NATO airspace creates an unsafe environment, which could even lead to an in-flight accident. At the end of June four Alfa Scrambles were carried out by the TFA "Gladiator", but there were very numerous "activations" which increased the level of readiness of the aircraft in Quick Reaction Alert.

With a view to de-escalation, in an attempt to cool the warm fronts on the eastern side of the Alliance, the EF-2000s of the Air Force are also equipped with a Pod Litening II, the tactical reconnaissance system, which allows, if necessary and in certain situations, the identification of aircraft even from a distance, integrating, or sometimes replacing, the VID (Visual Identification). The latest generation system is equipped with very high resolution visible and infrared sensors.

Alongside the operational activity of Air Policing that the men and women of the "Gladiator" contingent carried out in Romania, our pilots conducted joint exercises with the Romanian Air Force, offering the pilots of both nations the opportunity to test the capabilities of their respective weapon systems and providing Italian personnel with the possibility once again to exploit the undisputed potential of the EF-2000.

NATO organizes complex exercise events and TFA Gladiator also organized the Dracula Flag, a complex exercise with Romanian and Spanish partners. Col continues. Massara: «After having made a request to AIRCOM and Torrejon, and after the approval by Ramstein of the purpose of the exercise and the structures involved, we coordinated the areas concerned in collaboration with the CAOC and with the Romanian ATC, and so the exercise took place. In this context, the Air Force and the Romanian Air Force have carried on their training activity already programmed at home while the Spaniards have provided "Red Air" (ie aggressor) activities. This exercise has especially benefited Romania, which is growing from an aeronautical point of view with the purchase of the F-16. Even our EF-2000s performed, in part, "Red Air" activities».

During the "Gladiator", for the first time in an Air Policing, the AM assemblies carried out exercises with the use of the GBU-16 laser guided drop armament. «There was the possibility of doing so because it was already foreseen in an Italy-Romania agreement. We faced a small logistical effort to bring the bombs from Italy. Romania has two polygons that allow you to drop the armament within certain tactical scenarios and to train not only in the release procedures, but to contextualize the action in complex exercises by integrating artillery, other aircraft including rotary wing and air defense systems. This exercise at the range took the name of Dacian Strike 2023 and took place in collaboration with Romanian IAR 330 and American helicopters, UAVs, with the IAR 99 of Bacau, and with Romanian artillery».

The interview ends with Col. Massara: «In addition to the operational aspect, in these eight months an emotional relationship has been created with the local communities, which has led the men of the Air Gladiator Task Force to donate medical materials useful for



**X1-Commander Task Force
Air. col. Antonino Massara**



**X2-Commander Task
Force Group. Magg. D. M.**





the pediatric hospital in the area, avoiding, for certain emergencies, having to take the children to Bucharest. Our men have enthusiastically carried out moral support activities, dressing up as superheroes and entertaining the children of the hospitals'.

With regard to the maintenance aspect, the efficiency of the EF-2000 Typhoon weapon system in an operating environment at a distance of about 2,000 km from "home" has shown reliability rates close to 100%, highlighting the professionalism and competence of the Air Force specialists and technicians who allow the Eurofighters to operate anywhere in the world and in any condition.

As we said, the reliability was 98% out of 1,400 flight hours carried out up to the end of June by the TFA assets. A mission such as NATO Air Policing requires that the available air potential is always efficient and the four EF-2000s present at MK have always been ready to take off thanks to the great professionalism and competence of the specialists from the various Italian flight groups and deployed in Romania. A continuous and adequate supply of spare parts was ensured from the motherland, also through the assets of the 46th Pisa Air Brigade, and the maintenance technicians of the TFA have, on some occasions, also worked at night to maintain the efficiency of the aircraft.

In the field of NATO Air Policing, Italy has achieved an authentic record, namely that of being the only member of the Atlantic Alliance to have contributed to guaranteeing the defense of the skies of all European nations that need this type of support. Beyond the three missions in Iceland and Estonia carried out by the F-35As of the 32nd Wing of Amendola, the Air Policing activities are mainly carried out by EF-2000A aircraft which, ready for take-off in a very short time, ensure a timely response in the event of threats to NATO airspace.

The Air Force has once again expressed a credible ability to defend and secure airspace in a complex, risky and delicate operating theater such as that of the Black Sea, in compliance with the responsibilities assumed within the Atlantic Alliance and Europe.



At the 13th edition of Romania's largest air show, which took place on August 26 at Bucharest's Aurel Vlaicu International Airport, the Romanian Air Force put on a dazzling display featuring F-16 Fighting Falcons, IAR-99 Șoim, IAR-99 STANDARD aircraft, C-27J Spartan transport aircraft, C-130 Hercules, AN-26, IAK-52 training aircraft, IAR-330 and IAR-316 B helicopters, along with some jaw-dropping parachute jumps. Visitors at BIAS were treated to static exhibitions featuring the MiG-21 LanceR, F-16 Fighting Falcon, IAR-99 ȘOIM, C-27J Spartan, and AN-30 aircraft, as well as IAR 330 helicopters, a low/medium altitude TPS-79R radar, a ground-to-air missile launch system HAWK, a missile launch system M903/PATRIOT, and an EOD (Explosive Ordnance Disposal) vehicle.

A notable addition was the MiG-21 LanceR simulator, placed alongside the IAK-52 simulators and the instrumental flight simulator at the Romanian Air Force's educational presentation booth. At the invitation of the Romanian Air Force Staff, BIAS 23 saw military personnel from the air forces of Germany, the Netherlands, the Hashemite Kingdom of Jordan, Slovakia, Slovenia, Hungary, and the United States of America, who showcased their equipment in the static exhibition or in aerial displays.

BIAS 2023

The Show Must Go On

The skies over Bucharest were transformed into a vibrant and dynamic canvas at the Bucharest International Air Show & General Aviation 2023 – an event eagerly anticipated by aviation enthusiasts and the general public alike. With a rich history in the international aviation calendar, this edition raised the bar high by showcasing an impressive range of aircraft and performances that set hearts racing and eyes gazing skyward.

The event kicked off with a series of breathtaking aerobatic displays, where renowned aerobatics teams and skilled pilots from around the world showcased their exceptional abilities. Bold maneuvers and choreographed aerial stunts held spectators captive, shedding light on the dedication and intense training required to achieve such feats. Synchronized flights and daring maneuvers elicited rounds of applause and admiration from those in attendance.

Within the static exhibitions, participants had the privilege of getting up close to the displayed aircraft and even interacting with the pilots and crew members. This unique opportunity to explore technical details and learn the stories behind each aircraft added a personal and captivating touch to the entire event. From impressive fighter jets to transport helicopters and private general aviation planes, the diversity of showcased aircraft provided a comprehensive look into the world of modern aviation. BIAS 2023 was not only a celebration of flight but also a platform for innovation and progress in the field of aviation. Aviation companies had the opportunity to showcase their latest

Story by: Maria Ioniță
Photos: Cosmin Purtan, Dănuț Vlad, Dan Ștefan, Maria Ioniță

technologies and innovations, from cutting-edge avionics to revolutionary materials. This exchange of ideas and knowledge created an environment conducive to the development of collaborations and future innovations in the industry. In conclusion, the Bucharest International Air Show & General Aviation 2023 was much more than a mere airshow. It was an opportunity to celebrate the passion for flight, human talent, and technological innovation. Looking to the future, the event promises to continue to inspire and amaze, remaining a highlight in the aviation calendar for many years to come.



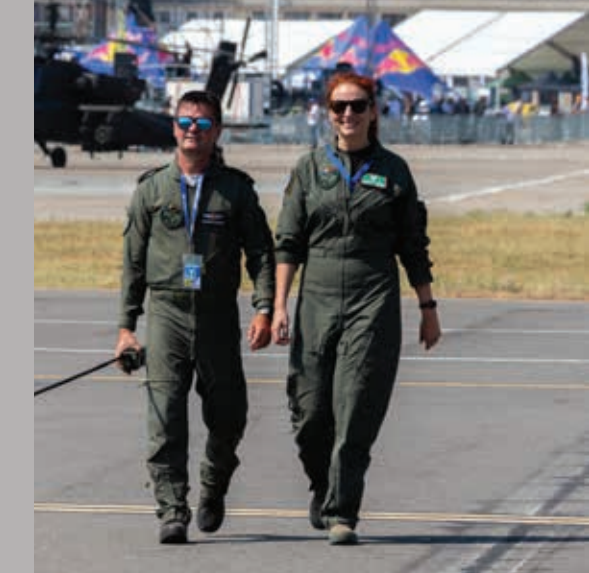


August 26, 2023
 BIAS, a scorching day at 40
 degrees with clear skies

I must admit, I pondered quite a bit about how to narrate this experience from my perspective. Beauty, they say, is in the eye of the beholder, and on that blistering Sunday when I'd typically stay put in the cool shade, I saw things a little differently. Arriving early in the morning at the Romaero's courtyard, I was astounded by the exuberance of the people streaming through the entrance. They carried bags of enthusiasm along with their belongings, creating a beach-party atmosphere, complete with umbrellas, folding chairs, blankets, kids' tents, and even coolers filled with water and ice. All these folks were gearing up to face off with the sun god Ra, all in pursuit of witnessing the most spectacular airshow, an event that never seems to lose its allure.

Children of all ages, some sporting caps and others donning sunglasses, gazed at my colleagues with awe and admiration. It struck me that they didn't see military personnel; they saw superheroes. Fueled by curiosity, they bombarded us with questions, creating a friendly and cheerful atmosphere. Their little legs grew tired as they clambered and explored every aircraft on display. Yet, even the adults transformed into kids at Bias, embracing childlike wonder as the roar of planes and helicopters filled the air.

The sky donned the tricolor multiple times throughout the day, and when the sun finally decided to take a break, the air came alive with a mesmerizing fireworks display. It wasn't just a day; it was like a narrative, a story of airmen and their exceptional craftsmanship.





*The defense of Romania's
air space in the postwar era
(1945-1990)*



THE DEFENSE OF ROMANIA'S AIR SPACE IN THE POSTWAR ERA (1945-1990)

1945-1950. THE ARMISTICE AGREEMENT AND THE PARIS PEACE TREATY

Although Romania had ranged itself on the side of the United Nations before signing the Armistice Agreement, which had to register the rights and obligations of each part, Moscow's ambition to rule over the Black Sea area and the South-Eastern parts of Europe manifested itself preeminently, as a constant of the Russian and then Soviet foreign policy. The Sovietization and communization of Romania followed their well-known path. The Armistice Agreement and the Paris Peace Treaty shattered the Romanians' dream of a democratic and constitutional life.

Meeting of the Great Three (Churchill, Roosevelt, and Stalin) in Yalta, February 1945



THE ROMANIAN ROYAL AIR FORCE UNDER THE CONDITIONS OF ROMANIA'S ARMISTICE AGREEMENT WITH THE UNITED NATIONS

The Romanian Armistice Agreement with the United Nations was signed in Moscow on 12 September 1944. Under the terms of this agreement, the armies of these countries became allies. Analyzing the terms of the convention, it can be seen that it was in fact a genuine peace treaty, giving Romania an international status before the conclusion of the Paris Peace Treaty and controlling the economic, political, administrative, and military fields of life. The Armistice Agreement included several references to the military, in articles 1, 2 (with appendix), 3 (with appendix), 5, 7, and 9. The (Soviet) Allied Control Commission, taking certain actions that exceeded the Armistice Agreement, imposed a military protocol on 26 October 1944, stipulating the reorganization of the Romanian Army, which had 120,000 people at the time. By 3 December 1944, the 3rd Romanian Air Corps (C.3.A.R.) had been dismantled (5 group commands, 38 air squadrons, 9 battalions, 43 anti-aircraft batteries).

In May 1945, political structures were introduced inside the operative structures of the Army at the battlefield and in July the same year, before the arrival home of the Romanian divisions and of the C.1.A.R., which had fought on the front, a second division of volunteers (the first was the one called "Tudor Vladimirescu") made up of former prisoners from the Soviet territory, the "Horia, Cloșca, and Crișan" division, was returned to the homeland. The elimination of the valuable elements from the Army's structures was achieved by the Petru Groza Cabinet on the basis of Law no. 186 of April 1945, which in fact subordinated the Army to the Romanian Communist Party. The feeling of uncertainty regarding their military careers diminished the enthusiasm, authority, and character of the military.

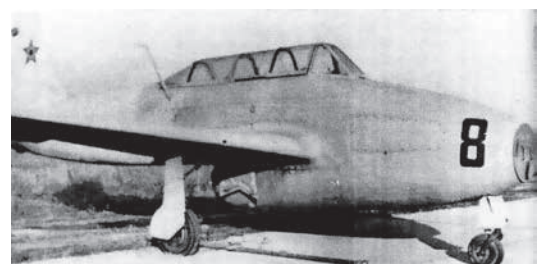
Regarding the control of aeronautics, according to Article 3, the Inter-Allied Control Commission for Air Traffic (C.I.C.T.A) was created, which functioned at the S.M.A. Within the framework of the economic effort for the implementation of the Armistice Agreement between Romania and the United Nations, the Air Force gave the Soviet High Command, at any time and on any airfield, priority for any Soviet civilian and military air lifts and reserved the aerodromes in Mizil and Ziliștea for the materials gathered and handed over to the U.S.S.R. as due on the basis of the Armistice convention.



Checking a Iak-11 airplane



During communism, the military pilot badges undertook a Soviet symbolism, giving up the original shape (an eagle with open wings)



The only known photo of a Iak-17 airplane during its employment by the Romanian Military Aviation

Lieutenant-Colonel Aurel Răican, commander of the 135th Jet Aviation Regiment in Caransebeș, from 1952 to 1954. He is the Romanian pilot who wrote the first page of jet fighter aviation after, he performed on 26 June 1951 a solo flight with a Iak-23 airplane



THE SITUATION OF THE ROMANIAN ROYAL AERONAUTICS AFTER THE WAR; THE REORGANIZATION IN THE FIELD OF AERONAUTICS STIPULATED BY THE PARIS PEACE TREATY OF 10 FEBRUARY 1947

The year 1947 was a fatidic one for all of Romania, but especially for its Army. By the end of the year, Romania's fate was sealed: as a state, it was defeated in World War II, according to the Paris Peace Treaty, signed by the Romanian delegation on 10 February 1947 and ratified on 23 August the same year (although Romania had been on the winners' side, it was considered a defeated state and did not benefit from the status of co-belligerence); on 30 December 1947, a new form of state was introduced, the Popular Republic, instead of the constitutional monarchy, and a new political regime, the communist (socialist) one, or, as it was officially called, the "Popular Democracy Regime", the essence of which was proletarian dictatorship.

Romania was forced to accept this status of a bargaining chip in the Great Powers' game of interests, being left for more than four decades in the Eastern Block, in the sphere of influence of the former U.S.S.R., led with an iron hand from the Kremlin, even though it was outside the political and ideological bipolarity from the postwar era, on the wrong side of the Iron Curtain, as Winston Churchill called it in his famous speech delivered on 5 March 1946 in Fulton, Missouri.

Several articles from the Peace Treaty operated the destruction of the Romanian Army (through a drastic limitation of troops and armaments) and of the national defense industry, so as to prevent the Romanian Army from representing the force that would ensure the detachment from under the patronage of the USSR. It is also highly important to underline that the combat doctrine of the Romanian Army (which was also the national defense doctrine) was stipulated in the Treaty as subordinated to "the requests of the inner and local defense of borders"; this meant a lower (strategic) level compared to the responsibilities of the national army in a sovereign, independent state. Thereby, it also meant a de jure and de facto annulment of the strategic value of all army categories, which were finally divided into different commands of their own components. In other words, the former USSR had assumed the "defense" of the countries in its sphere of influence from a military point of view as well.

Regarding the Romanian Aeronautics, the Peace Treaty stipulated the reduction of the Romanian Air Force troops and the grounding of all bombers. The following were put at the disposal of the Allies (the 5th category): "1. Aircraft... 2. Carriages and cannon locations... 3. Equipment...for the airborne troops. 4. Catapults or devices for the launching of aircraft from carriers, for ground aircraft or hydroplanes, and devices for the launching of aerial weapons. 5. Balloon aprons."

Nevertheless, in obvious contrast with the destructive specifications of the Peace Treaty and in spite of the reductions of personnel made by the Petru Groza Cabinet, the officers and generals (of the still Royal Romanian Army that had not yet become a "popular" one) maintained their high optimism and attitude of confidence in the vigor of the military institution.

The mistreatment caused by the lack of appreciation carried on, though, in the following years. The military decorations from their aviators' uniforms did not matter. Many of the latter went to communist prisons. Those who managed to outlive those times got older and carried on in silence with the pain of remembering the crucial war full of battle flights and lost fellow-airmen.

The Yak-23 jet fighter was produced in the Soviet Union, starting in 1949, with approximately 310 examples being built at the Tbilisi factory. The Yak-23 was the first jet fighter to enter the equipment of the Military Air Force Command (CFAM), operating within the three regiments of the 3rd Division (later 97) Jet Fighter Aviation



THE BEGINNINGS OF THE MILITARY JET FLIGHTS: THE ANTI-AIRCRAFT ARTILLERY AND RADAR TECHNOLOGY FROM 1951 TO 1955

The Military Air Force Command and its units

On 1 April 1950, the Aviation Command changed its name into the Military Air Force Command. Under this command were: the 1st Air Force Division (D.1.Av.) with Regiments (R.) 1, 2, and 3 Fighter Aviation (Av.V.), subordinated to the operative Antiaircraft Defense Command of the Territory (C.A.A.T.); D.2.A. with R.4. Attack Aviation (Av.A), R.5 Research Aviation (Av.C.), and R.6 Fighter-Bombing Aviation (Av.V.B); R.7 Contact Aviation (A.L.); R.8 Transport Aviation (A.TP.); R.9 Av.; nine airfield assignment battalions for each regiment; the Officers' Air Force School; the NCOs' Air Force School; the Technical Aviation School; the Inferior Professional Aviation School; the Aviation Training Center; R.6 Trs.Aer.; R.4 Airfields; two groups of depots (nos. 1 and 2); two workshops (one for the airplanes and another for the vehicles).

Following these changes, in the late 1940s and the early 1950s, the Aviation received a khaki uniform, the cap badges received a five-point star with the initials R.P.R. (Romanian Popular Republic) in the middle, and Soviet-type badges for the navigation and technical personnel were introduced, with straight wings, as well as new ways of addressing between chiefs and subordinates.

In 1949-1950, 40 Iak-11 (Yakovlev) aircraft (9 others in the following years), a phase II school plane, and 45 Po-2 (Polikarpov) aircraft were brought in from the USSR for schooling, transportation, and establishing connection.

Ten La-9 (Lavoskin) fighters (out of which five were double-seated), several Tupolev (Tu) bombers and several Il-10 (Ilyushin) attack airplanes were provided as aircraft fighters. Among these, only the Il-10 type would be further imported; thus, in 1952-1953, another 166 planes of this type came in (170 altogether, out of which 14 made in the USSR and 156 under license in Czechoslovakia), that made up the 4th Attack Division, with its HQ in Braşov. Its three regiments were deployed in Braşov, Sibiu, and Turda. In 1952, this great unit was renamed the 68th Division.

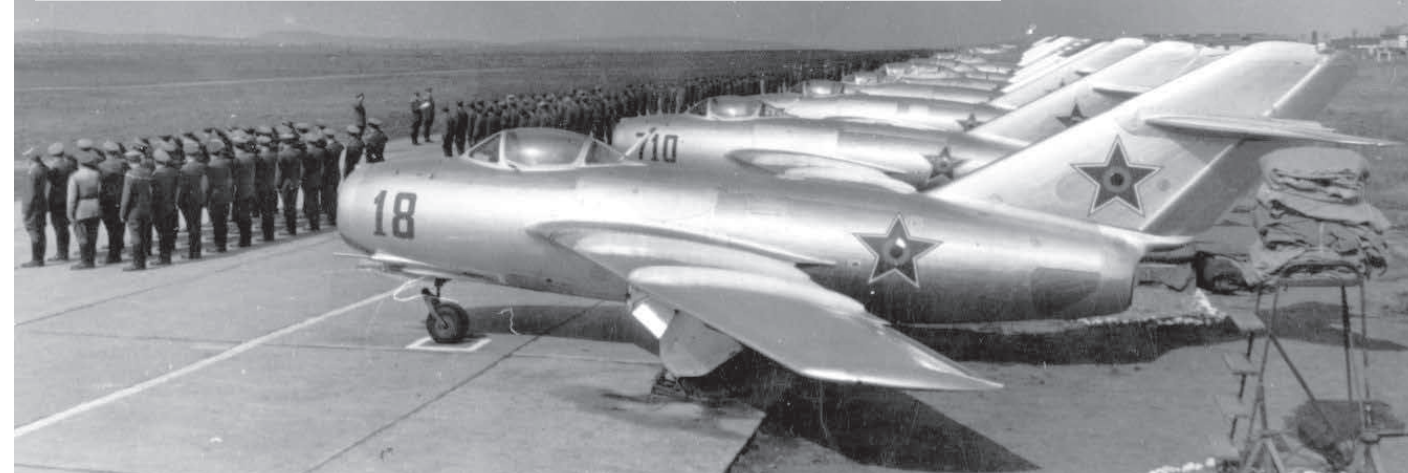
All this time, the main activity of the Military Air Force Command was to establish the first fighting base endowed with jets. On 1 April 1951, the 11th, 12th, and 14th Air Force Jet-fighter Regiments were created and housed on the Pipera airfield. These units were to become the 3rd Fighter Aviation Division.

The division was deployed onto the lanca aerodrome a few months later. Four Iak-17 (for schooling purposes) and 62 Iak-23 aircraft would also come in from the USSR (as it happened, these were the only aircraft imported in 1951).

The first official flight with this type of aircraft took place on 25 June 1951 and was performed by Major Aurel Răican, commander of the 14th Regiment. Just a few hours later, several political personalities (the communist leader Gheorghe Gheorghiu-Dej, the Prime-Minister Petru Groza, and the National Defense minister Emil Bodnăraş) visited the lanca regiments and congratulated the pilots.

In 1952, the Romanian Army was endowed with MiG-15 (Mikoyan-Gulievici) jets, which were faster and flew higher than the Iak-23 ones. Beside the two 23-mm cannons, that the Iak-23 also possessed, the MiG-15 had a 37-mm cannon. All these qualities of the MiG-15 made it an important jet fighter of the communist camp used in the Korean war ongoing at that time. During the years 1952 and 1953, 174 MiG-15 jets of the type S102 were brought in, that were made in Czechoslovakia.

The MiG-15 marked the beginning of the "MiG era", which Romania would be part of for many decades to come. The first Romanian pilot to have the honor of flying this exceptional subsonic fighter on a solo mission was Captain Daniel MĂLĂESCU on May 20, 1952. Captain MĂLĂESCU served as the commander of the 206th Jet Fighter Aviation Regiment, a unit that was established at the Deveselu airfield shortly before this historic event



Alexeni, mid 1950s. Last arrangements before the flight



In the first decade after the Second World War, Li-2 Soviet airplanes were imported for airlift missions

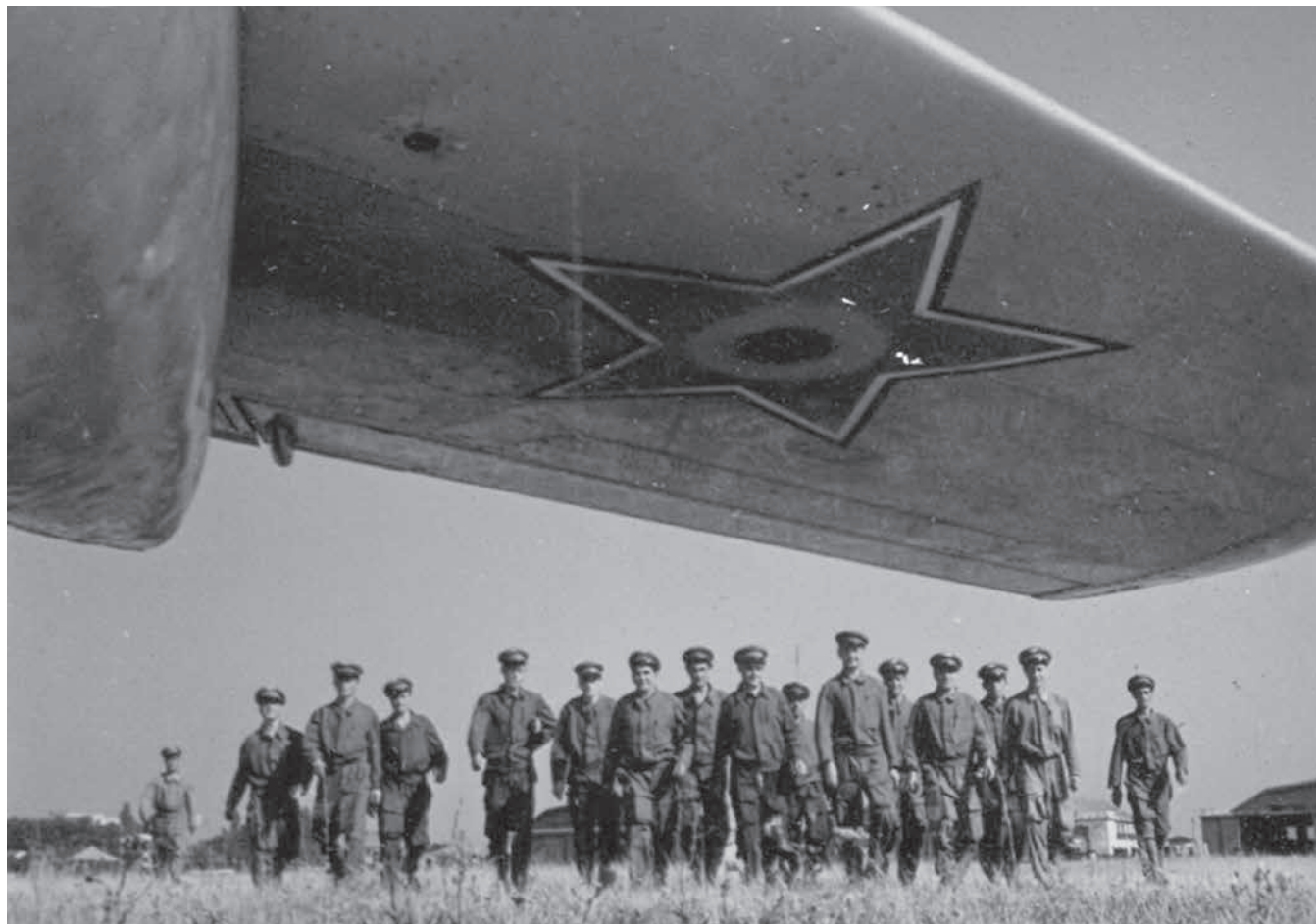


Fighter pilots synchronizing their watches before the mission

ROMANIAN MILITARY AVIATORS IN PROPAGANDA IMAGES OF THE TIMES



The Romanian military aviators have, always been under close media scrutiny: therefore, we have hundreds of promotig photos at the time, which, over the years, have become real historical evidence





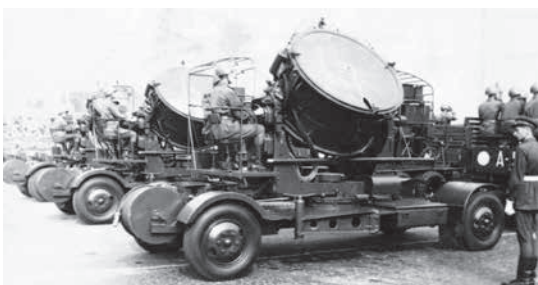
The first helicopter pilots in Romania. From left: Lt. Maj. Gheorghe Dinu, Lt. Maj. Gheorghe Leahu, Capt. Ion Repede, Capt. Ivan Cercaschi – the Russian trainer, Lt. Maj. Vasile Iurașcu, and Lt. Col. Ioan Zamfirescu – commander of the 108th Airlift Regiment



In the 1950s, the first helicopter units were formed. In the image, Mi-4 helicopter registered as no 0127, the first aircraft of this type in the Romanian Military Aeronautics



Range instruction for anti-aircraft firing



Projector subunit at a military parade during the years of the People's Republic of Romania

In early 1952, after having been massively endowed with jets, the Military Air Force Command had the following configuration: D.23 Av.V. made of R.125, 200, and 226 Av.V.; D.66 Av.V. made of R.158, 206, and 277 Av.V.; D.93 Av.V., made of R.135, 172, and 294 Av.V.; D. 68 Av.A. made of R.167 and 251 A.; D.87 Av. made of R.190 and 282 Av.; D.34 Technical Aviation with nine airfield assignment battalions; R.108 Av.Tr.; R.177 Av.L.; R.239 Av.C.; R.246 Pșt.; R.161 Transports; R.262 Airfields; the Hydro-Aviation Squadron; the 246th Artillery Fire Control Squadron; the Military Aviation Schools nos. 1 and 2; the Technical Aviation Schools nos. 1 and 2; the Inferior Professional Aviation Schools nos. 1 and 2; the Military Aviation Training Center.

The 97th Division was the former lanca division, this time deployed with two regiments near Timișoara, on the Giarmata airfield, and in Caransebeș. The former R.14, renamed 172, was on the Mihail Kogălniceanu aerodrome as a part of D.23, which had one more regiment in Otopeni (from 1958 on, this was moved on to Borcea-Fetești) and another one at Silișteea-Gumești. The 66th Division regiments were responsible for the airfields located near Craiova and Caracal (Deveselu).

Unfortunately, the jet aviation had the first victims. On 31 October 1952, two pilots of R.158 took off for a formation flight, flying two MiG-15 aircraft. During a turn, these crashed and both pilots died. Their names were Lt. Liviu Șandor and Lt. Ioan Negruțiu.

As was normal, from 1953 on, a classification system was introduced. The first five Romanian pilots who met the requirements for 1st Class were: Lt.-Col. Gheorghe Gherghina, Major Teofil Brișan, Capt. Gheorghe Năstase, Capt. Liviu Rădulescu, and Major Ion Buhoci.

In 1954, the Romanian Aviation received its first twin-engined jet, Il-28, which performed intelligence-gathering and bombardment missions. The unit that employed was the 282nd Scout Aviation Regiment.

In 1955, 12 MiG-17 PF aircraft were purchased from the USSR, having post-combustion and an on-board radio-locator, assigned to D.23. To make them operational, more Romanian pilots were trained for MiG-17, in the USSR, in Sevastleika. In 1956, 12 more MiG-17s arrived, F version (only post-combustion, without an on-board radio-locator), assigned to D.66. Regarding ordinance, MiG-17 F was similar to MiG-15, but superior due to a greater stability at high speeds (diving), by speed and flight altitude. The insignia of the Romanian military aviation in 1952 – 1965, were identical to the Soviet ones, fixed with screws and nuts, also having on the front the specialist classification.

The anti-aircraft artillery military units

From 1950 to 1955, the status of the anti-aircraft artillery improved, as compared to the first years that followed the war. In 1951-1952, the following cannons were in use: 25-mm Soviet ones, 37-mm Rheinmetall ones, 75-mm Vickers ones, 76.2-mm Soviet ones with a PUAZO-2 central firing system, 85 mm ones with a PUAZO-3 central firing system, 88-mm German Krupp ones and 150-cm German Nedalo projectors.

With this equipment, two air-defense artillery corps were organized each having five regiments and one grenadier regiment, two divisions of two regiments and a battalion, but also two defense regiments to protect the small objectives. In 1953, new units were established with two air-defense artillery regiments for each division, and two battalions and a regiment to defend the new objectives.

During the same period, seven battalions and eight air-defense artillery batteries were appointed in order to defend the airfields and to strengthen the artillery defense of certain objectives. The protection of the territory was also improved by the introduction of the Soviet 57-mm cannon with a PUAZO-5 central firing system.

It should also be mentioned that, by order of the Great General Staff, on 1 April 1950, a firing range was established in Capu Midia, subordinated to the Training Center of the Air-Defense Artillery. Its first commander was Major Eng. Constantin Heytmanek. From 1954 on, the firing range became a self-sustained military unit.

The observation, information, and air liaison service

As for the radar, the years 1950-1955 were important for the setting up of this branch. On 17 March 1950, by order of the Great General Staff, two territory observation battalions were established in order to strengthen the Radio Observation Regiment (P.R.): the B.1 Territory Observation (P.T.) Bucharest-Cotroceni and the B.2 P.T. (first in Bucharest-Iasmin, then in Cluj).

By 1 July 1950, the three R.P. Radio battalions had the following transformations: B.1 became B.10 P.R. (Timișoara); B.2 became B.11 P.R. (Orșova); B.3 became B.12 P.R.(Constanța).

The Training Radio Observation Center was formed on the same date in Bucharest-Iasmin. On 1 November 1950, B.3 P.T. was finally established and it was deployed to Alba Iulia.

On 30 November 1950, all these units were changed into a higher structure: the Observation, Signal, Air Communications Service (O.I.L.A.).

After establishing the O.I.L.A, the six observation battalions were independent and directly subordinated to the Air-Defense Artillery Territory Command. However, the battalions underwent several changes: B.1 became B.587 Independent O.I.L.A. (Bucharest); B.2 became B.475 Independent O.I.L.A. (Cluj); B.3 became B.329 Independent O.I.L.A. (Bacău); B.10 became B.548 Independent Radio O.I.L.A. (Timișoara); B.11 became

B.423 Independent Radio O.I.L.A. (Orșova); B.12 became B.352 Independent Radio O.I.L.A. (Constanța).

The battalions were sending as usual the information received by the center through the permanent telephone line or radio signal. In 1951, 492 observation posts were under these six independent battalions.

The first two stations which were endowed for the Romanian Army in War World II, the Canadian radio detecting and raging SCR-527A, for the Military Aviation, and the English radio detecting and raging AN-TPS-3, for the air-defense artillery.

In 1952, the first radio technical subunits were formed and entered under the independent radio O.I.L.A. battalions, being also equipped with P-20 and P-3A stations.

On 15 May 1952, the Great General Staff decided to turn the independent radio O.I.L.A. battalions into regiments. Thus, the R.269 (Timișoara), R.181 (Craiova) and R.110 (Constanța) were created and would become independent battalions in 1954.

P-8 stations (some of them with A.Z.P.-8) were first used in 1954. Besides, the radio-technical subunits already functioning in Craiova (the Timișoara area), Vânu Mare (the Turnu-Severin area), Palas (the Constanța area), nine more new units were created in Oravița, Târgu-Jiu, Mediaș, Alexandria, Roșiori de Vede, Tecuci, Chinteni, Băișoara, Hălchiu, and Cuza-Vodă. In 1954, radio-technical subunits were created on the military aerodromes in Timișoara and Bucharest. Additionally, there were six more Soviet radar subunits on the aerodromes in Roșiori de Vede, Otopeni, Alexeni, Boboc, Fetești, Mihail Kogălniceanu.

In 1954, Romanian aircraft reconnaissance systems were installed on the radar stations, of N.R.Z.-1 type (the airplanes had response systems on board).

By the Ministry of the Armed Forces Order no. 74 from 25 July 1955 the Radio Technical troops were established, including: the R.101 Radiotechnic (in Bucharest); the B.548 Independent Radiotechnic (in Timișoara); the B.423 Independent Radiotechnic (in Craiova); the B.475 Independent Radiotechnic (in Cluj); the B.329 Independent Radiotechnic (in Roman); the Radiotechnic Training Center (on the Bucharest-Ploiești Avenue, at Km. 32); the Military School for Radar Officers.

After the establishment of the Radar Technical Troops, the O.I.L.A. system was dismantled.

The consecration of ground aviators – the navigators

The Romanian jet aircraft flights had already begun to take place under radar surveillance, which led to the increase of flight safety. The radar stations were also the ones that coordinated the Romanian military airplanes for interception. This is how it became necessary to train a new type of personnel – the ground navigators – with the mission to direct fighter aircraft for interception. They eventually bore the responsibility of the military air traffic control and of coordination with the Civil Aviation flights.

Thus, on 28 October 1952, the first night-time interception of a real target took place for the first time in the history of the Romanian jet aviation. A Iak-23 from lanca, flown by Major Dumitru Balaur, took off in search of a Soviet airplane meant to check the reaction capability of the units defending the Romanian air space. With the help of the coordination team inside the command center, led by Major Mihai Căciulă, the Soviet airplane was intercepted. In conclusion, the disposition of the aviation, anti-aircraft artillery, and radio scout (eventually radar) was done in accordance with Moscow's strategic interests and with the evolution of the political-military situation in the Balkans.

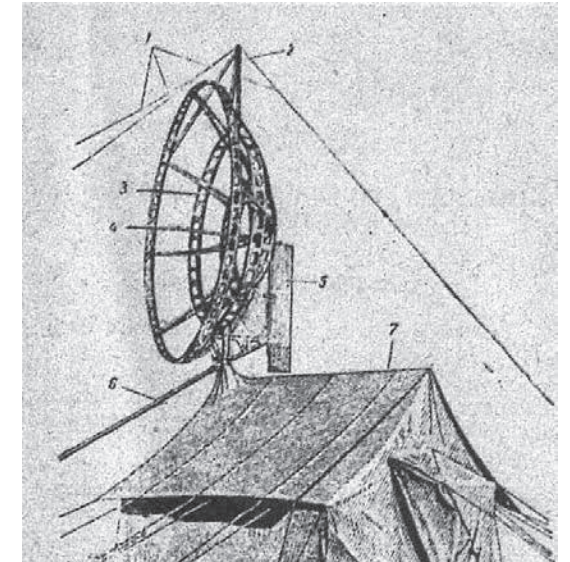
Therefore, a defense line was created, comprising fighter regiments, medium- and small-caliber anti-aircraft artillery, and air surveillance posts with the center of gravity in the Southern part of Romania.

In case a war with the West had broken, the airplanes of the 97th Division had the mission to fight against the enemy aircraft trespassing the Romanian air space, coming from Italy or Yugoslavia, the ones of the 66th Division had to intercept possible attacks of aircraft coming from Greece, and the 23rd Division fought the possible air attacks originating in Turkey.

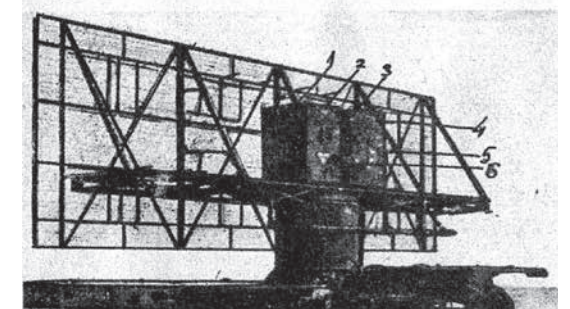
THE TERRITORY AIR DEFENSE COMMAND AND ITS ENDOWMENT WITH EQUIPMENT

On 14 May, in the Polish Capital, Warsaw, the Treaty of the Organization for Friendship, Cooperation, and Mutual Assistance was signed. In fact, it was a military organization of the Communist countries, meant to oppose the West. The eight member states were: the Soviet Union, the People's Republic of Poland, the Republic of Czechoslovakia, the Democratic Republic of Hungary, the Popular Republic of Romania, the Popular Republic of Bulgaria, and the Popular Republic of Albania (that eventually withdrew in 1968). For the following three and a half decades, the Warsaw Treaty annually organized exercises simulating a possible war against the North-Atlantic Organization. During these exercises, Romania was responsible with the defense of the Southern battle front (the Balkans), providing support for Bulgaria.

After one year and four months since the Warsaw Treaty was created, in September



Images of AN-TPS-3 (above) and SCR-527 (below), installations, the first radar stations in Romania



Mobile post for flight coordination in the first years of jet aviation in Romania



A MiG-19 airplane prepared for a night flight



Training with surface-to-air missiles



P-15 type radar station. This model is being displayed at the Romanian Military Aviation Museum

1956, important changes were made in the Romanian Army. The Military Air Force Command and the Country Air Defense Command joined under the name Territory Air Defense Command (C.A.A.T.). The C.A.A.T. Chief had subordinated deputies responsible for each branch. The first commander of this structure was Lieutenant-General Titus Lupescu. The reason for this joining together was given by the necessity of having the aviation regiments cooperate with the radar subunits to obtain efficient air space search and surveillance, especially in the Southern part of the country.

The radar had the ability to supervise flights from an altitude limit of 1,500-2,000 m, using one or two frequency ranges.

The military equipment remained a priority. In 1958, an important accomplishment was made: an aviation regiment received the first supersonic airplane, a MiG-19. A number of 25 airplanes arrived, in two versions: PM (without cannons, able to use only air-to-air missiles) and P (with two 30-mm aircraft cannons, placed on the wing enclosure). Captain Adalbert Bodiş and Captain Florin Croitoru were the first Romanian aviators to fly this airplane that could exceed the speed of sound, during a course in the USSR. But, unlike the other types of airplanes until that time, the MiG-19 was considered a less successful airplane and was withdrawn from use in the mid-1970s.

At the same time, at the end of the 1950s, Romania's anti-aircraft artillery entered a new era, beginning with the employment of the surface-to-air missiles of Soviet production.

After May 1959, when the USSR sent the necessary documentation regarding the disposition of the missiles, the assembly and operation conditions for the additional installations, during the last decade of November of the same year, the C.A.A.T. received the necessary equipment to establish two battalions: a fire battalion (with 6 launching platforms and 18 missiles) and a technology battalion aimed to prepare the missiles before launching. These two subunits formed the core of the 27th Mixed Anti-aircraft Artillery Regiment, which was temporarily deployed in the Mihai Bravu Garrison from 6 January 1960 on. The first commander of this unit was Major Vasile Miclăuş. This regiment executed the first missiles firing in the Asuluk (USSR) firing range, between 13 and 21 October 1960. The results were very good.

As regards the endowment of the radar units in the second half of the 1950s, new stations of the P-8 (with A.Z.P.-8) and P-10 types were introduced into service. In 1958, P-15 stations were introduced into service and were assigned the air space at low and medium altitudes (maximum 6,000 meters) as well as the radio altimeter P.R.V.-10, which was used to determine the cruising altitudes of the air targets.

The radio technical troops were better endowed with P-30 stations between 1958 and 1959 and had an active interrogator-responder which allowed a more efficient collaboration with friendly military aviations. As for the identification of the own aircraft by radar units, the N.R.Z.-1 system installed in 1954 started to be gradually replaced with a superior one, with anti-jamming protection.

In February 1960, other major changes took place within the Romanian Air Force organization: the three fighter divisions and a part of their subordinated regiments and bases were disbanded.

A year later, two anti-aircraft divisions were established (the 16th Division located in Ploieşti and the 34th Division located in Timișoara) and comprised not only radar and anti-aircraft artillery units, but also four fighting regiments (the 57th in Mihail Kogălniceanu, the 86th in Borcea, the 91st in Deveselu and the 93rd in Giarmata) and two bombardment regiments (the 49th in Alexeni and the 67th in Craiova). The regiment from Ianca comprised a squadron of MiG-15 bis and two squadrons of S-102, while the regiment from Craiova comprised a squadron of MiG-17 PF and two squadrons of S-102. In September 1965, the 49th Regiment was relocated from Alexeni to Ianca.

Some of the personnel from the disbanded units were made redundant and disbanded, having the right to get hired within the Civil Aviation. The 282nd Regiment, changed into a reconnaissance squadron, remained under the command of the Military Aviation Staff, the 38th Reconnaissance Squadron being in the same situation.

As concerns the anti-aircraft artillery units, in 1961, most of the cannons employed in World War II were no longer used. While these cannons were handed over, the regiments were either disbanded or reorganized and endowed with ground-to-air missiles.

On 1 December 1963, the anti-aircraft artillery units within the C.A.A.T. were the following:

- D.16 (commander Major-General Eugen Onofrei, chief of staff Colonel Constantin Drăghici), comprising the mixed anti-aircraft artillery missiles R.4, R.11, R.18, R.19, and R.17, as well as the 102nd Division;

- D.34 (commander Major-General Ioan Stoian, chief of staff Lt.-Col. Dumitru Grozea), comprising only the R.15 Mixed Anti-aircraft Artillery.

The C.A.A.T. also subordinated the "Aurel Vlaicu" Superior School for Aviation Officers in Boboc-Buzău (commander Col. Aurel Niculescu), the "Traian Vuia" Air Force Warrant Officers School in Mediaş (commander Lt.-Col. Vasile Doljanu), the Superior School for Anti-aircraft Artillery Officers in Braşov (commander Lt.-Col. Mircea Mocanu),

the Military School for Anti-aircraft Artillery and Radar Non-commissioned Officers (commander Lt.-Col. Petre Spanache), as well as the Training Centers of the three main specialties.

In February 1962, the aviation regiments started to be endowed with supersonic MiG-21 aircraft; the first version which was brought to Romania was F13, but it did not have an on-board radar. The MiG-21 has been the main aircraft of the Romanian Fighting Aviation since the 1960s up to now. The training for this aircraft was done in Krasnodar (Soviet Union) by two groups of pilots, engineers, technical personnel as well as a medic within the R.93. The second squadron of MiG-21/F 13 was formed in 1963 on the Mihail Kogălniceanu air base.

The first Romanian pilot to fly a MiG-21 in solo flight was Captain Alexandru Marcu and the first engineer of the squadron endowed with MiG-21 was Lt.-Major Gheorghe Grasu.

Radar structures were also endowed with new equipment imported from the Soviet Union in the first half of the 1960s. Thus, radar stations of the types P.R.V.-11, P-35M and P-14 entered the Air Force inventory; the training courses for these radars were organized in Romania.

THE ROMANIAN AIR DEFENSE FROM 1965 TO 1977. IMPLEMENTING THE NEW DOCTRINE OF "THE ENTIRE PEOPLE'S WAR FOR HOMELAND DEFENSE"

The year 1965 brought political changes in the Romanian political life, when Nicolae Ceauşescu took over the leadership of the only political power, the Romanian Communist Party. The name of the country became the Socialist Republic of Romania. Beginning with 1974, when the function of President of the Socialist Republic of Romania was introduced, he occupied this position, too. Initially, he was seen, both externally and internally, as a reformer and determined enough to oppose Moscow's influence. His political climax was in August 1968, when Czechoslovakia was invaded by the USSR and by the troops of the other member states of the Warsaw Treaty, except the Romanian ones. The fact that Romania condemned this act, considering it an aggression, brought Nicolae Ceauşescu a lot of popularity.

This attitude towards Moscow made Ceauşescu take into consideration a possible conflict with the USSR and other member states of the communist block. Therefore, without officially declaring that Moscow was considered an enemy, he initiated a series of actions preparing the Romanian Armed Forces to react in case of a possible attack of the Warsaw Treaty troops.

Thus, a military doctrine was adopted, entitled "The entire people's war for homeland defense", a statement meant to emphasize the unity and desire of the Romanians to take part in the war efforts in case of aggression. According to this, besides the national Army, with all mobilized forces, and the forces of the Internal Affairs, other territorial forces participated, including the Patriotic Guards, the pre-military youth groups and the passive defense detachments.

A second measure was to create a national industry capable of ensuring a great part of the battle equipment and the ammunition that the Armed Forces required.

Regarding the structure that had to defend the Romanian air space, the Territory Air Defense Command, its development, and increase in operability were considered a priority. In fact, in 1965, a new restructuring was made for the radio-technical troops, so as to collaborate with the other branches of the C.A.A.T.: military aviation, artillery, and anti-aircraft missiles.

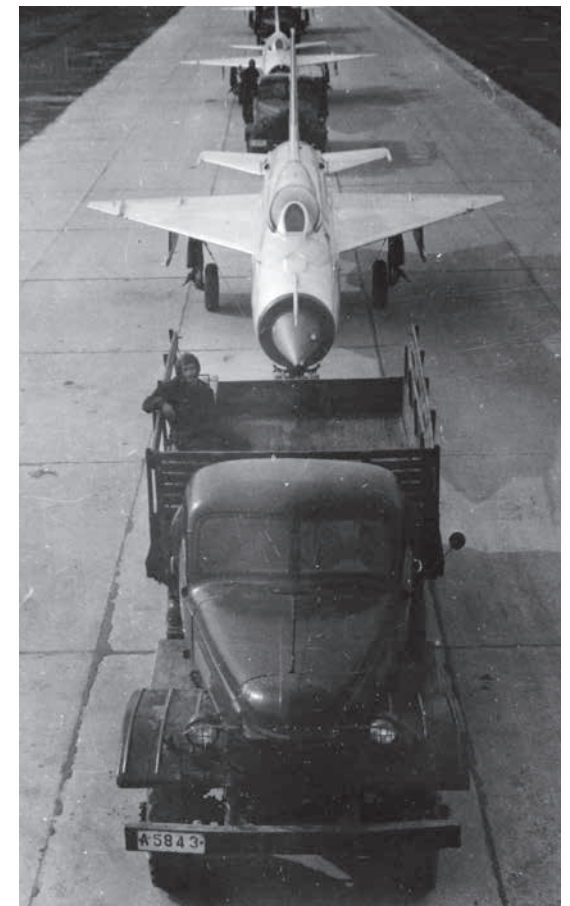
So, on 1 August 1965, the 46th Radio-Technical Brigade was created, with its headquarters in Ploieşti. The brigade was subordinated to the 16th Territory Anti-aircraft Defense Division (D.16) and included all the radio-technical subunits in the Eastern half of Romania.

The Western subunits were subordinated to the 41st Radio-Technical Brigade, created on 1 October 1966, with its headquarters in the Timișoara garrison. The 41st Brigade was subordinated to the 34th Territory Anti-aircraft Defense Division.

In 1966, the greatest part of the 36 centers and radar posts of the C.A.A.T. were placed so as to form a line situated at 10-15 km far from the Southern border of Romania; others were located in the center of the country or near the aviation and anti-aircraft missiles units.

After the events of August 1968, the surveillance Romania's air space required a system able to cover the entire national territory. Immediately, several new subunits were created in the North (Oradea, Vatra Dornei, Iassy) and in Galaţi. They were modernly equipped (especially to improve low-altitude surveillance and according to the Romanian relief) and the continuous training of personnel remained the main objective of the Radar weapon for the following two decades, in order to accomplish its missions: surveillance of the Romanian air space and air traffic control during peacetime, the avoidance of being taken by surprise and efficient friend-or-foe flight coordination in case of war.

At the same time, changes in doctrine were made inside the artillery and anti-aircraft defense. One direction determined by the 1968 crisis influenced the restructuring of the C.A.A.T. units, reshaping the objectives of this service.



Starting in February 1962, aviation regiments were equipped with MiG-21 supersonic fighter aircraft. The initial variant to arrive in the country was the F13, which lacked an onboard radar system. The MiG-21 became the primary fighter aircraft of the Romanian Air Force from the 1960s onward



Anti-aircraft missiles subunit parading during the years of the People's Republic of Romania, at the National Day Parade



In the years of the People's Republic of Romania, helicopters were used also in the economy. The images show Mi-8 helicopters working for the installation of high-voltage poles in mountainous areas (above) and for the construction of a power plant funnel (below)



After the conclusions drawn after careful consideration of the way Czechoslovakia was occupied, anti-aircraft artillery subunits were set up at airfields and airports. Until 1972, eight battalions and two independent batteries were set up with the mission to deny a possible taking over of these objectives by airborne troops. Two anti-aircraft artillery mixed battalions were also set up, with the mission to protect from aerial and naval attack the harbors Constanța and Mangalia.

The turnout of the anti-aircraft artillery was still dependent on the imports from URSS. From 1961 on, complexes which included radiolocation stations for firing sessions of the types SRT-4, SRT-9, and SRT-9A, Puazo-5 and Puazo-9 firing command apparatus, 57-mm and 100-mm caliber anti-aircraft cannons were introduced.

From 1972 on, ground-to-air missiles units and subunits were successively receiving training at the firing range from Capu Midia in order to evaluate their level of performance. The architect of this readjustment of the army was major-general Mircea Mocanu, the commander of the artillery and ground-to-air missile troops.

The first brigade of ground-to-air missiles was founded by reorganizing the 18th and 19th Mixed Anti-aircraft Artillery Regiments on 1 August 1973. It was called the first brigade because its mission was to defend the air space in the area of the Capital city. Its first commander was Colonel Romulus Ularu; chief of staff was Colonel Nicolae Mocanu.

Not only the regiments under the command of the C.A.A.T. were equipped with ground-to-air missiles, but also the anti-aircraft artillery of the ground forces. Around the year 1960, when the C.A.A.T. was set up, the first researches regarding the completion of the anti-aircraft missiles systems mounted on mobile platforms were in progress in the USSR. At that time, the anti-aircraft defense of the Romanian ground forces was the attribute of two anti-aircraft brigades (the 4th Brigade in Târgu Jiu and the 5th Brigade in Florești-Cluj). Each brigade had a subordinate command, a command battalion and two regiments of anti-aircraft artillery, one with 57-mm cannons and one with 100-mm cannon. This two brigades were at the disposal of the two existing Armies, while the battalions had batteries with small-caliber anti-aircraft cannons (25-mm and 37-mm). Once the infantry divisions were turned into mechanized ones starting with the year 1961, the 37-mm cannons were replaced with 57-mm ones, while the 25-mm cannons were replaced with anti-aircraft machine-guns.

During the crisis that took place in the summer of 1968, the ground forces' anti-aircraft artillery units and subunits were taken from their caserns and placed near the objectives which needed defense, and in this way the anti-aircraft defense system including the C.A.A.T. units was complete, all under its command.

As for the anti-aircraft missiles turnout of the ground forces, the first steps in improving it were made in May 1974, when the short-range anti-aircraft artillery battery was set up as part of the 57th Battalion, being equipped with Strela-1 self-driven missiles. At the same time, the first short-range mobile platoons of anti-aircraft missiles were set up, being equipped with Strela 2 systems. A few years later, in March 1976, two more Strela 1 self-driven batteries were set up as part of a battalion attached to the 1st Mechanized Brigade and on 10 February 1977 two more as part of the 6th Tank Division.

As a consequence, on 25 September, the first battalion of anti-aircraft missiles, the 48th Anti-aircraft Missiles Battalion, was set up, with Col. Sorin Pascaru appointed as its commander. It was equipped with the KUB complex and was subordinated to the 2nd Army.

The aviation continued to develop at the end of the 1960s and beginning of the 1970s, creating new units and augmenting its equipment. The development focused mainly on strengthening the central and North-Eastern areas of Romania by setting up new units and improving the infrastructure (including the reserve airfields).

The point was reached where even the roads were enhanced so that aircraft could take off and land on them. As the military doctrine of the entire nation's struggle to defend the homeland became coherent, it was decided to include other types of aircraft in the defense plans, namely commercial and sport planes. What is more, military personnel was appointed in command of these types of aircraft irrespective of the ministry they belonged to (for example, on 23 October 1972, the Command of the Civil Aviation TAROM was created).

Starting with the year 1965, the fighter regiments were equipped with the new versions of MiG-21. So, by 1971, the versions U, US, UM, M, RFM, RFMM, MF, and R. were imported. The MiG-21R aircraft were renamed C (from Cercetare - Reconnaissance) and were assigned to the 31st Reconnaissance Squadron from Giarmata.

A second reconnaissance squadron of the Romanian Military Aviation was the 38th Squadron equipped with Il-28 twin-engine aircraft which was deployed to Fetești (from 1972, the Il-28 twin-engine aircraft were replaced with Hong-5 imported from China).

At the end of the 1970s, the fighter squadrons started being equipped with MiG-23 imported aircraft, a supersonic jet superior to the MiG 21, meant to intercept aerial targets. Starting with the year 1979, 46 of these aircraft were assigned to the squadrons from Mihail Kogălniceanu and Giarmata (36 MiG-23 MF and 10 MiG-23 UB). The first Romanian pilots to fly these aircraft were trained in the USSR, at Lugovaya (Kazakhstan).



The MiG-23 aircraft were operational in the Air Force up to the year 2001.

In order to replace the MiG-15 and MiG-17 aircraft which were used by the two fighter-bombing regiments, the Romanian aeronautical industry, together with the Yugoslav one, started to manufacture the aircraft IAR-93/Soko J-22 (Orao), a twin-engine machine meant to support the ground forces. This aircraft flew for the first time on 31 October 1974, at the In-flight Testing Center which was set up during that year.

As for the Military Transport Aviation, the 99th Transport Regiment had 16 Li-2, Il-16, Il-18, and An-24 aircraft in April 1967. The first two An-26 aircraft were assigned to the regiment from Otopeni on 18 May 1974.

On 16 February 1971, at Otopeni, the 50th Flotilla was set up by reorganizing the 203rd Squadron. The role of this new unit was to provide air transport to the political rulers of the country.

The separation of CAVM from CAAT

On 1 May 1977, the Military Aviation Command (C.Av.M.) was no longer a part of the Air Defense Command (A.D.C.), becoming a separate structure. It comprised aviation and paratroopers units.

The first commander of the C.Av.M. was Major-General Aurel Niculescu, replaced, in the summer of the same year, by Major-General Gheorghe Zărnescu.

The C.Av.M. was responsible for the elaboration of a development strategy, the training and use of aviation in combat, the planning and coordination of flight in the Romanian air space, training of the personnel.

The C.Av.M. was in command of four fighter regiments and two fighter-bombardment regiments; units and subunits of rotary-wing aircraft; the transport regiment and the 50th Flotilla, two reconnaissance squadrons, the 70th Engineers' Regiment, the 60th Regiment responsible for the functioning of the runways; the 161st Battalion responsible for guarding the airfields; the 265th, 271st, 284th, and 295th Logistics Bases; the Aircraft Maintenance Base; the Aeronautical Medical Center; the Chemical Laboratory; The Training Center for Aviation; the "Aurel Vlaicu" Military School for Pilots; the "Traian Vuia" Warrant Officers' School.

On 30 July 1978, the 70th Aviation Division was set up in Otopeni. It was in charge of two fighter-bombers regiments (from Ianca and Craiova) and two reconnaissance squadrons (the 31st and the 38th). To these, in 1982, was attached the first aviation unit from Transylvania after World War II, which had its airfield at Câmpia Turzii.

The unit in Otopeni also included the 58th, 59th, and 94th Helicopter Regiments. When the 70th Division was created, the Romanian Military Aviation had 797 airplanes: 259 MiG-21, 19 MiG-17, 142 MiG-15, 10 Il-28, 3 An-30, 6 An-26, 11 An-24, 2 Il-18, 1 Il-14, 4 BN-2 Islander, 1 Boeing 707, 47 Aero L-29, 29 IAR-823, 5 IAR-822, 16 An-2, 25 Mi-8, 18 IAR-330, and 94 IAR-316B.

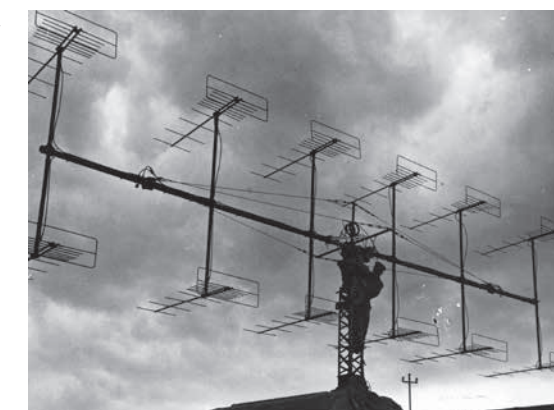
The air crews had 825 pilots, 59 navigators, 21 technical personnel, 7 signalers and 3 cosmonaut-candidates, while the non-flying personnel numbered 1,000 specialists. Among the 825 pilots, 270 had first class certificates.

In 1962, the first helicopter squadrons were established and in 1965 the first regiment (the 94th Helicopter regiment, stationed in Alexeni), but this branch of aviation started to grow in the mid-1970s, when the Romanian industry started to produce IAR-316B (Allouette III) and IAR-330 (Puma). Until the end of the 1980s, six helicopter regiments were formed: R.58 (Sibiu), R.59 (Tuzla), R.60 (Tecuci), R.61 (Boteni), R.73 (Caransebeș), R.94 (Alexeni). Besides these, there was another helicopter squadron deployed on the Someșeni military aerodrome.

The regiments had a mixed turnout: IAR-330 and IAR-316. The unit in Alexeni also had Mi-8 made in the USSR. Finally, helicopters were also located at the 99th Tp. Regiment in Otopeni.

Helicopters, especially IAR-330 ones, increased mobility of troops, according to the modern warfare. They were fit for airlift and assault, fire support, search and rescue.

The first jet airplane made in Romania was the IAR-93, a subsonic fighter aircraft for close air support, able to function on poorly equipped fields, on grassy runways. The aircraft, made as part of YUROM Program in cooperation with Yugoslavia, was furnished with a Rolls-Royce Viper MK 633-47 turbo-jet engine built under license at the Turbomecanica Plant



P-12 radar station maintenance



On 25 October 1973, the commander of the 1st Air Defense Missile Brigade received the battle flag from the Chief of Staff of the Air Defense Command, Major General Constantin Drăghici



The inventor Henri Coandă visiting the Homeland Air Defense Command at the beginning of the 1970s. He is welcomed by Generals Alexa (Chief of the A.D.C.), Catană, and Niculescu (Aviation Deputy)



Exercise with air cannons (above) and anti-aircraft machine-guns (below)



Il-28 search and bombing airplane on the Borcea aerodrome



The first flight of the IAR-93 prototype took place on 31 October 1974. Lt. Col. Gheorghe Stanică at the controls. Subsequently, the pilot was congratulated by the head of state, Nicolae Ceaușescu

In 1976, as a result of the Aviation Staff's decision and due to Nicu Ceaușescu's lobby (he was a graduate of the "Aurel Vlaicu" Military School for Pilots in Boboc-Buzău), the new type of blue uniform was adopted, as well as the new insignia that became again the Royal tail used during the reigns of Kings Ferdinand and Mihai, but with the insignia of the Socialist Republic of Romania.

Regarding the command, the C.Av.M. had the following composition on 21 September 1978: Major-General Gheorghe Zărnescu (commander), Major-General Gheorghe Ionescu (Chief of Staff), Major-General Dumitru Balaur (training deputy), Major-General Grigore Baștan (assault deputy), Major-General Gheorghe Catană (services deputy).

On 5 May 1987, the VR-3 jet aircraft was introduced. It was assigned to the 143rd Unmanned Reconnaissance Squadron, placed on the Mihail Kogălniceanu aerodrome. The squadron included 12 unmanned aircraft, employing two versions of VR-3, a photo reconnaissance one and a video reconnaissance one.

Besides the Military Aviation, the C.Av.M. also included paratroopers (beginning with 1 May 1977), renamed the 60th "Băneasa-Otopeni" Paratroopers' Regiment in June 1980.

In 1980, at the same time with the creation of two army commands (the General Staff comprised four armies), three paratroopers' regiments were created: R.56 (Caracal), for the 3rd Army, under the command of Lt.-Col. Dan Gabor; R.60 "Baneasa-Otopeni" (Buzău), for the 2nd Army, under the command of Col. Achim Alstani; R62 (Câmpia Turzii), for the 4th Army, under the command of Lt.-Col. Alexandru Plăeșu; R.64 (Titu), for the 1st Army, under the command of Lt.-Col. Tănase Niculescu. Each paratroopers' unit was placed near a military aerodrome in order to facilitate the peacetime training and rapid deployment in case of war.

Paratroopers were considered special dedicated troops, able to execute surprise attacks over long distances. They were trained to operate in cooperation with other units or independently.

Their equipment included machine-guns, 82-mm AG-9 grenade launchers, launching systems for antitank guided missiles, auto stations and radar stations, telecommunication systems, NBC decontamination vehicles, engineering assets and vehicles.

The parachutes were of the types BG-7M and BG-3M, made in Romania. The leaps were made using An-2 airplanes.

CAPT. ENG. DUMITRU PRUNARIU'S SPACE FLIGHT (14-22 MAY 1981)

For the space flight, Romania entered the "Intercosmos" program, that was designed to sent mixed crews to the outer space.

On 1 January 1978, three candidates were chosen: Captain Engineer Dumitru Dediu, Engineer Cristian Guran, and Engineer Dumitru Prunariu. They were sent to Moscow where they were tested by the specialists of aviation and space within the Medical Research Institute. After the tests, only Dumitru Dediu and Dumitru Prunariu were maintained. They went to the "Yuri Gagarin" Center for the Training of Cosmonauts in the so-called "Star City" near Moscow, where they started the training, together with other candidates from Bulgaria, Hungary, Mongolia, and Cuba. Later on, the candidates from Vietnam joined them. The candidates lived there with their families, which was a mandatory request.

Romania was to participate in the mission Soyuz 40, which would take place between 14 and 22 May 1981. On 12 May, Dumitru Prunariu was chosen to fly with Leonid Popov, owner of the space resistance record (185 days). The launch took place on the evening of 14 May, at 20:16, Bucharest time, from the Baikonur aerodrome in Kazakhstan. The following day, the spaceship coupled with the Saliut-6 space orbit station. For a week, the two cosmonauts made 22 scientific experiments, most of them with Romanian equipment designed in Romania. The return to the air space took place on the afternoon of 22 May, as scheduled.

The two members of the crew landed with a capsule which can be seen today at the "King Ferdinand" National Military Museum..

THE FLIGHT SCHOOL IN ANGOLA THE ROMANIAN ARMY'S FIRST MISSION ABROAD AFTER WORLD WAR II

A special mission for the school started on 30 January 1980, when the "Sirius" Romanian Aviation Group was created with the role to establish the National Military Aviation School in Angola (ENAM), commanded by Major-General Aurel Niculescu. The group had all the positions occupied. After a period of two years, ENAM would be able to continue its activity independently, having all the necessary personnel (instructors, staff officers, mechanics, weather officers). On 1 February 1981, the "Sirius" Group arrived in Angola. The entire equipment, except the BN-2 airplanes, were transported to Luanda by sea.

The aircraft were made in Romania and remained in Angola. Twelve airplanes were of the type IAR 823; then came the monoplane standard school airplane, 1st phase, six twin-engine BN2 Islander and six IAR 316B helicopters. The Group was made up of 150 people: flight instructors, engineers, warrant officers, NCOs, interpreters.

The mission was prepared in Boboc-Buzău. Its name was initially "Siriu", as the nearby river, but in Angola it became "Sirius". The courses were translated into Portuguese, and the future teachers studied them this way. Also, research had been done concerning the history, geography and culture of Angola.

At the end of the 1980s, the training phase was over. The 150 members of the Group received the special uniform of the mission, the color of the sand, and the insignia, with the ENAM initials, both conceived in Romania.

On 15 January 1981, the Flight School officially opened, in the presence of the Angolan Minister of Defense. The command of the school and the garrison personnel were from Angola, and the rest of the positions were occupied by the Romanians. During the first months, only theoretical courses were taught, and on 1 April the flights began. Circuit flights were first performed. After a few days, the cross-country area was extended, then simple flight maneuvers were taught, as well as IAR-823 battle employment elements, by simulating ground attacks. Additionally, it was decided that the students were to perform parachute leaps from the IAR 316B.

Each aeronautical initiation is paid with human sacrifice. When the Angolan flight training was created, the instructor born in Buzău, Gheorghe Preda, and his student Ruy Ximenes crashed with their airplane on 6 July 1981.

After the two-year long training period, ENAM continued its activity independently, when the Romanian personnel left, having the necessary trained personnel (instructors, pilot-instructors, staff officers, navigators, mechanics, weather officers etc.). Thus, on 18 December 1982, ENAM was entirely handed over to the Angolan government by the representative of the Romanian Government, (commander of the "Sirius" Group, Major-General Aurel Niculescu), on the occasion of the graduation ceremony of the first military pilots promoted to the rank of 2nd Lieutenant.

ACTIVITY OF THE TERRITORY ANTI-AIRCRAFT DEFENSE COMMAND (1977-1990)

The radar, artillery, and surface-to-air missiles remained under the subordination of the C.A.A.T., which was commanded from 1975 to 1990 by General Mircea Mocanu, commander of the operational-strategic unit, with two subordinated divisions. During the reorganization that took place at C.A.A.T. level, from 1976 to 1978, essential changes were made regarding artillery and surface-to-air missiles. The Operations-Reconnaissance Direction and the Surface-to-Air Defense Section were created, as well as the Battle Training Direction, the Artillery and SAM Section, and the Classified Documents Compartment.

In order to regulate the activity of the Surface-to-Air Defense Section, the position of commander for this structure was assigned to the Deputy Commander. So, among the responsibilities of this structure were: handling issues concerning the development of the Capu Midia firing range, planning and execution of surface-to-air and naval firing, artillery and anti-aircraft machine-guns, with bombardment aviation, trials and certification of new equipment, ammunition and missiles, as well as planning and coordination of the Romanian firing exercises abroad.

This coordination of activities in the firing range was useful for all the specialized units in the entire Armed Forces, including the Internal Affairs, Security, and National Guard. As proved in the following years, unitary equipment, training, and, mainly, development doctrines were conceived for the artillery and SAM, by overcoming the complex obstacles of the time. For example, the Chief of the Army Air Defense, Lieutenant-General Laurențiu Cupșa, and, in 1978-1983, Colonel Florea Drăghici and then, in 1983-1992, Major-General Valentin Nițescu were also Deputies of the Territory Air Defense Commander, positions that allowed them to be part of the major decisions for the future evolution of the artillery and SAM included in the Army.

The Capu Midia firing range offered poor accommodation and feeding and represented a real campaign school for the military forces brought here to develop their firing fight skills. Both the uploading and release of the battle equipment, mostly by railway, the vehicle transport, and, especially, the surface-to-air firing sessions, under heavy conditions, represented physical and mental tests. From this point of view, in the interval 1970-1979, this firing range was transited by all the units and subunits of artillery and SAM, all the graduates of the officers schools, WOs and NCOs schools, as well as conscripts. The range was also used by reservists, military personnel, or soldiers, in order to maintain their battle skills.

In the mid 1980s, the creation of a second defense line was taken into consideration. This was the reason why, beginning with 1986, the "Neva" system was purchased. These short-range missiles were assigned to the new 17th Regiment.

The development of the anti-aircraft artillery in the Army reached its climax in the 1980s, when three of the four Romanian armies had an anti-aircraft missile regiment: the R.48 R.A.A. for the 1st Army; the R.51 R.A.A. for the 3rd Army, and the R.53 R.A.A. for the 2nd Army. All these units were endowed with KUB systems. Finally, on 22 May 1989, the 50th Anti-aircraft Artillery Regiment was created, under the command of the 4th Army, endowed with Osa-AKM missiles.

Also, the national radar system was developed in the 1980s. Beginning with the second half of this decade, new radar stations were introduced, of the types: P37,



General Aurel Niculescu, the first chief of the Military Aviation Command



IAR-316 Alouette helicopters, made in Brașov from 1972



IAR-330 PUMA helicopters, made in Brașov from 1975



The crew made up of Dumitru Prunariu and Leonid Popov in the first moments after landing (above) and being decorated by Soviet leader Leonid Brezhnev (below)





The second visit of the Romanian delegation to Negage. In the center, standing and wearing a beret, Capt. Bonga d'Aço; third from right, Aurel Niculescu; wearing a white shirt, Dumitru Balaur



January 1981, opening ceremony of the Negage flight school



The Negage Military Airfield and the IAR-823 and BN-2 Islander aircrafts used for the Angolan pilots' training



Radar, artillery and ground-to-air missiles remained under the coordination of the C.A.A.T., commanded by Gl. Mircea Mocanu in the years 1975-1990

OBORONA-14, NUR-32, ST68U, NUR-32M, and P-18. These were supplemented with 5 N-87 and P14F systems, as well as PRV-13, PRV-17 and NUR-41. Moreover, automatic equipment was imported (from the command automatic system), of the types VOZDUH-1M and DUNAET.

By these investments, the forces of the two radio-technical brigades subordinated to the C.A.A.T. were doubled, as compared to the previous decade. Also, the national radar system became more and more efficient, by laying the foundation for automatic command and centralized interpretation and transfer of data.

THE POSTWAR MILITARY AERONAUTICAL EDUCATION

After World War II, the Romanian Military Aeronautics went through a downfall period. According to the Armistice Convention, the military aeronautical education institutions had to be reorganized, and some of them were closed, as was the case for the entire Armed Forces. From 1945 to 1960, the aeronautical schools in Buzău, Mediaș, Sibiu, Bucharest, Tecuci, Focșani, and Ziliștea –Boboc were reorganized.

The Law-Decree no. 1909 from 1946, established as sole aviation training center the one in Mediaș, with flight detachments in Clinceni and Buzău. Afterwards, based on the Decree of the Great National Assembly no. 356 from 4 September 1953, the aviation schools were progressively concentrated in Ziliștea-Boboc, beginning with 1956, under the name of "Aurel Vlaicu" School for Aviation Officers. The flights were normally performed in the interval May-September, on the Boboc aerodrome and also in Buzău, Focșani, and Tecuci. The training process, both on the ground and in the air, of the future pilots, mechanics, aircraft navigators/air-traffic and ground controllers or meteorologists was drastically modified concerning the endowment with the first jet aircraft, helicopters, or modern airlift airplanes.

The training system of the anti-aircraft artillery personnel initially focused on a single military unit, the Anti-aircraft Artillery Instruction Center, by bringing to Bucharest the instruction center for Anti-aircraft Defense within the Military Schools for Officers and Active NCOs, created on 10 December 1939.

The radio-locators' training began in 1941 in the Radio Scout Instruction Center in Bucharest, which in 1950 was named the Air Scout Instruction Center. The educational structures that supported the transformation and modernization of the radar were established in 1952, by the Military School for Active Radar Officers in Sibiu, which moved to Brașov in 1960. On 6 November 1959, the Military School for Radar NCOs was formed, subordinated to the military school for radar officers.

These aeronautical schools massively included workers and peasants to change the status of the military personnel, at the same time with the introduction of a strong Communist ideological influence. The Soviet political counselors interfered until 1958, when the Soviet troops left Romania. Witnesses from Ziliștea-Boboc relate that the Russian military and their families living in Boboc regretted the beautiful stay within this military school and also the true friendship of the Romanian aviators.

The syllabuses of the three specialties were designed to adopt the national and international aeronautical development, besides the political doctrine, performing consistent military, tactical, and specialized training imposed by the exploitation of military equipment used in the operational units.

The graduates refreshed the forces of the units, the already existing ones and the new founded ones, representing the main personnel of the Romanian aeronautics, some of them becoming commanders of aviation units.

Forecasting the beginning of a new superperson era, with the MiG-21 initiating roads, on 31 December 1961, the "Aurel Vlaicu" Military School for Aviation Officers was renamed the "Aurel Vlaicu" Superior Military School for Aviation Officers by extending the training period from 3 to 4 years (until 1968, when it was 3-year long again, but beginning with 1980 the training period was 4-year long again for navigators), with new syllabuses, comprising an increased number of polytechnic specialties, such as aerodynamics, transonic and supersonic speed, new course books, documents, regulations, methodologies and battle-and-flight training, creating new laboratories with special resources. Beginning with 1980, the "Aurel Vlaicu" Military School for Aviation Officers was reorganized into School Aviation Groups, stationed in Focșani, Buzău, and Boboc, under a single command.

In 1971, the Superior Civilian Aeronautics School was created in Boboc-Buzău, which was functional for two years and then joined the military school for aviation officers that it had been previously part of; the command, administrative personnel, and navigators forming the present Romanian Civilian Aviation come from the aviation school in Buzău. Among the first employed airplanes for the training of the civilian pilots were IAR-818 and, beginning with 1973, Zlin 526F, double-seat airplanes for flight initiation. The civilian aviation school existed in Buzău until 1993, and trained both navigators and non-navigators (air traffic controllers).

Beginning with the fall of 1960, the Anti-aircraft Artillery Military School joined the Radar Military School in Bucharest, under the name of the "Leontin Sălăjan" Military School for Anti-aircraft Artillery and Radar Active Officers, beginning with 1966.

By order CL 1778 from 2 July 1960, the Military School for Anti-aircraft Artillery and Radar was created by the unification of two schools and, after the creation of the WOs

Corps that same year, it became the Military School for Anti-aircraft Artillery and Radar Warrant Officers in Brașov.

The military schools of Ziliștea-Boboc and Brașov permanently extended their equipment by: employing new classrooms, laboratories, workshops, by taking part in cultural events (foundation of publishing houses and magazines, the first Romanian aviation museum, in 1982-1983 in Boboc, the basis of the present Romanian Air Force Museum of Pipera, near Bucharest, an outdoor display of airplanes, ceremonial halls, monuments, gyms, marble panoplies with the names of the best graduates, unit commanders' and instructors' galleries).

An important role was played by the military aeronautical school establishing friendships during the meeting with foreign delegations.

The relationships with the foreign aviators during the training of September 1980 until 1984, 40 pilots and 57 non-navigators (two consecutive series for each specialization) were made in Zimbabwe, Somalia, and Madagascar.

We must not forget the humanitarian support offered to their hosts in Buzău, Bucharest, Ploiești, and Brașov. Thus, in 1945-1946, the young military personnel worked for thousands of hours to remove the debris caused by the fights and bombardments, or to fight the flood of 1970, or in 1977, when the students and military personnel helped with the removal of the remains resulted after the devastating earthquake of 4 March 1977 for four days, just as it had happened in 1940.

ACTIVITY OF THE CAVM AND CAAT DURING THE DECEMBER 1989 EVENTS

The internal and international circumstances in Europe in the 9th decade of the previous century influenced the events of December 1989 and placed Romania in the center of the East-European Communist gulag disintegration. On 22 December 1989, Nicolae Ceaușescu's communist regime collapsed, as Romania entered a new democratic era: respect for individual freedom, introduction of a wide variety of parties, free commerce, and separation of power.

The events of December 1989 surprised the Armed Forces and the services were unprepared, misinformed, poorly trained, improperly equipped, with troops involved in economic activities rather than in normal battle-training activities.

The aviation, radar, and anti-aircraft artillery were in bad shape, with the exception of a few subunits that had attended special training programs and participated in periodical evaluations of the Warsaw Treaty, organized by the Soviet Union.

Regarding the amount of assets, the situation was not so bad (over 30,000 people, of which approximately 1,200 pilots), around 400 battle aircraft (IAR-93, IAR-99, MiG-21, MiG-23, MiG-29, IAR 330 PUMA helicopters etc.), airlift airplanes and helicopters (An-24, An-26, An-30, Mi-8, Mi-17 etc.) school and transfer (IAR-823, Iak-52, L-29, L-39, IAR-316 Alouette etc.) located in 15-16 airbases, radar and anti-aircraft artillery units and subunits. The quality of the equipment was poor, as the economic situation imposed by the communist regime was drastic during the last years of its existence.

The night of 22-23 December can be considered the "fire night" of the C.Av.M. and the C.A.A.T. or the hottest night of the entire range of events, both connotatively (initially, it was believed that the military attack began as an air strike) and denotatively (fire was opened using all air and anti-aircraft equipment), as soon as the couple of dictators and their collaborators ran, when Romania was attacked by air "assault". It was combined with real or simulated ground attacks upon the aviation, radar and anti-aircraft artillery units and other military or civilian important sites during the unfolding scenario.

Beginning with the following day, the commanders of the C.Av.M. and the C.A.A.T. ordered to cease fire, except upon visually confirmed targets. On 25 December, the air situation became normal.

Between 23 and 25 December 1989, there were many attempts to enter the command and control system of the aviation and anti-aircraft defense, realized by jamming the coordination instructions. Among the two thousand simulated air targets, there were real aircraft with various missions. To fight them, the two air-defense structures performed 52 take-offs (fighter aircraft), 26 helicopter flights, 58 different SAMs launched and 1,194 machine-gun and anti-aircraft artillery firing sessions.

Therefore, the air service, mainly based on the radio-electronic service, was accomplished by all tactical and operational rules, perfectly credible in the first hours of the confrontation. The electronic warfare was carried out with equipment superior to the Romanian one, with aircraft flying outside Romanian airspace, or even with satellites.

The response of the air-defense system was prompt, complex, thoroughly coordinated (as compared to the general chaos), meant to stop real actions, contributing extensively to the restoring of a normal internal situation and to the consolidation of the Romanian democratic state.

The series of articles is based on the book "Aeronautica Militară Română" (Romanian Military Aeronautics) published in 2003, as well as articles from the archive of the GER SENIN magazine



Chiefs of Air Defense (above) and members of the delegations (below) during a meeting of the Warsaw Treaty in the 1980s



The anti-aircraft missile units subordinated to the C.A.A.T. were meant to defend the main industrial objectives of the Socialist Republic of Romania



Exercises in the Capu Midia firing range



The S-125 NEVA surface-to-air missile complex was deployed in 1986 to bolster the second line of air defense for Bucharest

"THE SHARK" - AN AIRSHOW STAR

This aircraft had undergone an extensive modernization process, a noteworthy achievement that serves as a driving force behind the flight crew's unwavering determination and their motto: 'Fly! Sharks never stop!'



MALTA INTERNATIONAL AIRSHOW 2023

On September 22, 2023, the military aircraft AN-26 'Shark,' based at 90th Air Transport Base Otopeni arrived in Malta to take part in the MALTA INTERNATIONAL AIRSHOW 2023 air show held at Luqa International Airport in Valletta, Malta. The primary objective was to showcase and promote the Romanian Air Force's capabilities on the international stage.

The AN-26 'Shark' aircraft was made accessible to the public and was featured in a static display. The crew members, inspired by the aircraft's impressive appearance and dependable performance, demonstrated an innovative technical solution. This solution resulted from a collaboration between the Romanian Air Force and the Romanian company AEROSTAR, aimed at adapting analog flight instruments to meet current international aeronautical regulations.

THE ROYAL INTERNATIONAL AIR TATTOO 2023



Robust, sporting a 'smile,' and always prepared for flight, the 'Shark' refers to the An-26 military aircraft proudly belonging to the 90th Air Transport Base Otopeni.

This aircraft played a prominent role in the prestigious event known as "The Royal International Air Tattoo 2023," which took place in Great Britain from July 13 to 17, 2023, at Fairford Air Base. Its primary mission was to enhance the image and reputation of the Romanian Air Force and the Romanian Army on the global stage, accomplished through its participation in the static display.

This exhibition served as an exceptional opportunity to acquaint the general public with the remarkable attributes and impressive capabilities of the An-26 aircraft.



