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COVER I: ROMANIAN F-16 FIGHTING FALCON
PHOTO: BOGDAN PANTILIMON
COVER III: ROMANIAN AIR FORCE F-16 AND F-22
RAPTOR
PHOTO: 53RD WARHAWKS ROAF
COVER IV: LAST MIG-21 TAKE-OFF FROM 86TH AFB
PHOTO: ADRIAN SULTĂNOIU

TABLE OF CONTENTS

#WEARENATO

AIR DEFENDER 2023	3
NATO AGENDA	4-12
SABER GUARDIAN 23	13
FAREWELL TO ROMANIA'S MIG 21	14-25
BALTICA 2023	26-41
ROMANIAN AIR FORCE - 110 YEARS	42-65
EXTERNAL CORRESPONDENCE	66-77
PSYCHOLOGY PILL	78



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**GERMANY KICKED OFF LARGEST
MULTINATIONAL AIR FORCE
DEPLOYMENT IN NATO HISTORY.**

BERLIN, Germany - German-led multinational exercise Air Defender 23 was the largest air force deployment in NATO's history. From June 12-23, the goal was to exercise air operations with Allied and Partner air forces. The focus was on optimizing and expanding cooperation among participating nations.

"With exercise Air Defender 23, we opened a new chapter in transatlantic history," said Lieutenant General Ingo Gerhartz, Chief of the German Air Force at a press conference for German and American journalists in the United States in early April.

The exercise - which Germany started to plan in 2018 - was based on a collective defence scenario also known as Article 5 scenario in which Allies deployed their air forces to Germany to fight against hybrid occupation forces from a fictitious opponent.

In coordinated combined operations, the Allied air forces demonstrated they were capable of defending NATO territory with swift decisive action. The exercise's large-scale operations involved almost 10,000 personnel and more than 250 aircraft from 25 nations and NATO.

The US air forces that deployed to Germany were mostly Air National Guard units from 35 US States. The bulk of the participating forces operated out of three German Air Force bases and others flew in from their home bases.

Air Defender 23 demonstrated transatlantic solidarity through the visible contribution of US air forces. Germany's ability to receive and host large aircraft contingents at its airfields enabled, among others, the US Agile Combat Employment concept, facilitating short-term and out-and-back deployments. Last, but not least, Air Defender was a major demonstration of NATO's Deterrence and Defence in the Euro-Atlantic area that reassured populations of Allied cohesion and commitment.

According to the German Air Chief, Lieutenant General Gerhartz, Germany - by planning, organizing, and conducting Air Defender 2023

- responded to calls to accept more responsibility in the global security domain.

The Romanian Air Force detachment actively participated in the Air Defender exercise, deploying a C-27J SPARTAN aircraft at Wunstorf airfield. The detachment consisted of flight and technical personnel, alongside a liaison officer stationed at the air operations center in Kalkar. During the exercise, the Romanian detachment collaborated on missions with NATO Partners. Working alongside American and German counterparts at Wunstorf airfield, which saw the deployment of 30 transport aircraft, the Romanian detachment meticulously planned and executed daily missions in support of COMAO (Composite Air Operation) within a comprehensive package of 30 aircraft. This diverse aircraft package included F-35, F-16, EF 2000, GRIPEN, F-18, A-10, RAFALE, TORNADO, and AWACS. During the exercise, the Romanian detachment successfully carried out a range of crucial missions, including tactical transport, personnel insertion/extraction, rapid material transport via airdrops, parachute operations, container launches, medical evacuations, and NVIS night missions. These diverse and demanding tasks highlighted the detachment's versatility and demonstrated their ability to handle challenging scenarios effectively.

For the Romanian detachment, this exercise served as a significant and pivotal opportunity to establish credibility through joint operations with multiple partners. By seamlessly collaborating and executing missions alongside a diverse array of partner nations, the Romanian detachment showcased their professionalism, competence, and capacity to operate in concert with allied forces. This exercise solidified their reputation and underscored their commitment to excellence in joint military endeavors.

Photo credit: LUFTWAFFE





The Commander of the US Air Forces in Europe visits Romania

On Thursday, April 27, Minister of National Defence, Angel Tîlvăr, and the Chief of Defence Staff, General Daniel Petrescu, met, at the MoND Headquarters, with the Commander of the US Air Forces in Europe (COM USAFE) and Commander of Allied Air Command (COM AIRCOM), General James B. Heckler, as part of the visit the American official payed to Romania.

The activity represented an excellent opportunity to discuss topics of common interest in the field of air forces, within Allied context, and to develop and increase cooperation relations within the Romania-USA Strategic Partnership.

The American official's visit to Romania included meetings with the command teams and the Romanian soldiers deployed to the 90th Airlift Base "Comandor Aviator Gheorghe Bănciulescu"- Otopeni, 57th Air Base "Mihail Kogălniceanu", 86th Air Base "Locotenent Aviator

Gheorghe Mociorniță" - Borcea and to 71st Air Base "General Emanoil Ionescu" - Cămpia Turzii, as well as with a delegation of the Air Forces' Staff headed by Lieutenant General Viorel Pană, the Chief of Air Force Staff.

The activities carried out during the visit contributed to the development and consolidation of military cooperation plans between the two structures, thus ensuring high-level representation and the promotion of Romania's interests in the field. At the same time, this was an opportunity for further identification of the cooperation possibilities in the field of the conduct of enhanced Air Policing Missions, enhanced Vigilance Activities as well as of the exercises and assessments.

Romanian MoD Press Office

Romanian Air Force Chief of Staff visited United States of America

U.S. Air Force Chief of Staff Gen. CQ Brown, Jr. hosted the Chief of the Romanian Air Force Staff Lt. Gen. Viorel Pană for an official counterpart visit June 26 through 30. The visit recognized Romania as a valued NATO ally and advanced the strong and enduring bilateral defense relationship. During their office call, Brown commended Romania for its vital

contributions to European security, highlighting Romanian Air Force support to NATO's Baltic Air Policing mission as an example of alliance solidarity in action.

The leaders also exchanged perspectives on Black Sea security and impacts to the region from Russia's brutal war of choice against Ukraine.

"I want to thank Lt. Gen. Pană and the Romanian Air Force for their continued leadership role in the Black Sea area, and Romania as a whole for hosting thousands of U.S. and allied forces to bolster and defend NATO's eastern flank," Brown said.

Source (text and photos): www.af.mil



Air Force Chief of Staff Gen. CQ Brown, Jr. hosted Chief of the Romanian Air Force Staff Lt. Gen. Viorel Pană at a full honors arrival ceremony, Joint Base Anacostia-Bolling, Washington, D.C.; also Air Force Chief of Staff Gen. CQ Brown, Jr. hosted a staff discussion with Chief of the Romanian Air Force Staff Lt. Gen. Viorel Pană



The 187th Fighter Wing hosted a tour for the Chief of the Romanian Air Force Staff and delegation at Dannelly Field, Alabama



US Ambassador Kavalec toured Romania's 71st Air Force Base

On May 24, Ambassador Kavalec toured Romania's 71st Air Force Base located near the city of Campia Turzii in Cluj County, where the United States and Romania keep watch around the clock to reassure Allies that our commitments to Article 5 and NATO's Eastern Flank are sacrosanct. Ambassador Kavalec was accompanied by 71st Air Base Colonel (AF) Calin Hulea, Air Base Chief of Staff Captain Florin Sandu, and Head of the Host Mission Support Department Major Cosmin Tanase.

During the visit, the base conducted a concise briefing to showcase the capabilities of the major unit, with the participation of the American partner detachments' command. Concluding the visit, Ambassador Kavalec observed the take-off of the F-22 Raptor aircraft, which embarked on training missions within Romania's airspace.

The presence of Ambassador Kavalec was a part of a comprehensive program of activities commemorating the 25th anniversary of the strategic partnership between the United States of America and Romania.

Source: ro.usembassy.gov
Foto: Andreea Onița



Deputy General Secretary of NATO visited the 71st Air Force Base

On June 18th, NATO Deputy Secretary General Mircea Geoană arrived at the 71st Air Base, where he received a warm welcome from the base commander, Colonel (AF) Călin Hulea, and several members of the command team. Accompanying the delegation was Brigadier General Daniel Pop, the representative of the Chief of Defense Staff and head of the Instruction and Doctrine Directorate.

During the visit, NATO Deputy Secretary General Mircea Geoană addressed the military personnel stationed at the base, as well as the detachments of NATO partners working within the unit. He actively engaged in an informative briefing concerning the base's vital role and missions within the Romanian Air Force and Army.



As part of the visit, the Deputy Secretary General toured the base's chapel and hall of traditions, gaining insights into the rich history and heritage of the facility. Additionally, he explored the static exhibition, where he received comprehensive knowledge about the operational capabilities and missions carried out by the MQ-9 Reaper drones and IAR-330 SOCAT helicopters.

PORTUGUESE F-16 JETS CONDUCT FIRST ALERT SCRAMBLE IN LITHUANIA



Photo: Força Aérea Portuguesa

ŠIAULIAI, Lithuania - On April 2, 2023, two Portuguese F-16 fighter jets from NATO's Baltic Air Policing mission launched from Šiauliai, Lithuania, to identify and escort an IL-76 Russian military aircraft.

The Russian aircraft was flying from mainland Russia to the Kaliningrad exclave above international waters off the Baltic Sea coast of Estonia.

Since there was no flight plan, nor was the plane in contact with Air Traffic Control nor did it use its transponder, NATO's Northern Combined Air Operations Centre at Uedem, Germany, ordered the F-16s to launch and confirm details for the unknown aircraft. After identifying and escorting the Russian plane, the Portuguese fighters returned safely to Šiauliai. This was a routine event.

For the Commander of the Portuguese Detachment, Lieutenant Colonel José Dias, the first alert scramble for this F-16 detachment - executed on day two of the mission - was a demonstration of the "outstanding

commitment, dedication and professionalism of all members that constitute the detachment."

Portugal leads the 62nd rotation of NATO's Baltic Air Policing mission. Four F-16s arrived earlier last week and took over the responsibility of safeguarding regional NATO airspace together with Romanian Air Force F-16s on Mar 30.

Since the accession of Estonia, Latvia and Lithuania in 2004, NATO Allies have taken turns deploying an air policing capability to Šiauliai to protect the territorial integrity of the three Baltic Allies in a strong demonstration of Alliance cohesion and solidarity.

ROMANIAN F-16S LAUNCH FIRST ALERT SCRAMBLE SAFEGUARDING BALTIC AIRSPACE

ŠIAULIAI, Lithuania - On April 7, 2023, two Romanian F-16 fighter jets from NATO's Baltic Air Policing mission launched to identify and escort two Russian Suhoi Su-27 Flanker fighters.

Six days after taking over the augmenting role for NATO's Baltic Air Policing mission at Šiauliai Air Base, Lithuania, two Romanian F-16 fighter jets were scrambled by Combined Air Operations Centre Uedem, Germany, for the first time to respond to an air incident in international airspace over the Baltic Sea. A formation of two unidentified aircraft was detected flying over international waters within NATO area of responsibility. The aircraft did not

communicate their identity and were not in contact with civilian Air Traffic Control agencies. In line with the Alliance's standard procedures, the Romanian F-16s were scrambled and subsequently identified two Russian Suhoi Su-27 Flanker jets. After conducting the intercept and identification manoeuvre in professional manner, the NATO jets safely escorted the Russian aircraft and returned to Šiauliai Air Base.

"The successful completion of the first scramble task within the enhanced Air Policing mission in the Baltic States confirms the high level of readiness of the "Carpathian Vipers" detachment to safeguard skies and the ability of the Romanian Air Force to deploy and use our F-16 aircraft in NATO missions," said the commander of the F-16 detachment, Colonel Cosmin Vlad. Together with a Portuguese F-16 detachment, the Romanian Air Force are flying Air Policing sorties securing the NATO skies above Estonia, Latvia and Lithuania under the collective Baltic Air Policing mission. Both detachments took over the 62 rotation of Allied fighters executing this mission on April 1, 2023.

Photo: 53rd Warhawks RoAF



Allies Portugal and Romania took over NATO's Baltic Air Policing mission in a ceremony on Mar 31, 2023, the Alliance bids farewell to outgoing members Poland and France. The incoming Portuguese and Romanian F-16 fighter detachments are seamlessly continuing this important mission until the end of July when they will be handing the key to the Baltic Airspace to new incoming Allies.
Photo: Giovanni Colla



GERMANY, UK HAND OVER MISSION AND CONTINUE COMBINED AIR POLICING IN ESTONIA

ÄMARI, Estonia – The German and the Royal Air Force handed over their responsibility for enhanced Air Policing at Ämari, Estonia, in a ceremony on Apr 4, 2023, and keep on securing the Baltic skies in a combined effort under NATO aegis.

The traditional handover-takeover ceremony was attended by representatives from NATO, Estonia, Germany and the United Kingdom and formally marked the end of the German deployment and the beginning of the British one. "I want to congratulate the German detachment on the successful execution of their watch over the Baltic airspace and to welcome the British detachment, especially as the new lead nation for the combined air policing," said Brigadier General Ralf Raddatz, Deputy Commander, Combined Air Operations Centre Uedem, Germany during the ceremony.

This time, both detachments have an eight-week overlap conducting combined Air Policing duties. This means that mixed quick reaction alert scrambles take off from Ämari demonstrating the units' close integration at the tactical level. Several times, a Luftwaffe Eurofighter and a Royal Air Force Typhoon launched side-by-side in alert scrambles to intercept Russian military aircraft flying close to NATO airspace.

"This is the culmination of a yearlong process enhancing that level of integration, and I congratulate both detachments on this great achievement," General Raddatz said. "The Estonian Armed Forces – our hosts here at Ämari

– have also been a role model when it comes to integration," he added

"Since 2014, when Russia illegally annexed Crimea and NATO responded with assurance measures, Ämari has hosted a continuous series of Allied fighter detachments; especially during the busy times around the handover/takeovers our Estonian friends have proven their ability to provide first-rate support to the Allied mission," he concluded. "With today's ceremony we deliver an important message: the mission continues. This is especially poignant because we also celebrate today, NATO Day, the signing of the North Atlantic Treaty on 4 April 1949 and we are receiving our 31st member – Finland – on this very day," concluded General Raddatz.

Germany has deployed their fighter jets to Estonia ten times – once every year since Ämari was stood up as a second NATO base for Baltic Air Policing in 2014. Meanwhile, this is the fourth time United Kingdom flies their Typhoons out of Ämari after 2015, 2016 and 2019. Like all the other Allies that have deployed to safeguard the Baltic airspace, this underscores the Alliance's enduring cohesion and solidarity and is commitment to collective deterrence and defence.



Air Vice Marshal Phil Robinson, Commander No 11 Group, HQ Air Command addresses the audience with the RAF detachment and one of their Typhoons in the background. Photo by Maurice Heck.



The German Detachment led by Lieutenant Colonel Christoph Hachmeister in front of a German Eurofighter during the ceremony. Photo by Maurice Heck.

For the first time Danish and Swedish fighter jets conducted a planned combined intercept of a Russian aircraft flying in international airspace over the Baltic Sea. Photo by Royal Danish Air Force.



Skovmose. Whether Denmark and Sweden will do more tasks of this type together in the future has not been decided, but the collaboration is expected to be here to stay.

The Danish Air Force's Quick Reaction Force consists of two fighter aircraft that are on standby 24 hours a day at Skrydstrup Air Force Base in the south of Jutland. From here, the National Air Operations Centre launched the planes when Air Control Wing's radar operators receive information that there is unidentified traffic in the immediate area.

The first combined intercept of Denmark who is a NATO member and Sweden who has requested to join the Alliance, took place roughly one month after several Nordic countries agreed to bolster defences in the Baltic Sea and the High North. In a joint declaration of intent signed at Ramstein Air Base, Germany, on March 16, the commanders of the Danish, Finnish, Norwegian and Swedish air forces decided to deepen mutual cooperation in light of tensions caused by Russia's war against Ukraine. If turned into reality, this endeavour will create a pool of 250 modern fighter aircraft with common tactics, techniques and procedures

strengthen security in the Nordic region, in Europe and the entire transatlantic area", said acting Defense Minister Troels Lund Poulsen.

Although it is a breakthrough, the mission itself was in reality a routine task. Russian planes patrol the Baltic Sea at regular intervals, and their flight patterns often prompt Denmark or one or more of her neighbouring countries sending up fighter planes. What made the mission special was that the collaboration was planned in advance.

"Our air forces regularly train together, so it is not new for us to cooperate both in the air and on the ground, but it is new that we show a common front in this way regarding the enforcement of sovereignty in the airspace. It shows strong unity", said Lieutenant Colonel

DENMARK AND SWEDEN MEET RUSSIAN AIRCRAFT TOGETHER

SKRYDSTRUP, Denmark – In a combined effort, Danish and Swedish Quick Reaction Alert fighter jets intercepted a Russian military aircraft in the airspace over the Baltic Sea. This is the first time that Denmark and Sweden have worked together in this way. The Danish and Swedish aircraft were under their own national command during the entire process.

The four fighter jets met on Thursday April 20 just after one o'clock over the Baltic Sea between Sweden, Zealand and Bornholm where they met a Russian COOT-A military aircraft which was heading west from Kaliningrad. After finding the plane and escorting it on its route, the three nations' planes separated and returned safely to their respective home bases.

"We live in an uncertain time, which is fundamentally affected by Russia's aggressive behaviour. We must expect that the Baltic Sea area will be characterised by a higher level of tension than we have been used to. We have close and solid cooperation with Sweden, which is why we also look very positively on Swedish NATO membership, which will

HELLENIC AIR FORCE HAS HOSTED INTERNATIONAL AIR DRILLS DURING INIOCHOS 23



Greece has hosted the international live-fly Exercise INIOCHOS 23 April 26 to May 03. The scenario ranged across the full spectrum of air operations for personnel and aircraft from five NATO Allies and four non-NATO nations.

Under the supervision of the Hellenic Air Force (HAF) Fighter Weapons School, participants worked together to plan, execute, and debrief missions during INIOCHOS 23. The exercise involves a large number of HAF assets, such as fighters - including the recently acquired RAFALE - Air Defence Systems, helicopters, transport and training aircraft. The F-16 Tactical Simulators of the newly established HAF Synthetic Training Squadron were also used for several missions, expanding this year's edition to the virtual world.

"Exercise INIOCHOS aspires to become the most competitive exercise in the Mediterranean region and provide participants with a high

level of training allowing them to further hone their flying skill," said Lieutenant Colonel Panagiotopoulos Ioannis, Commander, HAF Fighter Weapon School.

Hellenic Army, Navy and Special Operations assets and personnel contribute significantly to creating complex and realistic scenarios across the exercise areas that covers mainland Greece and adjacent waters.

Participants from Allied and international nations conducted missions across the entire spectrum of air operations including Offensive and Defensive Counter Air, Air Power Contribution to Counter-Land Operations, Air

Power Contribution to Maritime Operations, Combat Search and Rescue and the prosecution of Time Sensitive Targets.

"The culmination of INIOCHOS 23 was the traditional Acropolis flight, when the participants performed a flyby over Athens showcasing multinational cooperation, friendship and interoperability", said Brigadier General Kanoupakis Mathaios, Commander, HAF Air Tactics Center.

The INIOCHOS exercise series is an annual medium scale exercise based on the facilities of the Air Tactics Center at Andravida Air Base in the Northwest Peloponnese. The exercise started as a national air exercise at the tactical level in the late 1980; since 2015, it has been conducted as a multinational exercise geared to offering realistic and complex combined air operations.

ALLIES TRAIN FLYING SKILLS IN NORWAY TO DEVELOP COMBINED CAPABILITIES

ØRLAND, Norway – The Royal Netherlands and Belgian Air Forces deployed fighter assets to the Norwegian Air Base at Ørland to conduct combined flying manoeuvres with Norwegian aircraft in enhancing interoperability and 4th and 5th generation fighter integration.

A Royal Netherlands Air Force F-35 during combined training at Ørland that provides an opportunity to enhance pilots' flying skills. Photo by Royal Norwegian Air Force/Ole Andreas Vekve. Photo by Royal Danish Air Force.



During the two-week training period – that also served as preparation and familiarisation for the upcoming Arctic Challenge Exercise in the High North – Dutch F-35s and Belgian F-16s flew combined missions with Norwegian and United States F-35 fighter jets.

"Integration of NATO air assets to strengthen interoperability and hence deliver high-end, credible air power is a cornerstone of our success as a combined fighting force," said Lieutenant Colonel Trond "Matrix" Haugens, leader of 332 squadron based at Ørland. "The integration training we execute from Ørland Air Base these days with our Belgian and Dutch allies is key to building the trust and confidence needed in honing our abilities and make best use of our equipment. We build on each other's strengths of both 4th and 5th generation fighter jets and further develop our common tactics, techniques and procedures (TTPs) - in practice, we develop our patterns of interaction in order to generate true combat power," concluded Lieutenant Colonel Haugens.

"On a daily basis, Belgian F-16s integrated with F-35As from our Allies Norway, the Netherlands and the United States. Our pilots flew training sorties allowing them to learn all about accomplishing complicated mission sets complemented by the new capabilities of 5th generation F-35 and its sensors, said Major "Gunny", commander of the Belgian F-16 detachment "Asgard Falcon" at Ørland. "The Norwegian Air Force and 132 Air Wing have been a great host for this training deployment. The

availability of large airspace, as well as ideal planning facilities and infrastructure enable the joint participants to focus on details and sharpen their skillsets at a very high tactical level. This unique cooperation clearly demonstrates the effectiveness of an integrated combat force between 4th and 5th generation aircraft and greatly enhances the readiness of our personnel and material. Moreover, for many of the Belgians this is their first exposure to a 5th generation Air Force and a first taste of the future," "Gunny" added. The Belgian Air Force will also receive F-35 fighter jets to replace the existing F-16 fleet.

The combined flying training provides an opportunity to enhance skills of pilots in the air and controllers at the Norwegian control and reporting centre. During the Arctic Challenge Exercise (ACE), the air controllers – and their Finnish and Swedish counterparts - will have to perform challenging tasks coordinating Allied and Swedish aircraft during cross-border operations in Finland, Sweden and Norway.

ACE is a multinational joint exercise organized by the Nordic Cooperation of Finland Norway and Sweden. Finland has the lead in the 2023 iteration that runs from May 29 to June 9, 2023. The aim of ACE is to strengthen the participants' national defence, explore common synergies in a multinational context and facilitate common solutions for challenges in combined joint operations.

ADVANCEMENTS IN AIR DEFENCE: DARS INTEGRATION INTO NATINAMDS

ERNDEBRUECK, Germany – The Alliance’s Deployable air surveillance and control unit – the DARS – has accomplished its integration into the NATO Integrated Air and Missile Defence system (NATINAMDS) for the German-led multinational air exercise Air Defender 2023.

Air defence systems have evolved significantly, from rudimentary warning systems to sophisticated integrated air and missile defence systems. NATINAMDS is a prime example of this. It is a command-and-control network that links sensors and weapon systems in the air, on land, at sea, and in space to operate as a single unit. The integration of DARS into NATINAMDS from 6 June 2023 from Erndtebrueck (Germany) is critical to improving the system’s capabilities. DARS provides real-time situational awareness, making it an essential component of modern air defence systems. “Integrating DARS into NATINAMDS system is another milestone for DACCC,” said Brigadier General David Morpurgo Deputy Commander. “This shows the capacity and resilience of NATO to deter and defend the Alliance. Integrating DARS into NATINAMDS offers several benefits, including improved detection and tracking capabilities, greater situational awareness, and faster response times”.

The integration of DARS into NATINAMDS has had a significant impact on air defence capabilities. It has improved the system’s ability to detect and track threats and provides a more comprehensive picture of NATO air and space.



The Alliance’s Deployable air surveillance and control unit – the DARS – has successfully accomplished its integration into the NATO Integrated Air and Missile Defence system (NATINAMDS) for the German-led multinational air exercise Air Defender 2023.
Courtesy photo from DACCC.



ITALIAN SURFACE-BASED AIR DEFENCE SYSTEM FULLY OPERATIONAL IN SLOVAKIA

The Italian Army SAMP/T surface-based air defence system deployed to Slovakia has officially been declared fully operational by Allied Air Command further enhancing Alliance interoperability and collective defence.

Italy deployed its SAMP/T to Slovakia in March and the system is now tied into the NATO defensive architecture shielding the eastern flank further enhancing Alliance interoperability and collective defence.

“The Italian SAMP/T deployment in Slovakia bolsters NATO’s deterrence and defence posture on the eastern flank. Having achieved positive results in the Readiness Verification, our system is now providing its contribution to the NATO Integrated Air and Missile Defence. This operational effort offers a great opportunity to increase Joint integration and interoperability, sharing experiences and working together as a great team with Slovakia and the Alliance,” said Lt. Col. Michele Vellucci, Task Group SAMP/T

Commander.

The SAMP/T is a theatre anti-missile system designed to protect the battlefield and sensitive sites, such as airports and seaports, against cruise missiles, manned and unmanned aircraft, and tactical ballistic missiles. NATO shares the responsibility with member nations to provide an integrated air and missile defence. Thus, the SBAMD deployments are agreed upon with host nations and are positioned to maximise the effectiveness of the systems.

The SAMP/T is deployed in a purely defensive role to defend Allied populations, forces, and territory. This deployment is a prudent measure that underpins our collective defence.



Photo courtesy of thalesgroup.com

FINNISH FLAG RAISED AT NATO AIR COMMAND

RAMSTEIN, Germany – Headquarters Allied Air Command (AIRCOM) marked the accession of Finland to the Alliance as its 31st member in a flag-raising ceremony on 4 April, 2023.

AIRCOM leadership and staff assembled at the Headquarters on Ramstein Air Base on the afternoon of April 4 for a ceremony to celebrate the accession of Finland to the Alliance, during which the Finnish flag was raised as a visible sign of Finland’s integration to NATO.

“It is a great privilege to witness this historic ceremony welcoming our Finnish partners to the Alliance and Finnish airmen to the Headquarters,” said General James B. Hecker, AIRCOM Commander. “AIRCOM has a long tradition of working closely with the Finnish Air Force, be it during exercises, training events or real-life missions. We are continually impressed by the professionalism of the Finnish Air Force. I was able to fly in a Finnish F-18 and see first-hand the superb skills of the leaders, pilots and ground crew at Karelia Air Command and Air Force Command Finland. They are a great addition to our Allied Air Forces and will make a tremendous contribution to collective security in these times,” General Hecker added.

For over a decade, AIRCOM has worked with the Finnish Air Force during exercises and in support of NATO operations. The Finnish Air Force also participated in the NATO Response Force and regularly joins allied Air Policing aircraft during intercepts over the Baltic Sea. The Finnish Air Force has trained with Allied Air Forces applying NATO tactics, techniques, and procedures during the NATO-wide



Steadfast exercise series and our AIRCOM-sponsored manoeuvres such as the Baltic Region Training Events, and Ramstein Alloy exercises.

“Due to the long-standing privileged partner relationship with Finland, the Finnish Air Force is extremely well prepared for integration into Alliance structures. I am proud to say that We are NATO and that now includes our Finnish Allies from today on,” Gen Hecker concluded.

Finland joined NATO’s Partnership for Peace Programme in 1994. It has been one of NATO’s most active partners and a valued contributor to NATO-led operations and missions. Finland applied to join NATO on 18 May 2022. The Finnish Air Force has more than 62 F-18s and also ordered 64 F-35 fifth-generation fighter jets.

EATC WORKS ON ALLIED TRANSPORT INTEROPERABILITY

European Air Transport Command (EATC) put its Lighthouse Project (LHP) into practice leading two first-rate events on A400M cross-activities. The mission of this project is to offer nations improved interoperability, enabling them in the end to operate integrated multinational detachments.

Photo courtesy of EATC.



For years, interoperability within the ground-handling domain has been on EATC’s agenda and EATC’s Lighthouse Project offers another set of stimulating and challenging everyday activities.

“Nations commonly procure aircraft or train air and ground crews. But when it comes to integrated employment, the multinational cooperation stays very limited,” said Major General Andreas Schick, Commander EATC. “This is why we are exploiting the potential of common procurement in all areas of operation, including maintenance and ground handling, as well as multinational training of experts and crews,” he added. “Although based on common civilian European regulations, every nation has its own variants of military regulations.

However common rules or at least the recognition of the different national regulations is a prerequisite when it comes to integrated employment,” General Schick continued.

The LHP was initiated in March 2021 and is making concrete steps in 2023 to demonstrate and validate common operational capacities. The first official event was organised this June in Orléans, France when A400M maintenance and logistics technicians from Germany, France, Belgium, and Spain practiced cross-maintenance, cross-handling, cross-mission preparation, and cross-parachuting activities. The United Kingdom and the European Air Group joined as observers. A second rendezvous is planned in the US in



European Air Transport Command (EATC) put its Lighthouse Project (LHP) into practice leading two first-rate events on A400M cross-activities. The mission of this project is to offer nations improved interoperability, enabling them in the end to operate integrated multinational detachments. Photo courtesy of EATC.

November this year. LHP in 2023 is only the beginning of many opportunities. The initial focus is the A400M, but this project will be used as an advantage and blueprint for other aircraft types such as the A330 MRTT and the C130J.

“Through the LHP, EATC is getting the ball rolling and offering meetings to negotiate and a platform to practice cross-activities. Together with our member nations, we will make the LHP a success. We have just taken off with EATC’s five A400M user nations. More is to come. And I am persuaded that the future will offer us new opportunities with NATO allies joining us on the road to integrated and common employment,” highlighted General Schick.

ADRIATIC STRIKE 23



CERKLJE-OB-KRKI, Slovenia - Thirty nations have been engaged in interoperability training during the multinational Slovenia-led exercise Adriatic Strike in several training areas across the country.



Romanian detachment

After the opening ceremony of Adriatic Strike 2023, the Joint Terminal Attack Controllers (JTACs) from Allies and Partner nations moved to the training areas to work with helicopters, manned and unmanned aerial platforms as well as tanks, mortars and artillery from a series of countries. During simulated air-ground-integration scenarios the JTACs went through agreed standardized tactics, techniques and procedures coordinating fire support with movements and operations of ground troops.

"This eleventh edition of the Adriatic Strike exercise is a great success for Slovenia as it enabled key training with an impressive mix of Allies and Partners," said Colonel Janez Gaube, Commander of the Slovenian Air Force and Adriatic Strike 2023 director. "We are proud to have hosted nations from the region and from across the Alliance. This multinational environment is critical to enable challenges for the participants that must be solved in a combined and joint manner.

The kick-off for the exercise took place at Cerklje-ob-Krki air base in the

bright sunshine. Exercise participants then went through two consecutive days of sometimes torrential rain. Jets and helicopters were unable to launch due to poor visibility and stayed on the ground for safety reasons. "The weather is what it is," said Colonel Gaube, "We still managed to achieve the training objectives of the participants. This was because the working of standardized multinational processes is at the heart of Adriatic Strike. Our complex exercise environment and scenario simulating the divisional level right down to the tactical platoon level are supported by digital communication links and command and control arrangements. Increasingly integrating these into the JTAC training was essential and all our participants benefitted from these options - once again because they learned to apply them in a multinational environment," he concluded.

Exercise Adriatic Strike closed on 9 June. It provided currency training of a critical capability of NATO and Partner air and ground forces needed in virtually any modern combined and joint military operation.



U.S. Army Paratroopers assigned to Battery A, 4th Battalion, 319th Airborne Field Artillery Regiment, 173rd Airborne Brigade, set up an M119A3 howitzer for fire during Exercise Adriatic Strike at Pocek Range in Postojna, Slovenia, June 7, 2023. The brigade routinely trains alongside NATO allies and partners to build stronger relationships and strengthen the alliance. The 173rd Airborne Brigade is the U.S. Army Contingency Response Force in Europe, capable of projecting ready forces anywhere in the U.S. European, Africa or Central Commands' areas of responsibility. U.S. Army photo by Paolo Bovo



Thirty nations have been engaged in interoperability training during the multinational Slovenia-led exercise Adriatic Strike in several training areas across the country. Photo courtesy of Slovenian Armed Forces.

NOTE: All the news for which the source is not indicated in the NATO AGENDA section (pages 3-12) have as their source the information provided by the Allied Air Command Public Affairs Office.

#WEARENATO



SABER GUARDIAN 23

Almost 8,000 soldiers from six countries (Albania, Bosnia and Herzegovina, Bulgaria, Romania, Hungary, and the United States of America) participated from 3-24 June in Multinational Exercise Saber Guardian 2019 (SG19), led by USAREUR and the Romanian Land Forces Staff, which was conducted on Bulgarian, Romanian, and Hungarian territory.

The main goal of SG19 was to emphasize cohesion, unity, and solidarity of the partner and allied states with a view of defending themselves against any type of aggression, especially by rapid mobilization and concentration of forces in a short time, anywhere in Europe.

The joint training activities planned to be executed during SG19 included staff tactical exercises and live firing exercises, forced river crossing, tactical deployment of 2nd US Cavalry Regiment from Germany to Romania, as well as specific medical activities.

In order to optimize the international joint training activities, SG19 was connected to a series of other national and multinational exercises and brought together almost 13,500 soldiers from 14 allied and partner states (Albania, Bosnia and Herzegovina, Bulgaria, Germany, Great Britain, The Republic of Moldova, the Netherlands, Poland, Portugal, Romania, Spain, Turkey, Ukraine, and the USA), out of which 7,600 represented the Romanian Armed Forces.

SG19 and the connected exercises scheduled to be conducted on our country's territory were mainly carried out in Cincu, Babadag, Smârdan, Capu Midia, Boboc, Bordeni training ranges, and areas.

Exercise Saber Guardian has been organized since 2013, being hosted on a rotational basis by Bulgaria, Romania, and Ukraine. Starting in 2017, Saber Guardian became a biennial exercise. SG19 is included in the program of the USAREUR joint training exercises program with a view to increasing interoperability at joint and multinational levels with the armed forces of the allied and partner states.

Source: Romania MoD



HISTORY OF THE MiG-21 IN ROMANIAN AIR FORCE SERVICE



MiG-21F-13



MiG-21RFM



MiG-21U

At the beginning of the 1960s, the frontline interceptor units were equipped with the MiG-19P and PM, though the workhorse of the Romanian Air Force (RoAF) remained the MiG-15s and, especially, the Czechoslovakian variants, the S-102. Other types, like the Yak-23 "Flora" and Yak-17 UTI "Magnet" had already been retired from active duty.

Following political and military changes in the European theatre between 1960 and 1961, the Romanian Air Force faced a structural upheaval. As a result, all the fighter and fighter-bomber units were placed under the control of two air defense divisions, headquartered at Ploiești (for the Eastern part of the country) and Timișoara (for the Western part).

In 1962, along with other countries within the Warsaw Pact (Poland and Bulgaria), Romania received the first MiG-21 fighters. Two teams of pilots and technical crews were selected and sent for type conversion to Krasnodar in the Soviet Union, in April-June and July-September respectively.

The initial batch of 12 MiG-21 F-13s (Изделие 74, or Fishbed-B; Russian word Изделие means Product), built by the GAZ-30 Znamya Truda factory in Moscow, were acquired for the Regimentul 93 Aviație Vânătoare (93rd Fighter Regiment), based at Giarmata airfield, near Timișoara. However, while this air base was closed for runway extension works, the aircraft were sent to Deveselu airfield, the home base for Regimentul 91 Aviație Vânătoare (91st Fighter Regiment). The fighters were delivered between February and October 1962 by the Soviet pilots, and were given two digit tactical numbers (the last two digits of the construction number), as follows: 10 to 13, 16 to 18, and 20 to 24.

The first Romanian pilot to convert to the type was Major Alexandru Marcu. The squadron finally moved to its home base at Giarmata in the summer of 1963, as Escadrila I Aviație Vânătoare-Interceptare (1st Fighter-Interceptor Squadron). A second batch of 12 MiG-21 F-13s was delivered during the second half of that following year to Mihail Kogălniceanu airfield near Constanța, to join Regimentul 57 Aviație Vânătoare (57th Fighter Regiment). The fighters, also built by GAZ-30 plant, received this time a three-digit tactical side number (the last three digits of the construction number), from 707 to 715 and 801, respectively.

The first fatal crash involving MiG-21 F-13 occurred in February 1965, claiming the life of Captain Costache Ciuraru, from 57th Fighter Regiment.

During 1968-1969, following the introduction of newer MiG-21 versions, the MiG-21 F-13s were transferred to Regimentul 86 Aviație Vânătoare (86th Fighter Regiment), on Borcea airfield, and to Regimentul 91 Aviație Vânătoare (91st Fighter Regiment), on Deveselu airfield.

The MiG-21 F-13s remained operational until late 1978, when they were grounded and used as instructional airframes with the Traian Vuia Military Technical School at Mediaș. Some also became gate guards or monuments at various military airfields.

The aircraft with tactical number 10, from the first batch of four, arrived in February 1962, is preserved in the Romanian National Aviation Museum in Bucharest. In 1992, MiG-21 F-13 no. 801 was painted in dark blue with white, yellow and red stripes to celebrate the 40th anniversary of the 86th Fighter Regiment, and had the number 40 painted in white on the sides of the aft section. In 2001, she was repainted in a lighter blue and given her original number (801), also in white, and is now preserved within Borcea Air Base. Another MiG-21 F-13, no. 23,

which wears a non-authentic green-brown camouflage (with a black tactical number, as those worn by the MiG-21 LanceR A sub variant), is preserved at Bacău Air Base.

MiG-21 F-13 was more sophisticated than its predecessors in the RoAF's inventory, but this variant still had no radar, being fitted only with SRD-5MK "Kvant" range radar linked to the ASP-5ND gunsight, an internal NR-30 30 mm gun and only two R-3S/K-13 (AA-2 "Atoll", in NATO designation) infrared guided missiles. Consequently, it was limited to the day fighter-interceptor role. MiG-21 F-13 paved the way for re-fitting of all four fighter regiments (86th, 57th, 91st, and 93rd) with supersonic fighters, a process completed in 1970.

FIRST ALL-WEATHER FISHBED

In 1964, the decision was taken to purchase the MiG-21 PF (Изделие 76, or Fishbed-D), the first true all-weather fighter-interceptor version of the MiG-21. This variant was fitted with the RP-21 on-board radar, and used RS-2-US/K-5M (AA-1 "Alkali") air-to-air radar guided missiles. The "Lazur" VHF data-link system was also introduced, giving pilots the ability to carry out intercepts without receiving voice commands from the Ground Control Intercept controllers. The trend of that time was to remove the cannon, leaving the aircraft armed with only two air-to-air missiles (RS-2-US or K-13).

In early 1965, the first batch of aircraft was delivered to 86th Fighter Regiment at Borcea, and the fighters received tactical numbers from 706 to 715, 802 and 803. The second batch of 24 aircraft arrived in mid-1965, joining 86th Fighter Regiment, at Borcea airfield, and 91st Fighter Regiment, at Deveselu airfield. The birds received the side numbers 401, 403 to 415, 501 to 505, 507 to 510, and 609. The records show that the aircraft in this batch had four-digit numbers (1501, 1401, etc.), but they actually wore three-digit numbers in service. All the aircraft were produced at GAZ-30 plant, in Moscow.

The MiG-21 PF was known as MiG-21 RFM in RoAF's active duty, R coming from radar, F from forțăj (meaning "afterburner"), and M from modernizat ("modernized"). The PF/RFM variant remained in service until being grounded in mid-1990s, and in 1999 were removed from their homebases and put into storage.

Type conversion to the MiG-21 in the USSR, and later in Romania, was made using CS-102 (Czechoslovakian version of MiG-15 UTI) as the trainer, but later on it became obvious – even in the Soviet Union – that a dedicated trainer for the MiG-21 was needed. The first two MiG-21 U two-seat trainers (Изделие 66, or Mongol-A) arrived in Romania in late mid-1965 (tactical numbers 1120 and 1216), and were followed by two more in the end of the year (no. 1716 and no. 1717). The deliveries continued with another two trainers in late 1966 (no. 3516 and no. 3517), and one in early 1968 (no. 5117). Again, these aircraft were built by GAZ-30 plant, and were the only two-seat versions of the MiG-21 built there. Earlier aircraft, like no. 1120 and no. 1216, were from the first production series which featured a narrow chord fin, while later examples (like no. 3516 and no. 3517) had a new boarder chord fin. Amongst the better known two-seaters in Romanian service was MiG-21 U no. 1120, which was nicknamed "Bătrâna Doamnă" ("The Old Lady"), and no. 3517, nicknamed "Racheta Albă" ("The White Rocket"). The improved MiG-21 PFM (Изделие 94A, or Fishbed-F) entered RoAF's service in 1966 (a total of



MiG-21RFMM



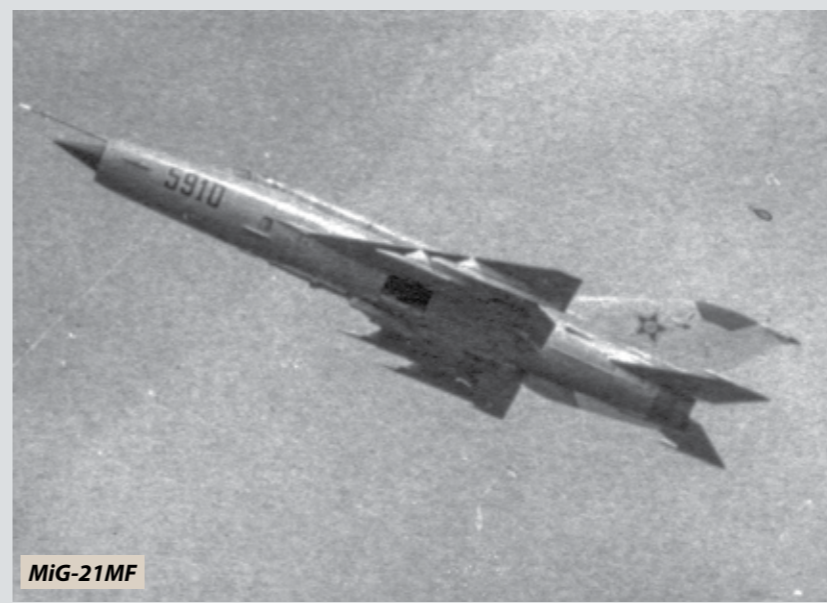
MiG-21C



MiG-21US



MiG-21M



MiG-21MF



MiG-21UM

15 fighters), and deliveries continued in late 1967 (another 15 fighters), being completed in early 1968 (last 24 PFM). The fighters delivered in 1966 wore four-digit tactical numbers (47xx, 48xx and 49xx series), those delivered in 1967 had 58xx and 59xx numbers, while the PFMs no. 6405, 8003 to 8015, and 8101 to 8110 were those delivered in 1968.

The MiG-21 PFM was known in Romania as the MiG-21 RFMM, and was the first to feature a two pieces canopy, the "SPS" (Sdovanie Pogranichnovo Sloya) boundary layer blowing system for the flaps, and the KM-1 rocket-assisted ejection seat instead of the basic SK ejection seat used on earlier versions. This enabled the pilot to escape from the aircraft in an emergency at zero altitude at a minimum speed of 70 kts (130 km/h). This model also reintroduced the well-known 23 mm GSh-21L cannon which was fitted in a GP-9 (Gondola Pushechnaya) pod under the main fuselage. The supersonic regained her role as a dogfighter, taking advantage of her maneuverability, but had no gyro sight to aim the cannon, just a simple collimating gun sight, similar to the type used on early fighters in World War II.

RECCE CAPABILITY

In 1968, the MiG-21 R (Изделие 94R, or Fishbed-H) was purchased by Romanian authorities. This was the dedicated reconnaissance version fitted with specialized pods under the centerline pylon: either D-type containers (for daylight photo reconnaissance), or R-type containers (for photo and radar reconnaissance).

It was the first MiG-21 version with an extended dorsal spine, four underwing hardpoints and an AP-155 autopilot (a modern one), but its cockpit layout was similar to the MiG-21 PFM version, and it kept the RP-21 radar. The aircraft became the MiG-21 C within RoAF's service (C for cercetare, meaning "reconnaissance"), and became operational with the Escadrila 31 Aviație Cercetare (31st Recce Squadron) at Giarmata airfield. The first two aircraft were received in late 1968 (tactical numbers 1503 and 1504); three more arrived in late 1970 (nos. 1907, 1908, and 1910), and the last seven in 1972 (nos. 2003, 2007, 2011, 2017, 2023, 2037, and 2043). All 12 were delivered from the GAZ-21 "Sergey Ordzhonikidze" plant in Gor'ki/ Nishny Novgorod.

The D-pod was equipped with four AFA-39 cameras. When the recce equipment was employed, the radar was disabled using a two-position switch in the cockpit, allowing the pilot to select between "RADAR" and "RECCE", as required.

The first MiG-21 Ms (Изделие 96A, or Fishbed-J) were also purchased in 1969, and featured four underwing pylons instead of the two carried on earlier versions, a RP-21MA radar and a revised cockpit arrangement. They also had an improved AP-155 automatic pilot (replacing the KAP-2 on previous versions, which was only capable of roll stabilization), and an airframe-mounted GSh-23L 23 mm cannon, assisted by an advanced ASP-PF-21 gyro sight. The first 18 aircraft arrived in 1969, and received the tactical numbers 211 to 215, 301 to 308, and 503 to 507.

As in the case of MiG-21 PF/RFM, the records for this batch are showing four-digit numbers, with 1 in front of the other three digits, but the aircraft actually worn only three digits.

The deliveries continued in late 1970, with 37 fighters displaying three-digit sidenumbers (nos. 709 to 715, 801 to 815, and 901 to 915), and the last three aircraft which got four-digit numbers (3001 to 3003). All aircraft were built at GAZ-30 plant in Moscow. In 1975,

Regimentul 57 Aviatie Vânătoare (57th Fighter Regiment) had no less than 42 MiG-21 Ms into its inventory!
 In order to provide a suitable training for the MiG-21 versions newly-entered in the active duty, it was decided the purchase of 11 MiG-21 US two-seat trainers (Изделие 68, or Mongol B), seven arrived in 1969 and received the tactical numbers 3406, 3907 to 3910, 4107 and 4109, and four in late 1970 (nos. 4702, 4703, 4708, and 4709). The aircraft were built at GAZ-31 plant in Tbilisi (today in Georgia).
 On December 1st, 1968, "Centrul de Instrucție al Aviației" (Air Force Training Center) was established on Bacău airfield as the specialized unit for the conversion of new pilots on MiG-21. The first sorties within the new unit took place on April 16th, 1969. The unit got into its inventory eight MiG-21 RFMMs and two MiG-21US, along with two CS-102 and eight S-102. The full inventory was reached only in 1971, when the unit had into its strength 20 MiG-21 RFMM, 20 MiG-21 RFM, 10 MiG-21 US, 12 S-102 and six CS-102. Regimentul 57 Aviatie Vânătoare gradually replaced all its MiG-21s with MiG-23s and later with MiG-29, and transferred them to other units.
 The conversion center in Bacău provided the training of the young pilots which were selected for conversion to supersonic aircraft after they graduated the "Aurel Vlaicu" Military Aviation School from Boboc. Between 1969 and 1995, the equivalent of 10 fighter groups were trained within this unit.

ENTER THE MIG-21 MF

Starting with 1972, the latest versions to enter in the RoAF's inventory were the MiG-21 MF single-seater (Изделие 96F, or Fishbed J), and its corresponding MiG-21 UM two-seat trainer (Изделие 69, or Mongol B), respectively. The aircraft were equipped with the more powerful Tumansky R-13-300 turbojet engine, with a thrust of 14,307 lb (63.66 kN) with afterburner, compared with 13,613 lb (60.6 kN) provided by R-11F-300 turbojet which equipped some of the earlier versions.
 The first 12 MiG-21 MFs were delivered in late 1972, six aircraft were delivered in late 1973, 20 aircraft in late 1974, and the last 36 aircraft in late 1975. The fighters were built at GAZ-30 plant in Moscow.
 MiG-21 MF were purchased in the largest quantities and received four-digit numbers in the 57xx, 58xx, 59xx, 60xx, 61xx, 62xx, 63xx, 64xx, 65xx, 66xx, 67xx, 68xx, 70xx, 81xx, 96xx, 97xx, and 98xx series. Most of the MiG-21 MF equipped Regimentul 91 Aviatie Vânătoare on Deveselu airfield, and Regimentul 93 Aviatie Vânătoare on Giarmata airfield – this units having only MiG-21 MFs in their inventory. The other units had a mix of MiG-21 MFs, Ms and/or PFM/RFMMs.
 The MiG-21 M and MiG-21 MF were the frontline fighters of the Romanian Air Force in the early '70s, and the number of aircraft in service peaked 130. All aircraft had their main mission as interceptors, but they could perform limited ground attack missions as well, being equipped for this purpose with either UB-16 rocket launchers, S-24 240 mm rockets, 50,100 or 250 kg free-fall bombs installed under the wing pylons.
 The MiG-21 UM trainers, built by GAZ-31 plant in Tbilisi, were also purchased. The first six aircraft got tactical numbers from the 69xx series. Ten MiG-21 UMs followed in the first half of 1976, and got numbers from the 95xx series, while other four came in late 1980, which got three digit numbers from 326 to 329.



MiG-21 LanceR A



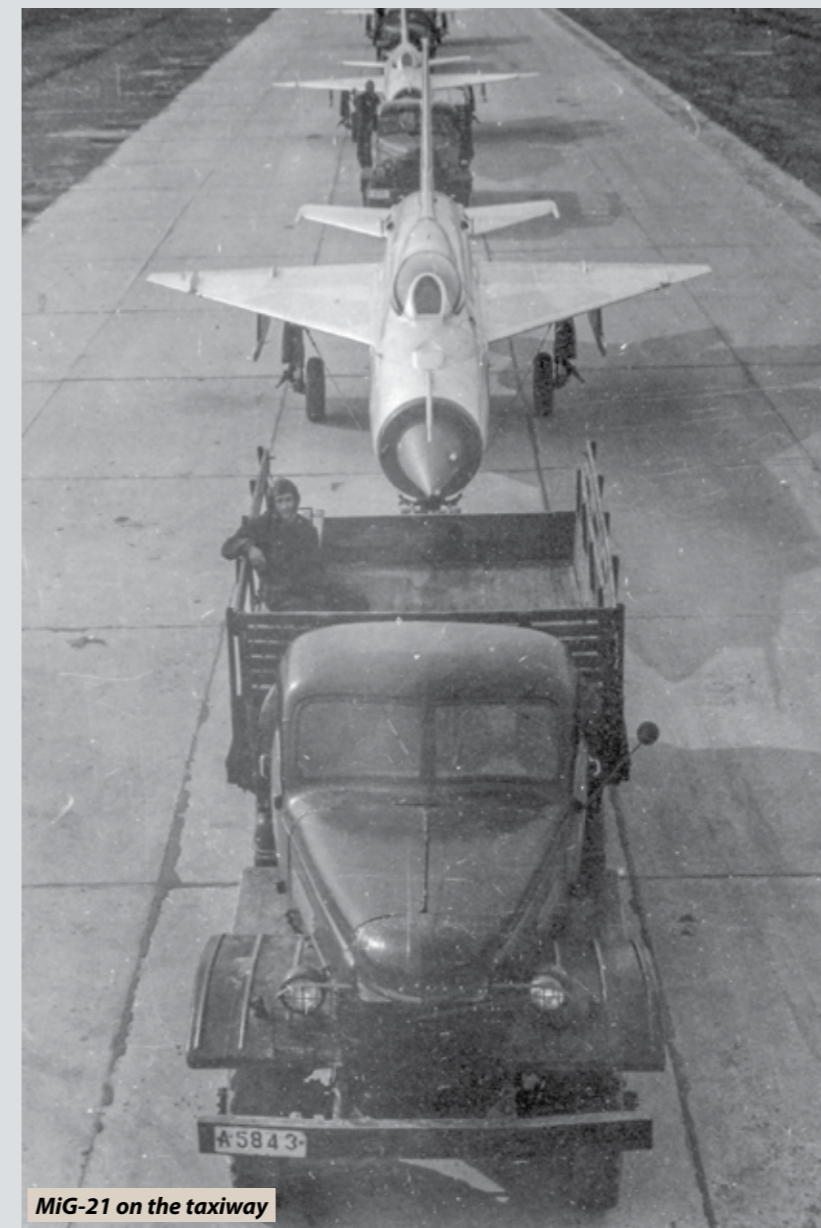
MiG-21 LanceR B



MiG-21 LanceR C



Preparing the aircraft for the mission



MiG-21 on the taxiway

In early '90s, after the MiG-21 U was retired, a small quantity of MiG-21 UM two-seaters was purchased from the former East Germany. These aircraft received three digit tactical numbers (061, 071, 172, 176, and 177). These trainers were the last MiG-21s that entered into RoAF's active duty. The aircraft were delivered to Regimentul 91 on Deveselu airfield, some of them being used by Regimentul 86 on Borcea airfield.
 In Romania, the air force branch was included into Comandamentul Apărării Antiaeriene a Teritoriului (C.A.A.T) – The Command of the Air Defence of the Territory until 1977, but on May 1st, 1977, was established Comandamentul Aviației Militare (C.Av.M) – The Military Aviation Command, which took command of all the aviation units.
 Besides serving with the four fighter regiments (57th, 86th, 91st and 93rd), and with the conversion center in Bacău, the MiG-21 fighter served also with Regimentul 67 Aviație Vânătoare-Bombardament (67th Fighter-Bomber Regiment) from Craiova, which also operated a squadron of MiG-21s. On June 30th, 1982, Escadrila 48 Aviatie Vânătoare (48th Fighter Squadron) was established on Deveselu airfield, squadron which was transformed into Regimentul 71 Aviație Vânătoare, and deployed on Câmpia Turzii airfield, in Transylvania. The first aircraft taken into the inventory of the new unit was MiG-21 UM no. 6956, and later received the MiG-21 Ms transferred from the conversion center in Bacău.
 Back in the '60s and early '70s, the Romanian MiG-21 pilots used initially a VKK-1 pressure suit, with detachable visor with oxygen mask, similar to those used by U-2 pilots. Later, the pilots of the modern versions of MiG-21 had the possibility to use the astronaut-like VKK-6 ventilation, pressure and g-suits, and the GSh-6A/M helmets for high altitude flights, but these were seldom used, the pilots considering them extremely uncomfortable, reducing visibility and not suitable for air combat. Instead, for regular training flights and low and medium altitude air combat exercises, g-suit "trousers" and lightweight ZSh-3M helmets with separate KM-32 oxygen masks were used.
 The Romanian pilots scored higher ratings during the live firing exercises held in 1976 at Astrakhan firing range in USSR for the air forces of the countries members of the Warsaw Treaty Organization.
 All MiG-21 arrived from USSR without paint, only in the natural metal color. The tactical numbers were painted in red only on the sides of the nose.
 The national markings were the Soviet style red stars with yellow and blue roundels inside, and they were painted on the sides of the fin and of the aft fuselage. They were replaced in 1985 by the red-yellow-blue roundels, which were painted on the wings and on the sides of the fin.
 As most of the types of jet combat aircraft in service, all the MiG-21 versions mentioned above, as well as their engines and internal systems, were overhauled since 1968 at U.R.A. Bacău, founded in 1953 (later I.R.Av., I. Av. Bacău, and from 1991, Aerostar S.A.).
 After the first repair, the aircraft received an overall grey painting, with the tactical numbers in red with white outline. The cockpit interior was painted in a darker green, instead of the original turquoise.
 In 1995, were reported to be in service 186 MiG-21 PFM/M/MF, and 35 MiG-21 US/UM, while in 1999, the official reports stated a quantity of 209 MiG-21s (all fighter versions, including two-seaters) and nine MiG-21 Cs.
 During the '90s, both the structure of the Romanian Air Force, as well as the MiG-21 fleet, passed through radical transformation.

END OF AN ERA

THE LanceR ERA

At the beginning of the '90s, the last MiG-21 versions which entered in RoAF's service had around two thirds of their operational life still available. The country's defense budget, diminished by the economical changes, prevented from the purchase of modern combat aircraft. So, the upgrade of the MiG-21 fleet with avionics built by Western standards was considered as a wise alternative.

In 1993, the Air Force was reunified with the Air Defence within the S.M.Av.A.A. (Statul Major al Aviației și Apărării Antiaeriene – Air Force & Air Defence Staff). In 1995, the old Soviet-style structure (regiments and divisions) was changed for the traditional structure (as during the WW2 period), consisting of air groups, air corps etc.

In June 1992, the Romanian Ministry of National Defence (M.Ap.N) issued a tender document, for which several companies submitted upgrade proposals, including MAPO-MiG (Russian Federation), Thomson (France), GEC Marconi (UK), Elbit Ltd. and IAI Lahav from Israel. The Israeli companies were short listed. From the early beginning, the intention was to involve in the upgrade program Aerostar S.A. as Romanian contractor, taking into account its 25 years experience in the overhaul of MiG-21 and the facilities available here.

At the middle of 1993, Elbit Ltd was selected as the integrator for the upgrade, and the contracts with M.Ap.N. and with Aerostar were signed. On November 15th, 1993, the go-ahead was given for the contract. Within the "DD" programme (named so in the memory of Lt. Col. Doru Davidovici), the Romanian MiG-21s are reconfigured as "LanceR" in the following versions:

– air-to-ground, single-seater version, named LanceR A. 71 MiG-21 M/MF aircraft were upgraded to this standard. The prototype of this version, and in the same time the first Romanian MiG-21 upgraded as LanceR, Black 9809 (nick-named "The Protocol" within its home base before upgrade), performed the first flight on August 22nd, 1995,



MiG-21MF on mission with Hong 5



MiG-21MF in service



MiG-21 LanceR from 71st Air Force Base

FAREWELL TO ROMANIA'S MIG 21



MiG-21 LanceR and F-15 Eagle



MiG-21 LanceR and F-22 Raptor



MiG-21 LanceR from 86th Air Force Base

– air-to-ground two-seater/trainer, or LanceR B. The prototype of this version, Black 327 – nicknamed "Tânăra Doamnă" ("The Young Lady") performed the first flight on May 6th, 1996. To the upgraded two-seater was introduced a ground attack capability, which was practically non-existent to the non-upgraded two-seater. A total of 14 MiG-21 UMs were upgraded to this standard,

– air-to-air (air defence) version, or LanceR C. The prototype of this version, Black 6607 made the first flight on November 6th, 1996, and a total of 25 MiG-21 MFs were upgraded to this standard.

LanceR A and LanceR B were equipped with an Elta EL/M-2001B range radar, while the LanceR C was equipped with an Elta EL/M 2032 multimode radar, with look-down/shoot-down capability.

The pilots flying the LanceR took benefit of a much improved man-machine interface, featuring 5 x 5 in multifunction displays, a wide angle HUD, HOTAS controls, as well as the DASH helmet. The upgraded aircraft also featured a much improved communication, navigation and identification suite, a better survivability within hostile environment, as well as advanced means for mission preparation and debriefing.

The upgraded aircraft could carry on newly-developed stores pylons a large variety of air-to-air or air-to-ground weapons, of both Western and Eastern origin – Python 3, R-60, R-73 AAM, laser-guided bombs, IR-guided bombs (Opher), free fall bombs, rockets, as well as a variety of specialized pods (for laser designation, electronic countermeasures and photo reconnaissance).

LanceR As and LanceR Bs were painted in a camouflage scheme composed of patterns of light and dark green, light and dark brown on upper surfaces and light blue underside, respectively, while LanceR Cs were painted in an air superiority camouflage composed of three nuances of grey on the upper surfaces and light blue underside, respectively.

Reported to the non upgraded aircraft, the LanceRs are wearing the same tactical number, but painted in black on the side of the nose and on the sides of the fin.

At the end of 1996, the first aircraft were delivered. The first aircraft was officially accepted into the RoAF's inventory on March 25, 1997, and on May 8, 1997 the first squadron of Grupul 95 Aviație Vânătoare "Lt. Vasile Craiu" (95th Fighter Group) from Bacău was declared fully equipped. During 1998, a second unit, Grupul 86 Aviație Vânătoare (86th Fighter Group) on Borcea airbase, received LanceR fighters, in early 1999 a third one, Grupul 93 Aviație Vânătoare (93th Fighter Group) on Giarmata airfield (near Timișoara) was equipped with LanceRs, and in January 2000 a fourth unit, Grupul 71 Aviație Vânătoare (71st Fighter Group) received the type into its inventory.

According to official data, 10 aircraft were upgraded in 1996, 29 were delivered in 1997 and 14 in 1998. The deliveries continued in the subsequent years and 102 were reported as being delivered until July 2002, while the LanceR fleet accumulated over 30,000 sorties. Until April 2002, a total of 128 pilots converted to the type.

Even the flights on MiG-21s – now upgraded as LanceR – recorded a boost compared to the previous years, the attrition rate being quite low, despite certain rumors, which presented the contrary. Four crashes took place (of which only one involved a fatality) since the introduction of the LanceR into active duty. None of these crashes was caused by the equipment installed during the upgrade, and two of them were caused by bird strikes.

Since 1997, the aircraft took part at various exercises within Partnership for Peace or to joint training sessions with French Mirages or US and Dutch F-16s (in Romania or at their homebases), as well as to various international airshows.

These activities practically demonstrated the compatibility of the upgraded aircraft with NATO standards, its ability to operate with other nations' aircraft, as well as the capability of rapid deployment. The MiG-21 Rs were retired from service in 1998, the 31st Sqn being disbanded that June, and the type was replaced by AAI Shadow 600 UAV. Also, parts of the reconnaissance missions were undertaken by the ARP Photo Pod which equipped the MiG-21 LanceR. In May 2000, S.M.Av.A.A transformed into the Air Force Staff (Statul Major al Forțelor Aeriene – S.M.F.A), with a smaller more flexible and cost-effective structure, using the concept of integrated airbases, similar to the structure of an USAF wing.

In the restructuring process of the Air Force, the 95th Fighter Group was reassigned for advanced training missions as 95th Supersonic Jet Conversion Center, following its old tradition.

The last non-upgraded MiG-21s were operated by 91st Airbase from Deveselu airfield. This airbase was closed and the unit was disbanded in 2001.

EPILOGUE

Romania's MiG-21 fleet continued to be the backbone of the Romanian Air Force, even more than 60 years after the first aircraft entered service. All non-modernized MiG-21 aircraft have been withdrawn from operational status and the future is represented by the F-16 Fighting Falcon. The MiG-21 LanceR fighters have been in Air Police Combat service under NATO command ever since Romania joined the world's most powerful military alliance. Considering the North Atlantic Alliance's goals and tasks, Romania, in its capacity as a plenary NATO member, declared its availability to provide the necessary forces and assets for Air Policing within the Baltic States' airspace.



Launching smart bombs



Firing unguided reactive projectiles



Launching air-to-air missiles



MiG-21 LanceR and Mirage during Operation BALTICA 07

In recognition of its level of readiness, NATO accepted Romania's proposal and consequently four MiG-21 LanceR aircraft belonging to the Romanian Air Force provided Air Policing missions in Estonia, Latvia and Lithuania, for three months, between 1st August and 1st November 2007. Even though in 2016, the first F-16s entered the service of the Romanian Air Force, the MiG-21 LanceR planes from the 71st Air Base and the 86th Air Base continued their noble mission of defending Romania's airspace until they were withdrawn from use, on May 15, 2023.

The author thanks Mr. Alexandru Trandafir and Dan Antoniu for their support in creating this article.

This article is an adaptation and an update of the article published in 2003, based on the documents studied at that time, in Air Forces Monthly magazine under the signature of the engineer Dănuț Vlad



Taxiing for take-off at night



The MiG-21 LanceR represented the Romanian Air Force at the Royal International Air Tattoo 2019

END OF AN ERA - FAREWELL TO ROMANIA'S MIG-21 IS WELCOME TO THE F-16



The last engine start at 86th Air Force Base

On May 15, 2023, the MiG-21 LanceR took off from 71st Air Base "General Emanoil Ionescu" located in Câmpia Turzii, on 86th Air Base "Lieutenant Aviator Gheorghe Mociornița" located in Borcea and 95th Air Base "Erou capitan aviator Alexandru Șerbănescu" located in Bacău to its final flight for the Romanian Air Force after more than 60 years of service.

Well over 11,000 MiG-21s were built in more than 20 variants worldwide. The fighter and interceptor jet entered service with Romanian Air Force in 1962. For over six decades it was the fighter aircraft that watched over Romania's skies when the country was a non-aligned State. The delivery of the upgraded MiG-21 LanceR variant to the Romanian Air Force started in 1997.

With the accession to NATO in 2004, the upgraded MiG-21 LanceR contributed to NATO Air Policing in Romania for over a quarter of a century. From August to November 2007, Romania deployed four of their MiG-21 LanceR aircraft to lead NATO's Baltic Air Policing mission in Lithuania, Estonia and Latvia.



Approaching the runway for take-off at Câmpia Turzii AFB

"I have been involved in NATO Air Policing since 2004 and I had the honour to be on Quick Reaction Alert duty the very first day when the Romanian Air Force started to conduct air policing mission under NATO command on April 1, 2004. Since then, we have flown many scramble missions, day and night, intercepting non-NATO military aircrafts over the Black Sea", said retired Colonel Daniel "Tomcat" Moise, former 86 Operational Group Commander at Borcea Air Base.

In 2019, the Romanian Air Force began flying the MiG-21LanceR alongside the F-16 for Air Policing missions. With the retirement of the MiG-21 LanceR from May 15 on, the F-16 fleet is taking over this duty and Romania has joined NATO's F-16 user community.

"Four Romanian Air Force F-16s are currently again deployed in support of NATO's Baltic Air Policing mission providing a critical contribution to deterrence and defence along the eastern flank," said Colonel Cosmin Vlad, the commander of the Romanian 'Carpathian Vipers'. "At Siauliai, Lithuania, the deployed F-16 detachment continues the tradition of the MiG-21 deployment in 2007 in an impressive display of Allied cohesion and solidarity and Romania's commitment to the Alliance," Colonel Vlad added.

Foto: Adrian Sultănoiu, Bogdan Pantilimon, Rareș Ceclan, Dănuț Vlad



The final pass over Borcea by the MiG-21 aircraft was executed in the presence of the F-16 fighters, which have been entrusted with the honorable task of safeguarding Romania's airspace at NATO's Eastern border



The six pilots, Adrian "Grasu" Trifa, Mihail "Mișu" Zamfirescu, Tudor "Gheruță" Dora, Romina Mirza, Mădălin "Gonzo" Bogdan, and Silviu "Lică" Marincaș, who skillfully operated the MiG-21 planes during their final landing in Romania, joyfully reported, "Mission accomplished!" Their successful completion of the mission marked the culmination of their dedicated efforts and represented a significant achievement for the entire team.



"Pilot, this is the final time I'll be assisting you with getting into the MiG!" An irreplaceable moment for the pilot-technician duo.





BALTICA 2023



**First Enhanced
Air Policing Mission
of the Romanian F-16s
in the Baltic States**

The Carpathian Vipers, a detachment comprising four F-16 fighter aircraft and its assigned personnel, has been deployed at Šiauliai Air Base in Lithuania. Their mission, known as the Enhanced Air Police, spans from April to July 2023, with pilot and technical staff rotations occurring every two months. The primary objective of this detachment is to safeguard the airspace integrity of the Baltic States, serving as a vital element of NATO's commitment to its member nations. The F-16 fighter jets are in constant operation, providing continuous early warning and intervention capabilities to assess the air situation. They are authorized to take lawful measures against unauthorized aircraft trespassing the Baltic airspace. The Romanian contingent, stationed beyond national borders, falls under the operational command of the Joint Forces Commander, who serves as the Supreme Commander of the Allied Forces in Europe (SACEUR). Meanwhile, administrative command remains under the purview of the Chief of Staff of the Air Force.



Photo: Bogdan Pantilimon

HOW IT ALL BEGAN

The initial mission of the Romanian Air Force in the Baltic states occurred in 2007. During this time, a detachment of 67 military and 4 MiG-21 LanceR aircraft from the 71st Air Base, "General Emanoil Ionescu," carried out air policing duties in the Baltic states. Stationed at Šiauliai Air Base, the Romanian fighter jets ensured the security of Lithuanian, Latvian, and Estonian airspace for a duration of three months. This marked Romania's inaugural foreign air police mission as a member of NATO, serving as a demonstration of its reliability as an ally. Fifteen years later, on May 6, 2022, during a press conference held on the occasion of Lithuanian President Gitanas Nausėda's visit to Romania, President Klaus Iohannis emphasized the need to enhance NATO's deterrence and defense posture on the Eastern Flank. It was at this moment that Romania pledged to resume its participation in the NATO air police mission

in the Baltic region. This decision signifies solidarity among alliance members and Romania's contribution to the collective defense effort.

WHY IS AIR POLICING NECESSARY?

For NATO, safeguarding the integrated airspace is a shared responsibility in times of peace, crisis, and war. It represents one of the fundamental tasks of the Supreme Allied Commander Europe (SACEUR). During peacetime, the preservation of Alliance airspace integrity is accomplished through the execution of Air Police missions under NATO's command. These missions allocate fighter aircraft equipped with air-to-air capabilities, detection and identification systems, and qualified personnel, all maintained at a certain level of combat readiness (RS - Readiness Status). Within this framework, forces and assets within the Alliance continually provide early warning and intervention to clarify the air situation and take appropriate legal measures against



Photo: Remo Guidi

"Carpathian Vipers," prior to deployment, at the 86th Air Force Base "Lieutenant Aviator Gheorghe Mociorniță," during the ceremony of transferring and assuming operational command. Photo: Adrian Sultănoiu



unauthorized aircraft utilizing North Atlantic Alliance airspace.

THE EVOLUTION OF THE AIR POLICE MISSION ON THE EASTERN FLANK

Following the Russian Federation's unlawful annexation of the Crimean Peninsula in 2014, a series of Assurance Measures were implemented at the NATO level to support the states on NATO's eastern flank. Among these measures was the development and implementation of the enhanced Air Policing (eAP) concept, aimed at reconfiguring the military-strategic defense

and deterrence posture. According to the SACEUR's Standing Defense Plan, "Persistent Effort," eAP involves reinforcing existing Air Policing forces and assets under NATO command with additional resources from allied states. These additional forces and assets can be deployed in areas of interest when necessary. In response to the Russian Federation's aggression against Ukraine, a series of enhanced vigilance activities (eVA) measures were adopted at the Allied level starting in February 2022. These measures encompass various aspects of air defense.



MiG-21 LanceR in a shelter at Šiauliai Air Base, Lithuania - ready 24/7 to take off Photo: CER SENIN archive

The composition of the Baltica 2007 detachment that provided airspace integrity for the Baltic States in 2007 Photo: CER SENIN archive





Two Romanian F-16s and two Portuguese F-16s securing the airspace of the Baltic States. Photo: Bartek Bera

To maintain a heightened state of readiness for air defense forces and assets and ensure a swift transition to the defense phase in case of Article 5 activation, the concept of Air Shielding (AS) was developed. AS enhances the deterrent effect achieved through Air Policing (AP) and eAP missions along NATO's eastern flank. It involves the establishment of national or combined squadron-level detachments (SSE - Squadron Sized Element) and the execution of specific missions, including joint training activities and combat air patrol missions. Romania is one of the beneficiary countries of the eAP and AS concepts. Between 2017 and 2023, twelve detachments from various Allied countries were deployed in Romania to carry out specific eAP missions under NATO command. Following the outbreak of the war between the Russian Federation and Ukraine in 2022, the protection of

Romania's national airspace was further bolstered through combat air patrol missions conducted by NATO forces operating in the AS format.

AIR POLICING IN THE BALTICS

Preserving the integrity of NATO airspace is a shared responsibility. For NATO member countries that lack the necessary air capabilities (Albania, Estonia, Iceland, Latvia, Lithuania, Luxembourg, Montenegro, North Macedonia, and Slovenia), agreements are in place to ensure airspace security within the area of responsibility of the Supreme Allied Commander Europe (SACEUR). Consequently, since the Baltic countries joined NATO in 2004, airspace integrity has been upheld by Allied nations. A rotational system has been employed, with 17 NATO member states providing Air Policing

services. Enhanced Air Policing (eAP) was initiated in April 2014 as a NATO reassurance measure following the illegal annexation of Crimea by the Russian Federation. Thirteen Allies have participated in this type of mission thus far, with Romania being the most recent contributor. Carpathian Vipers - The First eAP Mission of the Romanian Air Force in the Baltic Countries To demonstrate national commitment and solidarity at the Allied level, the Romanian Air Force took part in the eAP mission in the Baltic countries from April to July 2023. The detachment, consisting of 4 F-16 multirole combat aircraft and 100 Romanian military, is proudly known as "Carpathian Vipers." The Romanian contingent deployed outside the national territory operates under the operational command of the Joint Force Command and the Supreme Allied

With the landing of the four multirole F-16 aircraft on March 28, the detachment was at full strength in Šiauliai Photos: Laura Baştorea, Cătălin Moncea



Carpathian Vipers at the operational command handover ceremony Photos: Bogdan Pantilimon



Colonel (AF) Cosmin Vlad, commander of the Carpathian Vipers detachment Photo: Bogdan Pantilimon



An one kilometer long ground convoy en route to the deployment area of the detachment. Photo: Valentin Nițu.

Commander Europe (SACEUR). Colonel (AF) Cosmin Vlad, an experienced fighter pilot who has represented the Romanian Air Force in numerous national and international missions and currently serves in Romania's Air Force General Staff team, leads the detachment. Before embarking on the mission, he stated, "It is a complex mission, filled with challenges arising from the geopolitical context dominated by the aggression of the Russian Federation against Ukraine, and the novelty of deploying Romanian F-16 aircraft in a theater of operations. I am fully aware of the responsibility we all bear in successfully fulfilling this commitment. The experience gained from executing the Permanent Air Police Combat Service in the country, as well as the tasks performed to high

standards in multinational exercises, provides confidence in the successful accomplishment of this mission." The majority of the detachment comes from the 53rd Fighter Squadron "Warhawks" of the 86th Air Base, "Locotenent-aviator Gheorghe Mociorniță," along with military from various Air Force units. The detachment was established, made operational, and evaluated within a relatively short period after Romania assumed its participation in the mission. To execute Air Police missions, the detachment ensures a continuous presence of fighter aircraft in the area of responsibility, showcasing their high level of responsiveness that reflects the training and professionalism of the servicemen involved.

THE LOGISTICAL CHALLENGE OF DEPLOYMENT

Deploying the contingent posed significant logistical challenges and was carried out in multiple stages. Preparation for the deployment's specific logistics operation began almost a year ago. Captain Lucian Popa details the effort involved: "Transporting the entire F-16 detachment to Lithuania was arguably one of the largest movement and logistics operations ever executed by the Air Force. The transportation was conducted in phased stages using two main routes. Over the course of two weeks, more than 100 tons of equipment were transported by land and air. Air transportation involved four flights using C-17 Globemaster aircraft and two C-130 Hercules aircraft. Additionally, over

The Enhanced Air Policing (eAP) entails enhancing the current forces and resources of the Air Policing under NATO command by incorporating additional forces and resources from allied states. These additional assets can be deployed in areas of interest as required Photo: Liviu Dnistran





Portugal and Romania officially assumed the leadership of the 62nd rotation of the mission to safeguard the airspace integrity of the Baltic States, taking over from their Polish and French partners
Photo: Laura Baştorea



During the event, the Romanian "Carpathian Vipers" detachment, along with the Portuguese detachment, received the Baltic Airspace Key from their Polish and French allies. The key serves as both a symbol and a commitment from NATO to ensure the protection and integrity of its member states in the face of any potential threats
Photo: Laura Baştorea



Photo: Bogdan Pop

1500 spare parts for F-16 aircraft were brought to Lithuania to ensure optimal mission conditions."

The land deployment followed the route from Feteşti, Romania, through Hungary, Slovakia, Poland, and finally to Šiauliai, Lithuania. Chief Master Sergeant Nitu Valentin, together with colleagues from the Joint Logistics Command, was responsible for the proper deployment and coordination of the transportation. He explains, "We departed on March 19, 2023, at 18:00 and arrived at our destination on March 23, 2023, at 08:00. The convoy of vehicles carrying all the necessary ground support equipment stretched for an average distance of 1 kilometer. We covered a total distance of 2400 kilometers at a maximum speed of 65 km/h. It was two sleepless nights, but I'm proud that we successfully and safely completed what was probably the longest land route."

A precursor detachment of 22 military worked on the logistical and administrative preparations, ensuring all necessary conditions were in place for the integration of the entire detachment into the theater of operations. On March 25, a Boeing C-17 Globemaster III aircraft transported the remaining members safely to Šiauliai Air Base. With the arrival of four F-16 multirole aircraft on March 28, the detachment was fully operational in Šiauliai.

Pre-deployment Period
The period leading up to the deployment involved accommodation in the deployment area and the handover of administrative spaces from the French partners. This provided an opportunity for the Romanian and French militaries to interact and engage in specialized fields. On March 27, the Force Protection structures of both nations conducted a joint exercise. They took turns playing the role of the opposing force (OPFOR), drawing on their experiences gained from theaters of operations in Afghanistan, Africa, and Djibouti, and demonstrated field tactics at the team and group levels. "The exercise concluded with each nation showcasing their individual weaponry. The French partner was pleasantly surprised by the capabilities and maneuverability of the 5.45mm automatic rifle," said Staff Sergeant Valeanu Dan.

The Handover-Takeover (HOTO) ceremony for the NATO-led Air Policing mission occurred on March 30, 2023, at ŠIAULIAI Air Base in Lithuania. Romania and Portugal officially assumed leadership of the 62nd rotation of the mission to safeguard the integrity of Baltic airspace, taking over from their Polish and French partners. The event was attended by officials from all five nations involved and representatives from Allied Air Command (AIRCOM).

The Romanian delegation consisted of General (retired) Ion Opreşor, the Presidential Adviser for National Security of the President of Romania, Mr. Cosmin George Dinescu, the Ambassador of Romania to the Republic of Lithuania, Lieutenant General Viorel Pană, the Chief of Staff of the Air Force, and Brigadier General Robert Manea, the Deputy Chief of Staff for Operations, Joint Force Command.

Brigadier General Ralf Raddatz, the deputy of the Combined Air Operations Centre in Uedem, opened the ceremony by acknowledging the contributions made by Allied detachments to the defensive air mission along the eastern flank of the



The event provided the perfect opportunity for Lieutenant General Viorel Pană, Chief of the Romanian Air Force Staff, to address the entire personnel of the "Carpathian Vipers" detachment at Šiauliai Air Base. He emphasized that the Air Force leadership views the enhanced Air Police mission in the Baltic States as a top priority, and assured the detachment's personnel of unwavering support in executing their mission
Photo: Laura Baştorea



Two French Rafale aircraft symbolically transferred the eBAP (Enhanced Baltic Air Policing) mission to a Romanian F-16 aircraft
Photo: 53rd Warhawks RoAF

Alliance. He expressed gratitude for their support in NATO's mission in the Baltic region. During the event, the Romanian detachment "Carpathian Vipers" and the Portuguese detachment received the Baltic Airspace Key from their Polish and French allies. The key serves as a symbol and guarantee of NATO's commitment to ensuring the protection and integrity of member states in the face of any potential threat. Lieutenant General Viorel Pană, the Chief of Staff of the Air Force, took the opportunity to address the entire staff of the Carpathian Vipers detachment, who were newly stationed at Șiauliai Air Base. He emphasized that the Air Force leadership team considers the reinforced Air Policing mission in the Baltic countries a top priority, assuring the detachment personnel of full

support in carrying out their mission. After handing over the mission on the ground, a symbolic airborne responsibility surrender took place. The French allies, using two Rafale fighter aircraft, transferred the eAP service to the Romanian F-16 aircraft by jointly executing an Air Police mission. This informal activity highlighted the collaboration among Allies and served as a testament to the high level of staff readiness and interoperability among members. The deployment commenced with the first real mission. The first day of the detachment's 121-day operational period was marked by the flying of the Romanian national flag at the entrance to the designated perimeter where the contingent operates. The tricolor flag, a national symbol cherished by all Romanians, including the military, serves as

a reminder of their homeland and the sacrifices made by their ancestors in building the modern Romanian state. In general, F-16 aircraft are put on alert in response to the activities of the Russian Federation's Air Force within our area of responsibility. The first interception mission for the Romanian F-16 fighter jets in the Baltic states occurred on April 7, 2023. Merely six days after assuming the mission, two F-16 fighter jets from the "Carpathian Vipers" detachment were alerted by the NATO Air Operations Center in Uedem, Germany. Two unidentified aircraft were detected flying over international waters within NATO's area of responsibility. Following standard procedures, Romanian aircraft were scrambled to assess the air situation. The targets were later identified as two Sukhoi Su-27 Flanker aircraft belonging to the Russian Federation. They



First interception - two Russian Federation Sukhoi Su-27 Flankers were escorted by Romanian F-16s
Photo: 53rd Warhawks RoAF

Ramstein Alloy was a collaborative training exercise involving seven other Allied nations: the Finland, Germany, Lithuania, Portugal, Türkiye, United Kingdom, and United States. Its purpose was to enhance NATO's Air Policing standards and reinforce the concept of reassurance for the Eastern flank states within NATO. This exercise served as a clear demonstration of NATO's collective defense. "The Ramstein Alloy exercise provided us with an opportunity to train our personnel in Air Police missions while showcasing the exceptional level of training, interoperability, and cooperation among NATO members," declared Colonel (AF) Cosmin Vlad, the commander of the "Carpathian Vipers" detachment
Photo: 53rd Warhawks RoAF



The entire operation revolves around the majestic "metal birds." Every serviceman plays a crucial role in ensuring the smooth execution of activities on the airfield. Whenever an aircraft takes off, the thoughts of those on the ground are with the pilot, and witnessing a successful landing on the runway brings immense joy—a feeling that only those acquainted with airfield life can truly comprehend
Photo: 53rd Warhawks RoAF





were safely escorted out of NATO's area of responsibility. Throughout the mission, the detachment engaged in joint exercises with allied and partner structures. The first exercise in the series was Ramstein Alloy, which took place April 12 to 13, 2023. This joint training exercise involved seven other allies (United States of America, Lithuania, Portugal, Germany, Turkey, Great Britain, Finland) and aimed to enhance NATO Air Policing standards and provide reassurance to states on NATO's eastern flank. Romanian F-16 aircraft flew alongside Eurofighter aircraft (Germany, Great Britain), F-16 aircraft of the Portuguese Air Force, and United States Air Force aircraft. The detachment's high level of interoperability facilitated the achievement of shared training objectives in various simulated scenarios during the exercise. Ramstein Alloy provided an opportunity to train personnel in air policing missions and demonstrated the

readiness, interoperability, and cooperation among NATO members. The "Carpathian Vipers" detachment has also participated in several NATO exercises such as Aurora 23 Deep Strike, Spring Storm Estonia, RAAL 23, Agyle Linx, Griffin Storm, Baltops23, and AirDefender 23. These training sessions aim to foster cooperation between Alliance members and partners and promote interoperability within the framework of the Partnership for Peace (PfP), which contributes to regional stability and security.

OTHER ACTIVITIES OF THE DETACHMENT

Alongside their regular air policing missions, the "Carpathian Vipers" detachment engages in various activities that foster civilian-military relationships (CIMIC) and develop collaborative ties with allied nations beyond their professional duties. These activities include sports events,

ceremonies, visits from public institutions, as well as military and civilian educational institutions, and blood donations, among others. These endeavors enrich the experience of Romanian military in Lithuania. One such event was the Runway Run 23, a sporting event organized by Šiauliai Air Base to commemorate Lithuania's 19th anniversary as a NATO member. Among the approximately 10,000 participants, both military and civilian, the Romanian flag could be seen waving alongside the Lithuanian flag. The spirit of camaraderie was palpable as people of all age groups joined in the event. It wasn't about the time it took to complete the 3-kilometer run, but the fact that all 10,000 participants were moving together in the same direction, united! The collaboration between the Romanian detachment and its Lithuanian partner began in 2007, the year when Romania

STRONGER TOGETHER
The aviators of the "Carpathian Vipers" detachment engaged in a collaborative training exercise with F-22 aircraft from the United States of America from May 22nd to 26th. This exercise exemplifies the integration and interoperability of the Romanian Air Force with NATO forces in the Baltic States' airspace
Photo: 53rd Warhawks RoAF



"CARPATHIAN VIPERS" - DONOR HEROES

A portion of the team from the Romanian "Carpathian Vipers" unit enthusiastically accepted the invitation to take part in a blood donation drive organized by their Lithuanian counterparts at the Šiauliai Air Base.

The members of the "Carpathian Vipers" were appreciative of this opportunity, as it allowed them to continue their commendable practice of regularly donating blood. Such a decision has the potential to save up to three lives, showcasing the significance of their noble act. The community of blood donors is extensive, extending beyond national and cultural boundaries.



Second Lieutenant Florin Gavriluță and Lieutenant Dovydas Kazamekinovas joined forces in donating blood together.



**WO Gimi Obaciu
Photos by Laura Baştorea**

conducted its first air police mission in the Baltic countries. The partnership with Portugal was established in 2014, when Romanian pilots and technical staff underwent training in Portugal to familiarize themselves with the F-16 aircraft. The bond formed between the military personnel of these three nations is active and enduring.

One activity that involved military from all three nations was a football mini-championship. Teams from the Romanian detachment, the Portuguese detachment, and a team from the host nation participated. As expected, the Portuguese team secured the first-place position, while the Romanian team's effort was rewarded with second and third place in the final rankings.

Another competition was a military challenge that included various tests such as rope climbing, individual transport of 20 kg bags of sand over a 30-meter distance, driving a vehicle under the guidance of blindfolded colleagues, and identifying military objects in the field using binoculars. In the end, one of the Romanian teams, Team Weapons, achieved the highest score. The competition fostered team spirit, mutual respect, and camaraderie among all participants. The opportunity to collaborate with the Portuguese partners was more significant than securing the top spot in the

rankings. On a weekly basis, Šiauliai Air Base provides the Lithuanian civil and military community with the opportunity to learn about the contingents ensuring the airspace integrity of the three Baltic countries through air policing missions. As a result, the "Carpathian Vipers" received numerous visits from public institutions, as well as military and civilian educational institutions. Lithuanian Military Academy students, personnel from the State Border Guard Service of the Lithuanian Ministry of Interior, and representatives of the Red Cross were among those eager to learn about the combat capabilities of the F-16 multirole aircraft.

One particularly unique visit was from a "delegation" of Lithuanian first-grade schoolchildren. Despite being aware that they were in a military unit, the young ones showed respect by carefully checking their shoes before stepping into an area where they could admire the planes from a distance. Their curiosity at that age prompted innocent questions about how the F-16 works and more. Within minutes, the children approached the Romanian military, hugged them, and thanked them for their service to the Baltic countries. "AČIU," which means "THANK YOU!" in Lithuanian, was expressed through drawings and given as a gift to the Romanian military.

Official visits are also part of the detachment's agenda. The first of these visits was from His Excellency Robert S. Gilchrist, the Ambassador of the United States of America to Lithuania. Having previously served as a political counselor at the Embassy of the United States in Romania, he expressed a special desire to warmly greet the Romanian and Portuguese military.

A delegation of military representatives (MilRep) to NATO, composed of Major General Remigijus Baltrėnas (Lithuania), Lieutenant General Paulo José Reis (Portugal), and Lieutenant General Vasile Toader (Romania), visited Šiauliai Air Base and the deployment area of the two detachments. The primary purpose was to observe how allied nations collaborate in executing air policing and reinforced air policing missions and to assure them of full support from the Alliance. During the visit, Lieutenant General Vasile Toader personally greeted each member of the Romanian contingent and congratulated them on their diligent execution of their duties. The three generals had the opportunity to witness the preparation of F-16 aircraft for an interception mission in real-time. They were surprised to hear the alarm announcing the RS-10 and witness the pilots and technical personnel promptly heading to the shelters where the planes were prepared for takeoff.

Within ten minutes, the planes were airborne, with CAOC Uedem announcing Alfa Scramble. Following this adrenaline-filled moment, the delegation visited QRA 1, the deployment area of the Portuguese detachment, where the three generals took photographs in front of the area displaying markings of all the previous detachments that had conducted the BAP mission. In addition to their daily duties, the Romanian military demonstrated civic spirit. In May, some of the Romanian contingent's personnel accepted an invitation to participate in a blood donation campaign organized by their Lithuanian partners. The military of the "Carpathian Vipers" were grateful for the opportunity to donate blood periodically, as one donor's blood can save up to three lives. Thus, the family of blood donors extends beyond national and cultural boundaries.

DETACHMENT ROTATION

The mission has reached its halfway point, and the various activities undertaken by the Romanian military have contributed to a smooth transition during the initial two months. At the end of May, a military ceremony was held to rotate 50% of the staff. Among the attendees were Brigadier General Robert Manea, the Deputy Chief of Staff for Operations, Joint Force Command; Air Flotilla General Cătălin Micloș, the Commander of the 86th Air Base "Gheorghe Mociorniță"; and Major Robertas Tumasonis, the Chief of Staff of Šiauliai Air Base representing the host nation.

During this ceremony, distinctions and diplomas were awarded to the Romanian military personnel for their professionalism demonstrated during the execution of the specific air police mission in the Baltic countries. Those who were returning home were honored with the NATO Medal for Air Policing Missions in the Baltic States. Whether in the months leading up to the rotation or afterward, the Romanian aviators have formed a cohesive team committed to executing their missions with

utmost professionalism. Their shared goal is to ensure the detachment's safety. The daily schedule revolves around the impressive "metal birds," and each soldier contributes personally to the smooth operation on the airbase. As every plane takes off, the thoughts of those on the ground are with the pilots, and witnessing a successful landing on the runway brings joy that only those familiar with aerodrome life can comprehend. The mission of the detachment is evident: to safeguard the airspace integrity of the Baltic States 24/7. The F-16 multirole fighter jets fulfill this mission by providing early warning

and intervention to clarify the air situation. The pilots are responsible for enforcing legal measures against unauthorized aircraft using NATO airspace. Through its participation in the reinforced air policing mission in Lithuania, the Romanian Air Force reinforces its image as a reliable ally and an important pillar in strengthening NATO's long-term deterrence and defense posture on the Eastern flank.

Author: Lieutenant Laura Baştorea, Information and Public Affairs Officer.



On the occasion of Military Police Day, the members of the "Carpathian Vipers" detachment extend their congratulations to their colleagues belonging to the Military Police for their exceptional execution of duties and conveyed heartfelt wishes for a "Happy Anniversary!" Military Police unit has distinct missions, providing vital support to military operations through facilitating maneuverability, ensuring security, and establishing and upholding military order and discipline. Photo: Laura Baştorea

The military participants in the event included both runners and individuals providing information about the displayed F-16 aircraft

Photo: Laura Baştorea



**The Romanian and Portuguese F-16 Weapon Loaders teams have established a collaborative relationship that commenced in 2014
Photo: Laura Baştorea**



**The Romanian team, along with the Lithuanian military, proudly display their national flags
Photo: Laura Baştorea**





Photo: Karolis Kavolelis

PER ASPERA AD ASTRA

THE SECOND PART



The Romanian Royal Military Aeronautics' air combat during World War II (22 June 1941 - 12 May 1945)



On guard at the Cross dedicated to the Aviation heroes who died in World War II

During the Second World War, the Romanian Royal Air Force fought a firm air war, with severe "Air Battles for Romania", sometimes more severe than the "Battle of Britain". These battles took place on two fronts: the Eastern Front (against the Allies between 22 June 1941 and 23 August 1944) and the Western Front (against the Axis Powers between 9 September 1944 and 12 May 1945).

The Eastern campaign comprised:

1. the Air Battle within the "Barbarossa" Operation (22 June 1941 - 31 December 1941);
2. the Romanian Royal Air Force's participation in the Strategic Aerial Offensive of the German Air Forces on the Eastern Front - 1942, 1943, and 1944;
3. The Romanian Royal Military Aeronautics' combats to defend the national air space between 1941 and 1944.

The Western campaign consisted of three important phases:

1. the Romanian Royal Air Force under National Military Command between 23 August and 9 September 1944;
2. the Romanian Royal Aeronautics' contribution to the liberation of Transylvania (9 September - 25 October 1944)
3. the Romanian Royal Aeronautics' actions, along with the Soviet Aviation, on the Hungarian and Czech Fronts, as well as the return of the Romanian 1st Air Corps to Romania.

In both campaigns, the Romanian contribution to the Air Force was considerable, conveyed through an obvious continuity by an air battle system, equal to the one of our valuable enemies, whom we often defeated sharply and stoically in air combats.

During World War II, the Romanian Royal Aeronautics made use, by turns, of the two interwar conceptions regarding the battle employment of this category of forces. The first conception, the Western one, considered that this category of forces should be adjusted and run according to their own rules during the air activity, and the air military doctrine was supposed to become the substantial, practical, and applied materialization of the general strategy.

The second conception, as opposed to the first one, considered that a modern warfare could not be carried out without the support of aeronautics, but also that none of the countries would provide the military leaders with sufficient means to successfully achieve a victory only by the aid of aviation. This conception was eloquently applied by the Soviet military theory.



Marshall Ion Antonescu with aviation generals Gheorghe Jienescu and Alexandru Sahini

THE STRUCTURE OF THE ROMANIAN AERONAUTICS IN THE SECOND WORLD WAR

Instruction no. 2100 from 25 January 1941 for the reorganization and performance of the Aeronautics was the fundamental document in this great effort of organization/reorganization and was issued by the Undersecretary of State of the Air (S.S.A.) through the Aviation Staff (S.M.A.). This document mentioned:

1. two central agencies of command subordinated to the S.S.A. (the undersecretaries of Air were the following squadron generals: Gheorghe Jienescu (22 June 1941 – 23 August 1944), Ermil Gheorghiu (23 August 1944 – 5 November 1944), Gheorghe Vasiliu (5 November 1944 – 5 March 1945), Emanoil Ionescu (as of 5 March 1945); the S.M.A., commanded by squadron generals Ramiro Enescu (1 October 1940 – 8 September 1943 and 22 November 1944 – September 1946), Ermil Gheorghiu (8 September 1943 – 24 August 1944), Gheorghe Gârleanu (25 August 1944 – 22 November 1944), was under the command of the Army General Staff and had the purpose to provide “the war training of the air force and antiaircraft artillery”; it operated as a “planning, running, and endowment agency” of the Aeronautics;

2. two superior agencies of control, guidance, and supervision of the war training: the Air Force Command (for aviation, aerostation, and air engineering); the Antiaircraft Defense Command (for the antiaircraft defense, not only of the land troops, but also of the territory);

3. the educational system was under the command of the Aeronautical Training Schools and Centers;

4. three Air Regions which were established as basic external structures and ensured the control and administration of all aeronautical units, except for the Schools;

5. the Air Force was organized in three Air Corps (one for the internal air missions, the second for the external missions and the third as a reserve for the first two) with different aviation categories (fighters, bombardment, reconnaissance, observation, liaison, and hydro-aviation) and subordinated the Air Flotillas and the Air Command of the Romanian Army (each with 2-3 aviation groups, each group consisting of 2-3 squadrons);

6. the Antiaircraft Artillery Command, also including the Training Center for Antiaircraft Defense, which included 4 artillery brigades and, initially, 6 antiaircraft defense regiments (each regiment consisted of 4 battalions, batteries of territorial observation, as well as the technical assets);

7. The Romanian Passive Defense was organized according to the ternary principle with observation and air intelligence units and commanded by a Passive Air Defense Command consisting of: an Air Intelligence Service, a General Intelligence Center (Bucharest), a Surveillance Battalion and two Signal Intelligence Battalions;

8. The aerostation and the paratroopers were under the command of an Aerostation Flotilla which included a protecting aerostat battalion and a paratroopers' battalion;

9. The Romanian Aeronautical Engineers carried all branches and disposed of appropriate endowment comprising: Regiment 1 – Air Engineers and three air signals regiments (which were provided with radio navigation equipment, radio resources and wired radio, searchlights, electric generators);

10. The pigeon department was founded in order to send messages by means of specially trained pigeons. The efficiency and apparent discretion of this service was similar to the British correspondent within the British Air Force;

11. The Aeronautical services comprised: guard subunits, aerodrome and zonal detachments, refueling assets, storehouses, and aero-establishments;

12. Technical assemblies for the aerodrome improvements with beaconing and other auxiliary buildings;

13. Weather forecast centers and air navigation protection.

THE CREATION OF THE FIRST RADAR SUBUNITS WITHIN THE ROMANIAN ROYAL AIR FORCE

The General Service of Surveillance and Alarm was founded according to Law no. 938 of March 1939 and was endowed with 6 German radar stations (3 Freya and 3 Würzburg). Afterwards, the service of air space surveillance was reorganized in 28 antiaircraft defense areas.

After the bombardments carried out by the Allied air forces intensified and Romania entered the war, from 1942 on, the German and Romanian commands reached an agreement concerning the foundation of a command of night fighting squadrons at Otopeni; it consisted of 3 squadrons subordinated to the German Air Flotilla located in Greece (under the command of General Aviator A. Galland). In Romania, the squadrons were located at Zilișteța-Boboc. Thus, as from 1942, the first Romanian radar subunits operated at Otopeni, Herăstrău, and Zilișteța-Boboc, each of them endowed with two types of German radars..



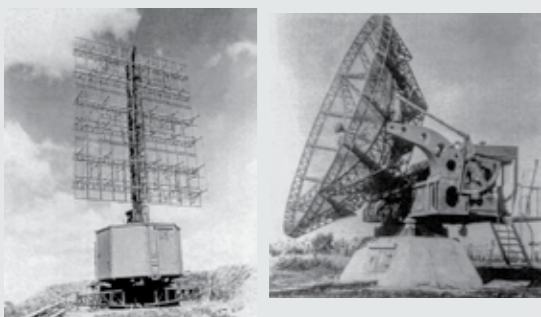
Romanian antiaircraft 37 mm Rheinmetall artillery battery on The Eastern front



Radio autostation of the air signals Regiment



1st Fighter Flotilla aviators before setting off for the battlefield, in 1941



Freya (left) and Würzburg (right) radars

THE ENDOWMENT AND TRAINING OF THE COMBAT AIR UNITS

As concerns the Romanian Aviation, during the process of endowment with modern aircraft, there was an intensification in the manufacturing of the types Messerschmitt (Me)-109, Savoia-Marchetti (S.M.)-79, Fleet, Fieseler Storch-156; the purchasing of combat aircraft from abroad, such as Hawker-Hurricane, P.Z.L.-11F, Heinkel-112, Bristol-Blenheim etc. also continued. In 1943, the newly-founded C.1 A.R. was entirely endowed with aircraft of the German types Junkers (Ju)-88, Me-109 G, Ju-87 Stuka, Henschel (Hs)-129.

Regarding the antiaircraft artillery, the units were endowed with 75-mm caliber cannons (Vickers – British type) and 88 mm (German type); 40 mm Bofors (Swedish), 37 mm Rheinmetall (German), 25 mm Hotchkiss (French), 20 mm Gustloff (German) and Oerlikon (Swedish), as well as with 13.2-mm machine guns, with 150 cm Siemens and 60 cm Nedalo searchlights, with range finders and stereoscopic alti-telemeters (with bottoms of 4 and 5 m). After the development of the installations in Reșița, the manufacturing of the antiaircraft cannons of 75 mm – Vickers; 37 mm – Rheinmetall, and of cannon barrels for the 88-mm antiaircraft cannons began there..

THE AIR BATTLE DURING THE “BARBAROSSA” OPERATION (22 JUNE – 31 DECEMBER 1941)

The German Air Mission in Romania had an effective role in the preparation of the Romanian territory for the German military combats in the Balkans against the USSR (the “Barbarossa” Operation) in the spring and summer of 1941. On 23 January 1941, the Higher Command of the German Army in Romania informed the Romanian Armed Forces about Order no. 51/1941 concerning the involvement of the German Air Force in the “aerial defense of the air space called «Romania»”.

At the same time, according to the above-mentioned order, the German Fighter Aircraft Command was created in Romania under the command of Aviation Major Handrick, who was also commander of the 3rd Fighter Group of the 52nd Air Flotilla directly subordinated to the German Air Mission.

Back then, Romania represented “not only a strategic center and a base for political supremacy in Eastern and South-Eastern Europe, but also a military operations center” for the Germans.

The Romanian Royal Military Aeronautics had a significant role to play during the military campaigns of the liberation of Bessarabia and Northern Bucovina and the siege of Odessa in 1941, along with the Land and Navy Forces. It deployed military operations with all air branches (bombardment, fighter aviation, intelligence, hydro-aviation, liaison, airlift, and medical corps) as well as with the aerostation and antiaircraft artillery.

The Romanian Royal Air Force involved in the military operations of 22 June 1941 included 50 air squadrons (6 liaison, 1 airlift, 1 medical corps, 3 reconnaissance, 15 bombardment, 17 fighter jets and 7 surveillance). The total amount was 621 aircraft under the control of operational and territorial units. The flying personnel – pilots, air observers, on-board signalers, and gunners involved in the 22 June 1941 operation totaled 1,947 people, of whom 1,066 pilots, 385 navigators (only officers), 129 operators, 83 flight engineers, 284 gunners (sergeants and corporals). The total amount of personnel of the Aviation at that time was 3,247 officers, 2,864 NCOs, 2,363 warrant officers, 1,044 civilians, and 52,074 troops, including also the national guard.

The Combat Air Grouping (C.A.G.) as an important operative unit formed the main Romanian Aviation force of action in the Bessarabian campaign. It gathered all aviation categories, air-defense artillery and the radio detection and ranging company. The C.A.G. (squadron commander Constantin Celăreanu) joined the campaign with 253 airplanes (205 available), and a total of 208 crews ready for fighting.

The Aviation units were deployed from 1 April to 10 June 1941, regarding not only the characteristics of the surrounding fields, but also the tactical operation in a fight of different aviation categories.

The fighter and the light bombing aviation were deployed near the border and the bombers inside the area. Nevertheless, the German units which were deployed in Zilișteța and Râmnicu-Sărat provided air defense and engineering.

In the 1941 campaign, the 3rd and 4th Romanian Aviation Armies had one reconnaissance and one liaison squadron at their disposal and 2 or 3 observation squadrons at the disposal of the Army Corps, dispatched by the Air Force Command. All these aviation deployments from 22 June 1941 were in the operative areas of these Armies: the 3rd Romanian Army in the Northern part of Bucovina and Northern Moldavia and the 4th Romanian Army in Moldavia.

On 22 June 1941, the enemy air forces inside the C.A.G. operation area of the Aviation were more or less equal to the Romanian ones: they had: 2 aviation regiments at the North of Kichinev, one fighter regiment in Bolgrad and one bombing regiment in Cetatea Albă; all these aviation fields and also the passages across the Prut river



Messerschmitt 109 fighter aircraft employed by the Romanian Armed Forces from 1940



IAR-80 aircraft on a campaign aerodrome



Group 5 Bombardment preparing for a mission in the summer of 1941



Hawker Hurricane fighter airplanes



The PZL Karas of the 73rd Bombardment Squadron, 6th Group



Heinkel He 111H-3 airplane of the 5th Bombardment Group taxied on the Ziliștea aerodrome, June 1941



Adjutant Ion Milu of the 7th Fighter Group presenting the outcome of a mission in the spring of 1941



Me 109 E fighter aircraft in Bessarabia



IAR-80 fighter aircraft in Bessarabia

were strongly defended. From the beginning of June 1941, the enemy aviation from that area did air reconnaissance and trespassed the Romanian air space and borders.

On the same date, the Air-Defense Command (commander Division General Gheorghe Popescu; chief of Passive Air-Defense Lt.Col. Ion Cerbulescu) and the Surveillance Headquarters were called out: 63 artillery batteries; 13 machine-guns batteries; 9 searchlight batteries; 694 groups of 7.92-mm machine-guns and Z.B. submachine guns; 6 surveillance batteries (3 operative and another 3 on the territory); 6 ground-defense regimental bases; 3 columns of ammunition; 3 trains of ammunition; 28 surface-to-air areas to the three air regions; the Surveillance Headquarters with 6 region intelligence centers (Bacău, Focșani, Buzău, Constanța, Ploiești, Bucharest); 29 intelligence area centers and 432 surveillance posts of the intelligence centers; 3,827 passive air-defense formations.

The overall mobilized personnel were 32,140 people, of whom 19,873 at the Air-Defense Artillery Headquarters and units (515 on-duty officers, 313 disbanded officers, 494 on-duty NCOs, 198 disbanded NCOs, 127 warrant officers), 4,400 in the red zones (10 disbanded officers and 50 disbanded NCOs), 46,028 at the Passive Air-Defense lines (police officers, civilians, firefighters).

THE AIR OPERATIONS IN BESSARABIA AND NORTHERN BUCOVINA. THE AIR SUPREMACY CONQUEST (22 JUNE – 4 JULY, 1941)

The Romanian Air Force received the mission to start the battle in the morning of 22 June 1941. Once Romania went to war for its national integrity, it allowed the pilots from the Ziliștea-Boboc, Buzău, airfield the honor to engage first in battle: the preparation of the mission took place at 3 o'clock in the morning and the take-off occurred only half an hour later, at 3.30. The mission consisted in the bombing of the Northern and Southern sides of Kichinev, as ordered through Operational Directive no. 34.

The enemy was taken by surprise. The C.A.G. was engaged on the first day in 7 reconnaissance missions and 5 bombing ones with 124 aircraft (56 bombers, 64 fighters and 4 recon flights). They struck the aviation fields from the Northern side of Kichinev, in Bolgrad, Bulgărica, Cetatea Albă, and Tiraspol.

The following days, the Romanian Air Force activity remained intense. On 23 June 1941, in the afternoon, while the 53rd "Hurricane"-Fighter Squadron was flying from Focșani to Mamaia, Lt. Horia Agarici struck three enemy planes in the Constanța area.

OPERATIONS SUPPORTING OWN THE LAND FORCES AND MANAGING THEIR CRISES

From 4 to 18 June 1941, the Romanian Royal Aviation was engaged in the offensive actions of the 4th Army, by building bridges in Albița and Fălciu. The main goal of the Aviation was to go to war against the enemy land forces which were not only opponents at the Prut river, but also destroying their communications in order to stop the contact areas by deviating the enemy counterattack.

The C.A.G. air force units were engaged at a strategic level inside the enemy's formation, proving great efficiency. There was a remarkable action of the air force by supporting the 35th Infantry Division on 9 July 1941 (engaged in battle for the Masivul Cornești) and the 15th Infantry Division (in the Lăpușna area). On the battle field, there were lots of human losses, mentioning the reservist Lieutenant Ioan Lascu, flying a He-112 (51st Fighter Squadron), who was hit by the enemy's air-defense artillery, and 2nd Lieutenant Vasile Claru, flying an IAR-80 (41st Fighter Squadron), who was engaged against other six enemy planes and, having exhausted his ammunition, he decided to crash his own plane into one of the enemy ones. Another four enemy aircraft were destroyed during this battle.

The bombers were led by Colonel Alexandru Sahini, commander of the 1st Bomber Flotilla.

THE AIR OPERATIONS FOR THE LIBERATION OF SOUTHERN BESSARABIA

At this new level of the military operation – the battle in Southern Bessarabia (19-27 July 1941) –, the battle missions of the Romanian Aeronautics were mainly to disorganize the rear part of the enemy and strike them while trying to pass over the Dniestr. On 21 July, the Aviation offered aerial protection for the crossing of the Danube to Ismail by the 2nd Army Corps and the Aeronautics of the Dobrogea Aviation Command provided protection against the enemy attacks on the Constanța and Sulina harbors..

THE ROMANIAN AIR FORCE OPERATION IN ODESSA

The operation in Odessa was one of the most important in the 1941 Romanian Army campaign, and the Aviation took a substantial part in it. In the summer of 1941, the Romanian Army crossed the Dniestr, which had proven to be a political and military necessity. After releasing the central and Southern parts of Bessarabia, the 4th Army led by General Nicolae Ciupercă until 9 September 1941 and from then on by General Iosif Iacobiți was engaged from 8 August to 16 October 1941 in the offensive operation in Odessa (a strategic city on the Southern flank of the East-European front), behind the German and Romanian forces heading towards the Bug and the Dniestr.

The Odessa harbor was difficult to conquer at that time, due to its land, air, and naval forces in the area ready for defense. The greatest Romanian military units reached the enemy lines on 14 August 1941, in front of the Odessa defensive line, forbidding the enemy to retreat North or East, and they entered the city soon after, on the morning of 16 October, fighting the remaining enemy forces in the streets. The Soviet Army forces escaped by sea towards the Crimean ports and the North-Eastern shores of the Black Sea.

After setting Southern Bessarabia free on 26 July 1941, the military C.A.G. actions went on: all the military means stroke the fields taken by the enemy aviation, the railways, the groups of forces, and any other means, or the war shipment. Furthermore, until 8 August 1941, it covered the Romanian land forces which forced the Dniestr in the Criuleni-Dubasari area.

The fighter and bombing aviation of the C.A.G. appeared later on the tactical level, taking part in the offensive of the great units and the Romanian units for striking the strong enemy lines around Odessa and destroyed the artillery posts and the strong posts.

Lt.-Col. Alexandru Popișteanu, commander of the 7th Fighter Group, who was an excellent pilot and comrade, died on the Odessa battlefield on 21 August 1941. Several crisis situations were inevitable, given the military actions around Odessa. Two of these come to our attention. It was then that the aviation fight was crucial.

First, there was the landing that took by surprise of Soviet troops at Cebanka-Grigorievka (North-East of Odessa) during the night of 21-22 September 1941; second, there was the Soviet attack on Dalnic during the night of 1-2 October 1941. At the request of the 4th Romanian Army, the Aviation acted intensely and promptly to solve the critical situations mentioned, giving the enemy less time to react.

In parallel with the C.A.G. activity, the following units also came in: the 4th Romanian Army Aeronautics, the 3rd and 4th Fighter Groups, the surveillance aviation, and the artillery units and subunits of the Corps of Engineers and the Signal Corps.

THE RETURNING OF THE ROMANIAN AIR FORCES TAKING PART IN THE WAR TO THEIR HOME BASES

On 16 October 1941, the Aviation Staff, through Special Order no. 49, issued orders to "draw back the air forces inside the country and deal with the air battle in the Ukraine". By 31 October 1941, the Romanian Air Force echelons were brought back to their bases at the beginning of the campaign, by the order of certain headquarters and operative units, and there were still some forces left behind, such as: 14 air squadrons, of whom 4 surveillance, 3 liaison, 4 fighters and 2 hydroplanes, as well as other artillery units and engineering and aeronautical signal.

ANALYSIS THE ACTIVITY OF THE ROMANIAN ROYAL AERONAUTICS IN THE CAMPAIGN OF 1941

In the campaign of 1941, the Romanian Royal Aeronautics' activity was impressive by its functional, lasting, and capable structure of getting through difficult situations on the three levels of war, the operative, the strategic, and the tactical ones. Therefore, there were 6,626 war missions, with 12,108 take-offs, 21,077 flight hours during these missions, 2,354,424 kg of bombs launched, 349,000 kg of ammunition fired, 257 air victories (219 certain and 38 probable ones); 184 enemy airplanes hit by the air-defense artillery.

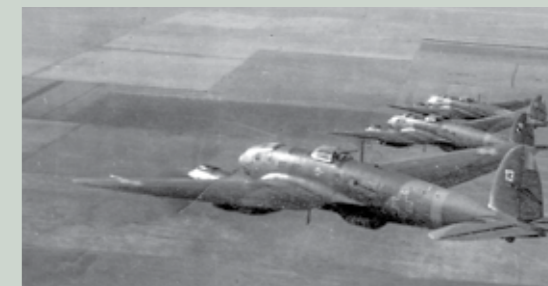
It proved to be fully efficient to gather the main air forces of the battle into a great operative and strategic unit, under the name of Combat Air Grouping, of an equal rank with the German Air Force Corps.

THE ENGAGEMENT OF THE ROMANIAN AIR FORCE ON THE EASTERN FRONT (1942-1944)

After the defeat in suffered on the outskirts of Moscow in 1941, the German High Command understood that the German-Soviet military campaign was going to last. However, for the summer of 1942, the German campaign plan was to conduct an offensive on the Southern front in the Caucasus, with the main purpose of occupying the oil areas Grozny and Baku.

In order to carry on with this plan, there were important military troops involved, named "A" (striking mainly on Rostov – Grozny – Baku front) and "B" (an offensive on the Kursk – Stalingrad front).

In the summer of 1942, the battlefield changed so much, that in the Stalingrad area, which was of an operative importance, the following were brought in: the 4th German Tank Army (from the "A" Army Group), the 3rd Romanian Army with its troops in the Don's Bend area, and the 4th Romanian Army in the Kalmuk Steppe, but also other German units and great units with special destinations. As a result, the Stalingrad operation became not only the most important one on the Southern German-Soviet battlefield, but also one of the most crucial ones for War World II. This military operation took place from 17 July 1942 to 2 February 1943, and there were two different stages of it: the first one between 17 July and 18 November 1942, which was an offensive operation of the German troops and their allies (the so-called "Blue Operation").



Bombardment patrol made up of Heinkel 111 airplanes during a mission in Bessarabia



Alert posts (above) and anti-aircraft defense posts (below) near the campaign aerodromes in 1941



Effects of an air bombing upon a station transited by Soviet troops on their way to Odessa



General Iosif Iacobiți, commander of the 4th Army, visiting the 53rd Fighter Squadron



King Mihai I decorates Lieutenant Nicolae Polizu-Micșunești, ace of the 1941 campaign, with "Mihai Viteazul" National Order



Antiaircraft cannon and teletrist on the Crimean battlefield



Wrecks of Soviet aircraft hit by the Romanian aviation and anti-aircraft artillery in 1941



The second one took place between 19 November 1942 and 2 February 1943: it was initially a Soviet counter-offensive mission and then turned into an offensive operation through the center and South of the German-Soviet battlefield, with certain conclusive consequences in War World II.

The engagement of the Romanian Aviation on the Eastern front in 1942 included the following activities: a) the military actions of the Caucasus and the Kalmuk Steppe, with the phases: 6 August – 16 September 1942; 16 September – 31 December 1942; b) the military actions from Stalingrad and the Don's Bend, with the phases: 1-16 September 1942; 16 September – 20 December 1942; 21-31 December 1942. This division was due to the organization of the headquarters and the distribution of the Aviation concerning the operative necessity in time.

Regarding the operations from the Stalingrad and the Don's Bend areas, they were fulfilled between 1 and 16 September 1942, by the C.A.G. including fighters and bomber units, and from 16 September 1942 on also the 3rd Romanian Army Aviation led by the General Headquarters of the Romanian Air Force (P.C. Rostov).

On 6 September 1942, by order no. 9423 of the Aviation Staff, the C.A.G. was reappointed as an operative base, similar with the one in 1941 (commander Squadron General Ermil Gheorghiu; chief of staff, Commander Vasile Constantinescu). There was a new element by comparison to the 1941 situation: the High Air Force Region was subordinated to the C.A.G. with all its means that had to arrive at the appointed times in the operative areas, so during two years, between 1 September 1942 and 23 August 1944, the Romanian Military Aeronautics and almost all its forces were in the military operations areas of the East front, where it possessed functional structures, apart from those that dealt with territorial defense and the protection of the Romanian coastline.

THE ACTIVITY OF THE AERONAUTICS IN THE STALINGRAD AND DON'S BEND AREA

At the end of September 1942, the Romanian Aeronautics fighting in the Stalingrad and Don's Bend military operations areas had 26 air squadrons (6 fighters, 2 fighter-bombers, 7 bombers, 6 surveillance, 2 reconnaissance, 2 transports and 1 medical), but also air-defense artillery means distributed by the C.A.G. to the 3rd Air Force Army; the 4th Air Force Army: the 4th Air-Defense Artillery Brigade (with 22 air-defense artillery batteries), the High Air Force Region (2 high region bases; 5 shifting workshops; 2 vehicle transport columns); 1 aero transport/medical squadron; the Aeronautics Engineers' Command (1 operation battalion; 1 railway construction battalion; 1 beaconing company); the 1st Forecast Service and Surveillance Service with 1 Romanian radio observation (on the 3rd Romanian Army battlefield) and 1 German observation company with 6 observation posts, 2 Freya radars and 3 Würzburg radars.

In the advanced battle from the Don's Bend area (till 19 November 1942), the C.A.G. combat aviation carried out missions supporting the 6th German Army in a direct offensive operation over Stalingrad and also in the defensive operation on the Northern front, between the Volga and the Don, supporting the 3rd Romanian Army in the defensive operation, mostly in the last part of October 1942, at the request of the General Headquarters of the Romanian Air Force and with the approval of the 4th Fleet of the German Air Force, supporting the indirect military actions of the 6th German Army and the 3rd Romanian Army by bombing the communications in the Mihailova – Rakova – Olhovka area through their military battlefield. A remarkable operation was that of the fighter aviation, that proved its professionalism and good war methods (mostly when it joined the bombing aviation), but also sure gadgets (modern, in nowadays terms).

From 1 September to 19 November 1942, the Soviet aviation activity was intensive on the Stalingrad and Don's Bend battlefield. The Soviet counter-offensive from 19 November 1942 was followed by the bomber-aviation attacks over Romanian and German airfields.

On 18 November 1942, the Soviet forces were ready to attack from their operative post. In the Northern section, the center of gravity was at the striking troops on South-Western front. These striking troops had their own mission to hit the 3rd Romanian Army by starting from the bridge South-West of Serafimovitch and West of Kletskaya and carrying on through to South-East of Kalatch, where on the third day, the joining with the advanced troops of the Stalingrad front had to take place.

ROMANIAN AND GERMAN AIR FORCE OPERATIONS DURING THE SOVIET COUNTER-OFFENSIVE (19-25 NOVEMBER 1942)

Till 19 November 1942, the main effort of the Romanian Military Aviation was for the Stalingrad offensive operation and its main access. Major amounts of troops, vehicles, and tanks, the railway stations in Frolov, Ilovinskaya, Kalinino were all destroyed and also the fuel depots and buildings from Stalingrad and from the Koltuban station were burned.

The Don front had its mission to go forward to the East of the Don, by going around the South-East, towards the South, then to strike and to pin down the German and Romanian forces.

The Stalingrad front continued the defensive attack in the city, then, after a day of counter-attack, it carried on to the West in order to enter the center and the left flank towards Kalatch.

The Soviet counter-offensive took place on the morning of 19 November 1942, after an intense training of the artillery on the 3rd Romanian Army front, and from 5 o'clock, the battle actions started from the Kletskaya and Bolshoy bridgeheads. The Romanian troops from the 5th, 6th, 13th, and 14th Infantry Divisions were caught in the middle of the two Soviet fronts, so they formed the so called "Lascăr Group" without a specific structure of command.

During the Soviet counter-offensive (19-25 November 1942) the G.A.L. aviation supported with all its forces and on bad weather conditions for the flights (just before 25 November 1942 the weather changed) the defensive operations of the 3rd Romanian Army, by attacking the offensive troops, vehicles, and tanks which attacked the friendly troops from behind. The G.A.L. carried out the battle and bombing missions in the Bolshoy-Kletskaya area, by attacking with the bomber aviation, troops, vehicles, and tanks, while the battle aviation provided free movement of the bombers lines.

The crucial situation of the troops from the "Lascăr Group" was permanently supervised by the Romanian Great General Headquarters and by the Aviation General Headquarters, which sent planes for information, provisions, and transportation of the injured.

In the morning of that day, by order of the 3rd Army, Cpt.Av. Valentin Stănescu flew over in his Fiesler Storch plane and landed at Golovski, the village where the 6th Infantry Division had its command post. He brought the first and last message to the 3rd Army Command from the generals Lascăr, Mazarini, and Sion: "The situation is crucial. The lines are bounding at any time now. Two members of Parliament arrived last night with a resolution to surrender, but all the divisions refused. The Artillery Regiment still has 40 cannon shots. The ammunition for the brandt is almost finished; the infantry ammunition is low. The troops are starving. This morning (22 November 1942), the firing with the tanks and katiushas began on the left of the 15th Division and on the right of the 6th Division. During the night of 22-23 November, we fought towards Tchernyshevskaya. There are many injured soldiers and the possibilities to treat them are poor. The anti-tank cannons of any category are without any effect against the numerous tanks. The infantry is beaten by the tanks. We could resist until tomorrow. Our first urgency concerns the ammunition and the gas."

On 23 November 1942, the G.A.L. operation journal mentioned one of the most dreadful operations from the Romanian Air Force activity on the Stalingrad front. For the first time since the beginning of the campaign (22 June 1941) and in the Romanian Air Force history, we dealt with the rescuing of an airfield (Karpovka) directly from enemy fire, during many hours of "dark night, a keen frost and blizzard" with amazing results: saving an important part of the flying material and the personnel. In order to save as many people as possible, parts of the aircraft equipment were removed, sometimes even the pilots' seats.

The attack of the Soviet forces was fought off first by the air-defense firing batteries from a land shooting position and then by the cannons and the board machine-guns, with the airplanes raised on some oil barrels (from the backside of the planes), by order of Lt.Av. Alexandru Șerbănescu (1917-1944), commander of the 57th Fighter Squadron. The aircraft took off under the heavy fire of enemy tanks (there were about 13, of which two collided in mid-air due to a very poor visibility) and landed at Morozovskaya.

"The last picture I had in mind – Lt.Av. Tudor Greceanu later reported – was that of the Russian tanks crushing Apostolescu's air-defense artillery battery as it if were some brushwood, and Șerbu, who was left alone in the battery, wearing just a shirt and shooting with all four 7r-mm cannons."

Among the pilots who survived from the 7th Fighter Group, there were names who became famous for the Romanian Air Force (with the ranks they had at the time): Lt. Dan Scurtu (1913-1985); Lt.Av. Tudor Greceanu (1917-1994); crew officer 3rd class Ion Milu (1902-1982); Adj.Av. Tiberiu Vinca and so on. Thus, the saving of the Karpovka airfield by the 7th Fighter Group from the enemy firing was made possible by the commanders' leading capacity and decision-making ability and by the well-prepared board personnel.

ANALYSIS OF THE ROMANIAN AIR FORCE OPERATIONS ON THE EASTERN FRONT IN 1942

We could sum up the idea that in 1942 the G.A.L. supported the 3rd and 4th Romanian Armies and also the actions of the 6th German Army, with remarkable results which were appreciated by the Romanian and German Commands. The G.A.L. aviation fought on the Stalingrad and Don's Bend front with almost 4,000 take-offs and over 1,500 tons of bombs. In 1942, the human losses from the Romanian Aviation (people dead, injured, or missing in action) amounted to 653 (57 officers, 55 NCOs, 11 Warrant Officers. 530 troops).



German-Romanian mixed patrol over the Romanian seaside 1943 (published in "Adler" a German magazine)



Distant reconnaissance airplane Dornier 17 on the Tacinskaia aerodrome, near Stalingrad



Pilot and navigator of a Heinkel 111 bomber



Potez 633 B2 reconnaissance-bombardment airplane ready for take-off on a new mission, from an aerodrome near Stalingrad, at the end of 1942



Potez 633 B2 reconnaissance-bombardment airplane ready for take-off on a new mission, from an aerodrome near Stalingrad, at the end of 1942



Pilots of the twin-engine bombers Savoia Machetti 79B before the Stalingrad campaign

THE FORMATION OF THE ROMANIAN 1ST AIR CORPS ON THE EASTERN FRONT

The formation of the Romanian 1st Air Corps (1st R.A.C.) with German assets, in the first part of 1943, meant a great evolution in the Romanian-German relationships on the Aviation field. There were many direct contacts and letters, even at a high level, between both parts and all these were considered in the restructuring and endowment of the Romanian Aviation after the losses from Stalingrad and Don's Bend in the autumn of 1942.

The 1st R.A.C. led by Squadron-General Emanoil Ionescu, was formed by using Romanian flying and technical personnel, with German assets and flying material and organized by 16 June 1943, in the Tiraspol-Razdelnaya-Odessa area, where there was also training schools, with German instructors.

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THE USE OF THE ROMANIAN 1ST AIR CORPS IN 1943-1944 ON THE EASTERN FRONT

By 23 January 1943, in the operation area, an Aviation Mixed Group was formed (commander Capt. Nicolae Iosifescu) which operated in the Lower Don – middle Donetz – Isium area. Most of the Romanian air-defense artillery forces remained in the operation area of this Mixed Group.

The first military actions of the 1st R.A.C. supported the operations of the Romanian and German land forces on the Mius-Donetz, Dniepr- Dniepr's Bend, Odessa-Bessarabia, and Moldavia fronts. In the second part of August 1943, the 1st R.A.C., being subordinated to the 4th German Air Fleet had: 140 fighters, 14 aerial carriers, and 78 air-defense cannons.

In 1943, the 1st R.A.C. operation covered several stages, because of the land forces' operations towards the West. In the first stage, on 16 June – 31 August 1943, it accomplished missions in the area defined as follows: Taganrog-Voroslovgrad-Kamensk-East Rostov-Northern coast of the Azov Sea. In the second stage, 1-30 September 1943 the 1st R.A.C. operations were tagged by the dislocation of the operative troops of the German-Romanian forces and their allies to the West, on the Molocnoje lake – Melitopol-Saporoje front. The 1st R.A.C. units were forced to deploy and fight on different airfields: Staraye Blisnezi, Dniepropetrovsk, Melitopol – the fighters; Saporoje – the bombers, until 20 September 1943, then the fields from Genisesk, Nicolaev. In the third stage, 1 October – 31 December 1943, after a short stay of the front from Saporoje – Melitopol – Molocnoye lake, the land and air battle began for Melitopol and the Nogay Steppe. In the last months of 1943, the 1st R.A.C. mission was to defend the 6th German Army and the 1st German Tanks Army on the Lower Dniepr and the beachheads Herson and Nikopol, as well as to defend the Romanian-German troops in the Perekop-Crimea area, and then in the Kertch area. The 1st R.A.C. units were deployed to Nikolayev, Odessa, and Tiraspol.

THE CONTRIBUTION OF THE ROMANIAN AERONAUTICS TO THE EXTRACTION OF THE FORCES FROM CRIMEA

The evacuation of the Romanian and German formations from Crimea (code name: "Adler Operation") was one of the greatest Air-Navy military operations in the Second World War. It took place between 15 April and 12 May 1944, under the fire of the enemy troops (land, air, and navy-submarine) who acted on the offensive to reconquer Crimea. At that time, there were 65,083 Romanians (2,433 officers, 2,423 NCOs, 60,227 troops) as well as 27,472 horses, 1,811 vehicles, including motorcycles, 7,650 horse-drawn carriages, 206 cannons, 293 anti-tank guns, 12 tanks. All these forces were grouped in the two Army Corps commands (the Mountain Corps and the Cavalry Corps) and subordinated the 1st, 2nd and 3rd Mountain Divisions, the 6th and 9th Cavalry and the 10th and 11th Infantry Divisions).

According to the "Adler" plan, the evacuation of the troops from the Crimean peninsula was assisted with air forces, mainly German, as well as Romanian which were organized in three important mission types:

- a) air-to-air and air-to-ground attacks, in order to allow the withdrawal of troops within the Sevastopol defense base;
- b) airlifts from Sevastopol, afterwards Hersones, to Constanța or onto other Romanian aerodromes;
- c) escort of maritime convoys from Sevastopol to Constanța.

As per the Aviation Staff Order no. 40027/T from 1 April 1944, the Air Force Command was responsible for the organization of the 2nd Romanian Air Corps (2nd R.A.C.) which became operative on 7 April 1944; it commanded all the air force



General Emanoil Ionescu, commander of the Romanian Air Corps



Generals Emanoil Ionescu and Gheorghe Jienescu inspecting the Eastern battlefield



Five of the Romanian Royal Aviation aces were decorated with the "Mihai Viteazul" Order, 3rd Class: (from the left) Captain aviator C. Cantacuzino, Lieutenant aviator T. Greceanu, 2nd Lieutenant aviator Ion Di Cesare, General G Jienescu, Cdror G. Davidescu, Capitain aviator A. Șerbănescu, Crew officer aviator I. Milu on the Mariupol aerodrome, Ukraine, 28 August 1943

bases in the country, the Air-Navy Command and the units within the Air-Dniestr Command as well; this last one was established on 14 November 1943 and was designed to protect the coasts and the maritime convoys. The 2nd R.A.C. comprised 51 units, including bases and workshops such as: 2 reconnaissance squadrons, 3 liaison squadrons, 10 surveillance squadrons, also including 20 surveillance squadrons, 4 bombing groups, 2 fighting groups, and the units within the Air-Dniestr Command. Since the German Air Force escorted the convoys from Sevastopol to Constanța for approximately 150 km (within their range of flying), these convoys were taken over near the Romanian coast by the units within the 2nd R.A.C., especially by the Hydro-Aviation Flotilla and the 4th Fighter Group.

According to the German data, 16,387 Romanian and German injured and 5,070 Romanian and German able-bodied soldiers (altogether 21,457 people) were flown from Crimea to Romania. On the Constanța aerodromes, only 8,297 evacuees landed and were taken over by the "Tomis" organization (within the framework of the "60,000 Operation") to be registered, decontaminated, sent to wellness centers etc.); the remaining 13,160 people were flown to other Romanian aerodromes.

Undoubtedly, not only from a human, but also from a military point of view, the evacuation of Crimea was one of the most dramatic pages in the history of World War II.

THE ROMANIAN ROYAL MILITARY AERONAUTICS' BATTLE TO DEFEND THE NATIONAL AIR SPACE

After the German-Soviet war started on 22 June 1941, Great Britain was relieved, due to the decrease of the pressure upon it through the regular air bombings launched by Germany. Given the newly-created political-military context, Great Britain and then the USA became the most important allies of the USSR, by providing it with huge quantities of combat equipment and food. On 6 December 1941, Great Britain entered the war against Romania. Suddenly, Romania unintentionally found itself fighting against a country it had been at peace with for several decades and which had stood by Romania during the First World War to attain an ideal of national unity; thus, the Anglo-Romanian friendship unexpectedly stopped, with some unfavorable consequences for Romania. The ulterior actions, also including some air bombings executed by Great Britain, meant a hard blow for Romania. The famed "Percentages Agreement" between the British Prime Minister Winston Churchill and the Soviet leader Joseph Stalin (October 1941 in Moscow) in which it was stated that Romania was "90%" in the Soviet sphere of influence, led to the British disinterest for Romania, but culminated in lots of political, military, economic etc. clauses which were stipulated in the Peace Treaty (signed on 10 February 1947 by the Romanian delegation).

As a reaction of Great Britain and under Berlin's pressure, on 12 December 1941, after six days from the British declaration of war, Romania declared war to USA. The two fighting sides, the Axis (Germany, Italy, Japan, Romania) and the United Nations (USA, Soviet Union, Great Britain) were now fully shaped and opposed.

THE ENEMY'S AIR OPERATIONS OVER ROMANIA IN 1941-1942

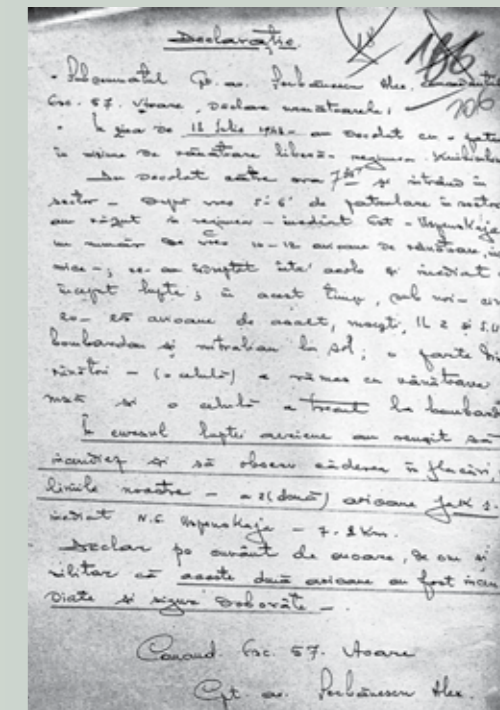
In 1941, the Soviet Air Force intensively operated over the Romanian territory, especially in the first two months of war, and diminished in proportion as the land forces went towards the East. After the siege of Odessa (16 October 1941), the Soviet raids were reduced to reconnaissance missions over the coasts to identify the convoys. Between 22 June and 31 December 1941, the Soviet Aviation executed 2,651 raids over the Romanian territory, with 7,817 different aircraft types (fighters, bombers).

Over the national territory, the fighting aviation and the antiaircraft artillery brought down 120 enemy aircraft. The enemy forces dropped 7,308 bombs, of which 4,355 explosive bombs (435 tons) and 2,953 incendiary bombs (6 tons), especially over Constanța, Sulina, Iassy, Valea Prahovei, Bucharest. The rate of the exploded bombs was scored at about 50%. The losses after the bombings were: 520 dead; 820 casualties; 478 blasted dwellings and 1,217 damaged.

In 1942, after a less intense activity in the first three months of the year, the Soviet Air Force restarted the air bombings on 2 April, but these were less intensive than the ones in the previous year. 81 raids were executed with a total of 134 aircraft, 376 bombs were dropped, including 352 explosive and 24 incendiary ones, amounting to 35.2 tons of explosive and 0.5 tons of incendiary projectiles. Losses included 31 dead, 60 casualties, 32 blasted and 68 damaged dwellings.

On 5 June 1942, the USA declared war to Romania and on 12 June 1942, the American Aviation executed the first bombing raid upon the Ploiești-Prahova area through the so-called "Halpro" unit commanded by Colonel Harry Halverson who prepared the mission.

In May 1942, the "Halpro Group" took off from Florida to bomb Tokyo. The course of the 23 Consolidated B-24 Liberator bombers towards Tokyo stopped at Khartoum, in Sudan, where their mission was changed – the air attack of Ploiești which, at that time, represented one of the largest producers in Europe providing petroleum-based fuel for Germany. On 11 June 1942, at 22.30 hours, the "Halpro" group flew over Turkey to reach Constanța and then headed towards Ploiești, striking it and other 13 localities in Southern Romania from an altitude of 4,000 meters: Constanța, Sulina, Buzău,



Handwritten report after a mission



Bucharest-Pipera, 1943, in spring. 9th Fighter Group. 2nd Lt. Av. Ion Dobran in the cockpit of his IAR-80 airplane



Back cover of the "Romanian Wings" magazine, with the portrait of 2nd Lt. Av. Mircea T. Bădulescu in Karankut, Crimea, in March 1944





Squadron General Aviator Gheorghe Jienescu decorating Capt. Av. Alexandru Șerbănescu during a ceremony with the 9th Fighter Group



Tecuci, May 1944. Adj. Av. G. Scordilă, Lt. Av. H. Dușescu, Lt. Av. T. Greceanu, Capt. Av. Alexandru Șerbănescu, 2nd Lt. Av. I. Milu, Adj. Av. E. Bălan



German and Romanian anti-aircraft batteries defending the air space over the Black Sea (photo published in the "Adler" magazine, 1942)



1 August 1943. Romanian fighter aviators under alert (above) and an American bomber destroyed by Lieutenant Ioan Bărlădeanu (below).



Râmnicu Sărat, Ciulnița, Bucharest, Ploiești, Berceni, Strejnicul, Teișani etc. where from they returned to their base. The "Halpro" project was considered a strategic failure of the American side. Four bombers returned on the Habbaniya airfield, 3 reached other airfields in Iraq, 2 in Alep (Syria), and 4 in Turkey where the aircrews were interned. One of the planes landed on the Izmir airfield (Turkey) with engine damages and bullet holes in the cockpit. Thus, the "Halpro" mission was unsuccessful and was afterwards renamed an "exploratory mission".

Colonel Halverson's air raid – the first air attack by bombers of the United States Army Air Forces over Europe and, obviously, over Romania – proved the possibility of long-distance bombing right in the center of Europe and approaching from some airfields other than the ones in Great Britain or across the Dniestr. For the Axis, and especially for Romania, this air attack meant an outstanding alarm whose consequences were to take shape in strengthening the anti-aircraft defense not only of the Ploiești-Prahova area, but of the entire country.

THE 1943 SOVIET-BRITISH-AMERICAN BOMBINGS AND THE ROMANIAN-GERMAN AIR DEFENSE REACTION

In 1943, the Soviet air operations over the Romanian national territory started with three bombing missions onto the Constanța harbor (on 3 May, 28 and 30 September) and a bombing raid onto Cetatea Albă (on 27 September). On 1 August 1943, the American Air Forces executed an air attack on the oil fields of Ploiești-Prahova (Operation "Tidal Wave").

From the autumn of 1942 on, as a consequence of the "Halpro" action, the Romanian and German military authorities undertook to strengthen the anti-aircraft defense system of the entire petroleum area around the Prahova Valley. Moreover, at the beginning of 1943, the hope of seizing the Soviet petroleum in the Caucasus became questionable, the battle of Kursk was won by the Allies, Sicily was seized, and Mussolini was overthrown from power. As a result, the Romanian petroleum became important to the Axis armies. The Allies also showed a great interest in these oil fields around Ploiești, but in the sense of destroying them.

In order to strengthen the anti-aircraft defense system around the Ploiești-Prahova area, two important components were set up: long-distance defense – through the fighters' activity to attack and disintegrate the bombing formations; and close defense – by means of anti-aircraft artillery capabilities which were deployed in circles around the objectives to be defended.

Therefore, the anti-aircraft defense formation was enforced with the 5th German Anti-aircraft Artillery Division commanded by General Julius Kundera, the 5th Romanian Anti-aircraft Artillery Brigade under the command of Colonel Ion Rudeanu (a total of 24 batteries of which 4 projectile batteries and a battalion of captive aerostats) and radars (Freyja and Würzburg). Hydrogen-fueled captive aerostats were set up within the 3rd Romanian Aerostation Battalion which comprised 58 aerostats and brought down seven aircraft. The targets were camouflaged in different ways: artificial fog (by means of "Nebeltopf" generators), the creation of false targets (around Berceni-Corlătești area a fake Ploiești was built at a 1:1 scale), covering the objectives in mosaic camouflage etc.

At the Conference in Casablanca (held between 14 and 24 January 1943), U.S. President Roosevelt, British Prime Minister Churchill and the Combined Committee of the Chiefs of Staff decided upon the further operations of the American and British forces. The American operation "Tidal Wave" of bombing the oil refineries in the Ploiești-Prahova area was also approved.

Colonel Jacob Smart planned this operation in the spring of 1943 in Washington. In order to execute this strategic bombing mission, 178 B-24 Liberator bombers belonging to the 8th and 9th U.S. Air Forces were assigned the five airfields around Benghazi in Libya.

On 1 August 1943, the German surveillance and alarm system organized in the Balkans signalled and followed the American bombers' formation since their departure (the Benghazi area at 04:00 GMT and at 06:00 in Bucharest) and indicated the probability of an air attack upon the oil fields of the Ploiești-Prahova area. The first set of bombers had the following course: Corfu Island – Ohrida Lake – the Serbian-Albanian border and headed North-East. The second set of bombers was noticed at 11:50 in the Eastern Prilep having the same heading. From 11:50 to 12:20, the enemy aircraft were observed on the course South Prilep – Ploiești (100 km North-West of Sofia), where they changed their course towards the West. Every 20 minutes, B-24 Liberators flew over the Danube in compact formations of approximately 50 bombers. The first bombers entered the Romanian air space at 13:06 at the Bistrețul point (50 km East of Calafat) and then followed the course: Bistrețul-North of Slatina-North of Pitești (the initial point of attack) -Târgoviște-North of Buftea-Ploiești-Brazi-Ploiești-Găești-Sinaia-Balta Potelu-Pucioasa-Câmpina-Găești-Corabia.

The air raids upon the objectives started at 13:56. At 14:45, the American bombers left the petroleum fields heading towards Balta Potelu for regrouping. The attack was executed at low-altitude (100-150 m) in formations of 8-12 bombers, with bombs of 250-500 kg which were supposed to explode at different times (about 45 seconds after the last formation's raid over the targets). The bombers (four-engined, with

approximately 12-hours flight autonomy) flew without the fighters, which seemed impossible from a technical point of view at the time. The defending troops' losses: 7 fighters, of which 5 were German and 2 Romanian; 15 military dead – 12 Germans and 3 Romanians; 48 military casualties – 29 Germans and 12 Romanians. The enemy forces lost 35 aircraft, of which 20 were hit by the German and Romanian fighters and 15 by the German and Romanian anti-aircraft artillery. The American losses were much higher: 53 aircraft destroyed, 37 seriously damaged, 8 landed in Turkey (where the air crews were interned), and 23 reached the Allied bases in Cyprus, Sicily, and Malta. Only 88 bombers returned to Benghazi, of which 55 were seriously damaged. 310 pilots died, 130 were injured (54 over the Ploiești area), 108 were taken prisoners, 79 were interned in Turkey. President Roosevelt presented this information to the American Congress on 15 August 1943, and admitted that this data was "disastrous", while Hitler and Göring congratulated General Gerstenberg, the Chief of the German Aeronautical Mission in Romania, for this success.

In conclusion, in 1943, 441 enemy aircraft were involved in 136 air raids, of which 39 Soviet and American aircraft were hit. 4,894 bombs were dropped upon the national territory, of which 48 explosive of 50 kg, 523 explosive of 250-500 kg and 4,323 incendiary. The losses of the bombings comprised: 124 dead, 251 casualties, 74 destroyed buildings, 206 damaged dwellings. Important damages were produced to the Columbia, Vega, Orion, Astra-România, Steaua Română, and Creditul Minier refineries. Serious damages also affected different installations such as Concordia, the railway installations and equipment around Ploiești, the electric plant and the railway station in Câmpina were completely destroyed.

THE BRITISH-AMERICAN BOMBINGS OF ROMANIA IN 1944

The British-American bombings over Romania, carried on between 4 April and 18 August 1944, were meant to exclude Romania from the Axis' war; from a military point of view, the attacks were supposed to force the obstacles placed in Focșani so that the Red Army would invade the Danube Plain and the Balkans. The duration, intensity, and destructive power of these bombings, the bombing techniques and procedures (daytime, at night, shuttle raids etc.), the bombing of the civilian population, etc. undoubtedly certifies the bravery of these military actions.

According to the information gathered by the special agencies, when the British-American bombings started on 4 April 1944, and later on, in May, the Soviet enemy mainly comprised three large air forces which were deployed on the Black Sea, Bessarabian and Moldavian fronts, moving from South to North as follows: 1) the 8th Air Army (about 10 airfields and 500 aircraft); 2) the 17th Air Army (about 1,170 aircraft); 3) the 5th Air Army (about 1,270 aircraft).

Since September 1943, after Southern Italy was occupied by the British-American forces, the 15th American Air Fleet (Commander General Nathan Twining) placed in Foggia (South of Italy) was assigned the mission to destroy the Romanian oil fields by the Supreme Allied Powers' Headquarters in the Mediterranean (SHAPE).

The number of Allied aircraft deployed to Southern Italy was estimated at about 2,000 B-24 Liberator and B-17 Fortress heavy bombers; approximately 500-600 B-26 Marauder, B-25 Mitchell and A-20 Havoc medium bombers; about 2,000 P-38 Lightning, P-51 Mustang and P-47 Thunderbolt fighters.

The greatest American bombings over the vulnerable regions near Bucharest and Ploiești during April and May 1944 (the total was 16 air raids over 12 localities) took place on 4 and 5 April 1944. On 4 April 1944, at 13:45, about 120 Liberator B-24 bombers attacked the North-Western part of the capital city, with the purpose to destroy the railways, the station shunting yard and workshops, including the Northern railway station, by bombing them from a high altitude (approximately 6,500-7,000m) with a rain of projectiles. The Romanian and German fighter aviation resisted the attacks responding to the American bombers and sometimes getting as close as 20-30 m of the enemy. 11 B-24 airplanes were hit and 45 prisoners (21 officers and 24 NCOs) were captured. The attack made 2,500 victims among the civilian population.

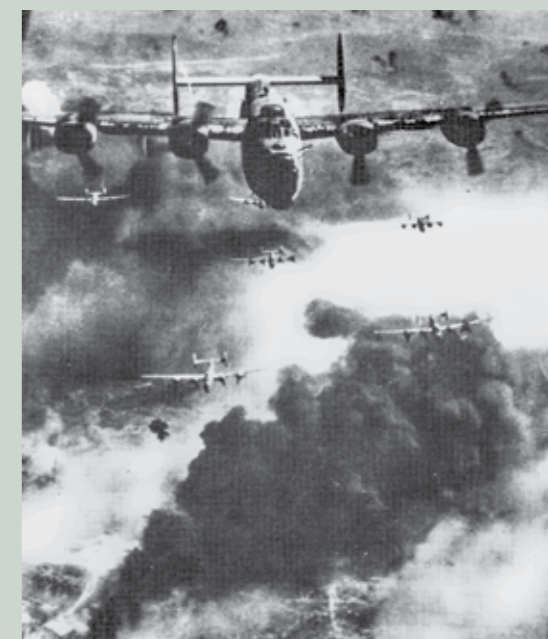
On 5 April 1944, 200 bombers (B-24 Liberator and B-17 Flying Fortress) attacked in five raids, backwards and upwards, the following locations: Ploiești Town – Ploiești Station – the Station shunting yard – and Astra Refinery. The number enemy aircraft destroyed reached 15 and the number of captured prisoners went to 77 (30 officers and 47 NCOs).

The element of surprise of the month of May 1944 was represented by the night bombings executed by the British aviation in three attacks on the Capital city (3-4, 6-7, and 7-8 May 1944), having as main purpose the demoralization of the population.

After a relatively calm period, the aerial activity of the Anglo-American aviation over Romanian territory went on in a more intense manner, reaching a climax in June. 23 air raids were executed during this month, more exactly 10-12 daily raids and 4 night raids over 14 localities. This time, the novelty was represented by the execution of "shuttle raids" by the aircraft taking off from the bases located in Southern Italy. After flying into the Romanian air space (Ploiești-Prahova and Bucharest), the airplanes landed on the aerodromes of Paltova, Mirgorod, and Piryatin, South-East of Kiev.



Students of anti-aircraft artillery schools for officers (above) and for non-commissioned officers (below) started their career during the battles for Romania's anti-aircraft defense



U.S. Air Force bombers over Ploiești in 1944; photo during Tidal Wave Operation



Mounting of an anti-aircraft artillery piece, caliber 75 mm



Collecting aerial information was crucial for the defense system of the Capital city in the first days after 23 August

In August 1944, the raids of the Anglo-American forces continued with the same intensity. There were 11 raids (9 day raids and 2 night raids), including 17 attacks over 9 localities.

The town of Ploiești was bombed 6 times and Câmpina 2 times. The Soviet aviation executed 3 night attacks, dropping bombs over Brăila (10-11 August), Pechea-Galați (16-17 August) and Ismail, Isaccea, Constanța (19-20 August).

The last Anglo-American bombings over Ploiești-Prahova took place at the end of this period, on 17, 18, 19 August 1944. These were massive bombings (700 bombers and fighters on 17 August 1944, approximately 800 on 18 August 1944), similar to the powerful "fire strikes" of the ground-based artillery, normally preceding the military offensive actions. Actually, these bombings preceded the start of the Soviet attack on the Iassy-Kichinev front of 20 August 1944.

The Romanian and German fighter aviation forces assigned to defend the territory in April-May 1944 were organized in three areas: a) the first area (German), including Otopeni, Ploiești, Buzău, with aviation forces deployed on the aerodromes of Buzău, Mizil, Ploiești, Boteni, Ianca, Pogoanele, Tândărei; b) the second area (Romanian), including Bucharest, Popești-Leordeni, Rosiori de Vede, Boteni, Otopeni, Pipera, Popești-Leordeni; c) the third area (Romanian), including Dobrogea-Cocârgea-Galați, with deployed aviation forces on the aerodromes of Fetești, Capu Midia, Jibreni, Mamaia, Ciocârlița de Sus (North-East of Cobadin). The operational command of the three areas was accomplished by the Romanian Fighter Aviation Command, with its headquarters in Băneasa.

At the same time, the Romanian Air Force had 450 aircraft, as follows: 112 fighter aircraft (day and night) for the defense of the territory; 164 aircraft (of which 37 were stationed) responsible to the fighter aviation commandment (29 were dive-bombing aircraft, 43 were for day-and-night bombings, 46 observation aircraft, 15 liaison aircraft, 20 hydro-planes, 8 transport aircraft, 3 reconnaissance aircraft); 121 airplanes for the Romanian Air Corps; 53 airplanes for the 3rd and 4th Romanian Armies.

The counterattack of the anti-aircraft defense, according to the evidence of that time, was "prompt and active", a situation that generally remained the same, with limits imposed by the tactical and technical traits of the available equipment, during the entire bombardment mission.

250 British and American airplanes were hit; more than half (139) were destroyed over Ploiești, which certifies the strong reaction of the defense system in that area. Most of the airplanes were destroyed in this area due to the anti-aircraft artillery; meanwhile, the fighter aviation carried out missions in further areas; out of the 100 aircraft that were destroyed (with the help of the anti-aircraft artillery), more than half (53) were hit outside the firing range of the anti-aircraft artillery in Ploiești. During the three months of Anglo-American bombing raids, the Romanian air-defense destroyed 157 enemy aircraft and lost 34 airplanes and 31 pilots. As a consequence, the losses rate, both for equipment and personnel, reached approximately 30% of the total amount.

Both the fighter aviation and the anti-aircraft artillery tasked to defend the territory gained a vast fighting experience, but with the price of losing 225 Romanian and German airplanes and 121 Romanian and German pilots. The enemies lost 1,025 prisoners, that were interned in Bucharest, then in Timișul de Jos and questioned by the Romanian authorities, that did not turn them over to the German troops present in Romania.

AIR BATTLES FOR ROMANIA DURING THE WESTERN CAMPAIGN

The Western campaign of the Romanian Army (during which the Romanian Royal Air Force fought against the Axis Aviation between 9 September 1944 and 12 May 1945), had three major stages: 1) the Romanian Royal Air Force under National Military Command between 23 August and 9 September 1944; 2) the contribution of the Romanian Royal Air Force to the liberation of Transylvania (9 September - 25 October 1944); 3) the missions of the Romanian Royal Aeronautics together with the Soviet Aviation on the Hungarian and Czechoslovak fronts and the return of the 1st Romanian Air Corps to the country.

At the beginning of the Western campaign, several important appointments were made concerning the command structure of the Romanian Royal Air Force. Thus, the command of the SSA was taken over by General Ernil Gheorghiu on 23 August 1944, followed by General Gheorghe Vasiliu on 5 November 1944 and General Emanoil Ionescu on 5 March 1945. The Chief of the Aviation Staff, General Gheorghe Gârleanu was replaced by General Ramiro Enescu on 22 November 1944.

ROMANIA'S STATUS ON 23 AUGUST 1944

The military situation on the Eastern front became more and more difficult in the summer of 1944. By the evening of 21 August 1944, the troops of the 2nd Ukrainian front enlarged the existing breach (65 km) and moved 40 km forward. Despite their defense measures, the German and Romanian forces did not succeed in stopping the enemy. During the fight against the Soviets, the Romanian Army found out about



On 18 August 1944, Alexandru Șerbănescu took off for his last mission. That day, he and his 12 wingmen, together with 12 other airplanes from the 7th Fighter Group, attacked a formation of Mustangs and Lightnings. When Lt. Av. Dobran and Adj. Av. Dârjan tried to clear his tail, it was too late. He fell in the Rușavățu Buzău area. Apparently, his radio was not functioning properly and he could not hear his wingmen's warnings.

Romania's decision to leave the Axis and put an end to the war with the Allies on the evening of 23 August 1944 at 22.35 hours, after the broadcast of "The Declaration of King Mihai I". It established that "the fight is over, as well as any other hostile activities against the Soviet Union, and the war with Great Britain and the United States".

The armed forces immediately obeyed the political and military orientation of the state, putting an end, during a complex military situation, to the military activities against the Soviet forces, and thus left the German capabilities. It was a unique event throughout the entire World War II. The success was due to the ability to convince the armed forces that in those crucial moments Romania had to put up, at the same time, with the powerful Soviet attack on the front and the forceful English and American bombings, therefore the alliance with Germany was meaningless.

The events on 23 August 1944 ended the activity of the Romanian Army on the Eastern front and determined Romania to join the United Nations. Romania's contribution to the Allied strides, when joining it, consisted in 1,100,000 military personnel, 50 operational and instruction divisions, 71 important maritime and fluvial ships, 71 aviation squadrons with 1,646 aircraft, of which 508 were fighters, the Romanian Army thus becoming the fourth largest force fighting the Axis. At that moment, the Air Force had withdrawn within our borders. The operational aviation included two air groups: the 1st R.A.C., commanded by General Emanoil Ionescu, had 30 aviation squadrons and 249 aircraft; the 3rd R.A.C., commanded during that period by General Gheorghe Vasiliu (18 August - 5 November 1944), that was active from 18 August until 3 December 1944 with 20 aviation squadrons, 165 airplanes, 22 hydro-planes, and 12 gliders; the 3rd Fighter Flotilla (brilliantly represented by the 7th and 9th Fighter Groups that were tasked with the air-defense of the Capital city); the Air Maritime Command, the Air Dniestr Command; the Anti-aircraft Artillery Command; the Passive Defense Command, each having the responsibility for their subordinate units; other battle forces and branches (aerostation, paratroopers, aerial communication, aerial engineering, training units). The status of the Romanian Royal Aeronautics on the Moldavian front was a stable one.

ACTIONS OF THE ROMANIAN ROYAL AIR FORCES UNDER NATIONAL MILITARY COMMAND FROM 23 AUGUST TO 9 SEPTEMBER 1944

Romania decided to join the United Nations before signing the Armistice Agreement, which contained the rights and responsibilities of each part. From the historical moment of 23 August till 9 September 1944, the strategic responsibilities were carried out by the Romanian General Staff. The strategic concept regarding the unfolding of the military actions on the Romanian front was meant to make the German forces withdraw from our territory and the Soviet troops were to be asked for help "only in case of necessity and solely at the request of the Romanian Army".

The main tasks of the Aeronautics obeyed this requirement by the regrouping of the 1st R.A.C. on the Soviet-German front in the Eastern part of the country and the involvement in the defense of the national borders and the planning of the liberating attack in the North-Western part of the country.

Totally disagreeing with the Romanian plans, the Soviets adopted an offensive response in most cases, categorically forbidding any discussion with the representatives of the Romanian Army in order to find a way to cooperate. The orders were issued by General R.I. Malinovski, the commander of the 2nd Ukrainian Group, and from Moscow by Joseph Stalin himself and his close counselors who demanded that the troops "keep carrying out their battle missions". This was the way that determined the course of action for the Romanian soldiers on the Moldavian front, where they were disarmed by the Soviet troops, even if they had ceased the fight and wanted to continue their battle joining the new allies so as to liberate Transylvania, while in the rest of the country the other part of the Romanian troops were taking out the German forces, contributing to the welcoming of the Soviet troops in Bucharest on 30 August 1944, accompanied by the military band, not with hostilities as it was reported afterwards to Moscow and many times after that in history.

Immediately after 23 August 1944, the staff of the Romanian Aeronautics conceived and independently executed, between 23 August and 9 September 1944, air-defense missions. The 1st R.A.C. went through various battle situations, among which the important ones were:

a) air missions, air-and-ground missions, air-and-water missions in order to defend the national airspace (23-30 August 1944), b) the reorganization of the units (1-6 September 1944), c) the establishment of units in the area of operations (6-8 September 1944), d) supporting the operations in Transylvania and Banat for the defense of the borders and for the concentration of the Romanian and Soviet troops in Transylvania (23 August - 20 September 1944).

Actually, on 23 August 1944, the greatest part of the Romanian military belonging to the Aeronautics were fighting together with the Germans and suddenly the ally became the enemy. A friendly parting was expected.

Beginning with 23 August 1944, the staff within the Romanian Aeronautics planned and executed their own air missions, air-and-ground missions, air-and-water missions. The purpose was to gain the air supremacy and to cooperate with the other



IAR-80 airplane of the 59th Fighter Squadron on the battlefield in Transylvania, October 1944. A Soviet airplane can be seen in the background.



IAR-37 airplane after 23rd August 1944, marked with the tricolor emblem



Putting on leap parachutes, embarking, and landing were the training exercises executed by paratroopers during the war. Potez 650 (above - embarking) and Junkers 52 (below - before the leap) in 1944





Former Allied prisoners in Romania were brought to the Popești-Leordeni aerodrome and transported by plane to Italy, in the last days of August 1944.



Twin-engine school Focke-Wulf 58 aircraft in Popești-Leordeni, after 23 August 1944; as can be seen, the Royal cross has been replaced by the tricolor emblem.



IAR-80 aircraft marked with the tricolor emblem on its wings and fuselage, an insignia reintroduced by the Romanian Army at the start of the campaign for the liberation of Transylvania.



In the morning, on a campaign aerodrome of a fighter aviation group endowed with IAR-80 aircraft

services of the Romanian Army to obtain victory, with respect to the doctrine promoted by the Romanian General Staff. The main reason for this actions was the desire to defend the political, military, and economical centers, to deploy Romanian forces and capabilities in Oltenia and then in Transylvania, to regroup them and to remove the conflict area elsewhere than over national territory.

The Romanian Royal Air Force also had two diplomatic informative missions: for the USSR (on 24 August 1944, in Ankara, Colonel Ștefan Niculescu with a LARES aircraft, flown by Ștefan Motrescu) and for the Allied Command in Italy (on 27 August 1944, in Foggia, Captain Aviator (r) Constantin Băzu Cantacuzino, having the American Colonel Gunn as a passenger in the radio compartment of the Me-109 G aircraft no. 166133, as the Romanian pilot was also an emissary of the Royal House of Romania).

The incident started by the Germans, on the morning of 26 August 1944, at 6 o'clock, worsened the relationships of the Romanian Aviation with the German one. A German Me-109 G 6 airplane attacked an IAR-39 which was landing on the Spătaru-Buzău airfield; the pilot died in the fire. Immediately, the staff of the Romanian Royal Aviation decided to attack any German aircraft in flight.

The first deployment of the 1st R.A.C. from the Moldavian front to the Transylvanian one took place on the Craiova aerodrome. The routes of the air and ground troops were as close as possible to the itinerary: Stâlpu-Buzău-Cașota-Southern Bucharest-Craiova. Regarding the anti-aircraft artillery, the commander of the 2nd Anti-aircraft Artillery Brigade decided on 25 August 1944 to evacuate the subordinated units on the railway, and a small command group by vehicles. Unfortunately, the equipment transported by railway was captured by the Soviet troops and the forces were disarmed as it had happened to the anti-aircraft artillery units in Galați, the Danube Delta, Dobrogea and near Bucharest. However, on 26 August 1944, most of the anti-aircraft artillery units that had used vehicles managed to regroup on the established itinerary.

The Craiova aerodrome was overcrowded at the end of August 1944. Besides the S-79 bombers (placed in Stănești) and the fighter aircraft, all the other operational units of the Romanian Royal Air Force were located in Craiova (presumed host, the commander of the 3rd Bombardment Flotilla, Colonel Ion Slăvescu).

On the night of 23-24 August 1944, the German troops regrouped in the area Băneasa-Pîpera-Tunari-Otopeni, with the purpose to attack the insurgents and to restore a German government. On 25 August 1944, the German Reich declared war to Romania and the Luftwaffe started the air attacks. General Alfred Gerstenberg initially wanted to urgently restore a German government in Bucharest and afterwards took over the command of the German troops deployed in Romania; in order to gain efficiency, he predominantly used the air attacks, involving all types of German aviation.

As a consequence, the separation from the German ally, hopefully non-violent, rapidly became a fierce military confrontation.

The fight against the German aviation attacking Bucharest was the most important moment of the interval 23-31 August 1944. "The bombings of terror" performed by the Germans as violently as the British-American and the Soviets, were successfully stopped by the Romanian Aviation and Anti-aircraft Artillery, by a thorough assignment of responsibilities between the two services. The main role in counterattacking was given to the fighter aviation. The Romanian aircraft took off and most of the time they were outnumbered, however bravely they fought and could be seen by the population of the Capital city who was reassured by their heroic missions. The German air attacks over Bucharest were very violent and at an increased pace, so the Romanian pilots landed only to be supplied with fuel and ammunition. Frequently, their missions were changed and communicated by radio in flight, passing from fighting to support for the bombers. The great German bombing formations that attacked the Capital city from 24 August till 30 August were stopped by the 2nd, 7th, and 9th Fighter Groups which had the most difficult tasks in defending Bucharest. Among these victorious aces was Capt (r) Constantin Băzu Cantacuzino.

During the defense missions, the anti-aircraft artillery also had losses, 2nd Lt. Virgil Sălăgeanu, Staff sergeants Petre Baroană and Costel Lădaru.

Due to the efficiency of the Romanian air counterattacks, the German aviation in Romania was in a desperate situation and it was decided that it should move to Transylvania and Hungary. Mizil was the last Romanian aerodrome that the Germans left on 28 August 1944. The air capability took off to Marasvasahely and the machines of the "Herder Convoy" withdrew while being attacked by the 88-mm cannon fire of the Romanian anti-aircraft artillery in the Prahova Valley, passing through Sinaia, Brașov, and Sibiu to reach the Romanian Saxons' region.

The Romanian Aviation obtained full air supremacy on 29 August. The newspaper "Ordinea" ("Order") of that day wrote about this success: "The air situation proves that these aircraft successfully intervened in the fight, saving the Capital from danger".

The balance of the Romanian Royal Air Force activity in defending Bucharest is eloquent. Between 23 and 30 August 1944, the Aviation performed 64 missions, with 246 aircraft take-offs, 320 flight hours, 24 German aircraft being destroyed during the air fighting. A number of 34 aircraft were lost (4 in the air fights, 3 on the

ground, 27 kept by the enemy in Focșani). The anti-aircraft artillery had 174 cannon batteries with 1,368 guns and 14 projector batteries with 168 components; 35 enemy aircraft were destroyed between 23 August and 7 September 1944. We can also state that during the aerial fights with the Romanian troops, the German aviators lost six times more aircraft, which confirms the expertise of the Romanian pilots.

The attacks of the Romanian Aviation against the enemy ground troops started after the German decision to declare war to Romania. The Romanian bombardment aviation and the fighter aviation mostly attacked the enemy objectives near Bucharest, on the Prahova Valley, and the enemy ship convoys on the Danube.

The Romanian Aeronautics provided support for the ground troops after 29 August, too, especially over on the Prahova Valley, attacking the strong enemy groups in the forest of Buda and Crângul lui Bot, as well as in the east of Muntenia, attacking the German troops withdrawing towards Bulgaria.

The Romanian Aviation provided support to the river and sea troops and were oriented towards the sea and river troops of the Germans, in Dobrogea, on the Danube, and on the seaside. The missions of the Hydro-aviation Flotilla, of the 3rd Bombardment Flotilla and the 1st Counterintelligence Flotilla consisted in bombardment and reconnaissance missions in order to prevent the landing/withdrawal of the German ship convoys both in the South of Dobrogea and in the North, near the isles in the Northern part of Cernavodă; they also defended the Danube Mouths and the bridges of Cernavodă and Călărași.

The outcome of the missions carried out by the Romanian Royal Aviation against the German enemy on the sea and river was the sinking of a battle ship, two big transport ships and eight barges, plus many more small ships transporting troops and trucks.

The ground missions executed by the Aviation Staff included all its forces. The ground missions were varied and many times simultaneous with the aerial ones and consisted in fighting on the aerodromes and in ground attacks against the German troops. The main ground fights of the Romanian Aviation units and formations with the ground troops took place in Bucharest and in its vicinity, in the oil area of the Prahova Valley and near the Carpathian Arch, in Buzău, where the Romanian Army met the German withdrawing troops and the offensive Soviet Army.

The joint missions stopped the German troops transport inside the country, because the Romanian Aviation attacked the transport German aviation in flight and the aviation personnel on the ground disarmed, captured, and took out the Allied forces from the aerodromes, as it happened on 24 August 1944, when, on the Boteni aerodrome, the patrols of the 7th and 9th Fighter Groups attacked three transport aircraft "Gigant" that were landing and disarmed the personnel on board, or on the morning of 26 August 1944, when General Stahel and his troops were blocked on the aerodrome.

The battles of Băneasa are also memorable, as on 24 August 1944, together with the 80 people of the

Airlift Group; during the fight with 800 Germans very well equipped and trained, the students of the Aeronautical Technical School also participated. The ones who died were: Chief Adjutant Gheorghe Ferent, students Dinică Zaharia and Decebal Popescu and sergeant Ion Tudor, Ion Curelea and private first class Dumitru Nicolae from the troops. Also, from the Aeronautic Training Center and the paratroopers' battalion on the Popești-Leordeni aerodrome, from the Deposit and German Radar center in Herăstrău (27 August 1944) carried out critical fights and obtained special results.

Other battles of the Romanian Aeronautics with the air or ground German forces for aerodromes, infrastructure, and equipment took place in Tecuci, Focșani, Balomir, Arad, Caransebeș, Turda, Alba-Iulia, Brașov, Ivești (24 August), Țândărei (23-25 August), Târgsor-Prahovei Valley (24-31 August 1944), Ianca (24-25 August).

On the Prahova Valley, between 23 and 31 August 1944, the Romanian anti-aircraft artillery directly faced the German one. The fire exchange was almost permanent between Cămpina and Valea Calugărească, with 46,000 anti-aircraft projectiles, 300,000 rounds, and 1,000 grenades. With the direct support of the Romanian fighter aviation and the ground troops of the 5th Ground Corps, the Romanians obtained the victory.

An important issue is represented by the status of the prisoners pertaining to the Allied air forces captured by the Romanian troops. After the bold flight of Băzu Cantacuzino, together with Colonel Gunn, one of the American prisoners from Timișul de Jos, they arrived in Italy where they described the good conditions of the British-American prisoners seized in Romania. Immediately, it was decided to take them to Italy, before the Soviet troops reached the area. The operation lasted for three days beginning with 1 September 1944 and was successful.

The defense of the borders and the concentration of the Soviet-Romanian troops in Transylvania began on 23 August 1944 and ended on 20 September 1944, initially employing only the forces and equipment of the 1st Romanian Army and the 1st Air Region, the latter being eventually unified with the 1st R.A.C. on 1 September 1944. The strategic military operation under national command, consisted in the blocking



Assault Henschel 129 aircraft were the asset of the Romanian Aeronautics during the combat with enemy ground formations



Rare images with Romanian paratroopers. Immediately after 23 August 1944, they had an essential role in the defense of the Northern part of the Capital City.



Preparing a mission



Anti-aircraft machine-gunner (above) and teletmetrist (below)



of the Hungarian and German military efforts to take over the peaks of the Carpathians and the defense of the temporary Romanian-Hungarian demarcation line established by the Treaty of Vienna, stating that the Romanian Army had a large area, in the North of the Meridian Carpathians and the Western field, in the Northern part of the West Carpathians.

The Romanian Royal Aeronautics carried out many complex missions during the defense operation of the borders and the concentration of Romanian-Soviet troops in Transylvania, following the next steps: a) 23 August – 1 September 1944 with improvised forces of the 1st Air Region (the 1st Air Squadron in Sibiu, the 44th Fighter Squadron in Turnișor, the observation squadron combined with the Liaison Squadron in Șura Mică, composed of 37 aircraft and 37 crews; the anti-aircraft artillery had 49 batteries with 26 cannons and three projector batteries with 36 components); b) 1-7 September 1944 with the improvised forces of the 1st Air Region and the 1st R.A.C.; c) 7-20 September 1944, employing all the 1st R.A.C. units.

In the last two phases of this operation, the Romanian Royal Air Forces carried out 463 missions, with 1,220 take-offs and 1,541 flight hours, obtaining 34 victories (4 aircraft destroyed in flight, 3 on the ground, 27 destroyed by the anti-aircraft artillery) and 2 gliders destroyed on the ground, 28 aircraft destroyed by the anti-aircraft artillery, 31 vehicles, 6 gas cisterns, 33 tanks and armored vehicles, 24 trains, 1,000 wagons, a locomotive, 4 damaged stations, 19 railway cuttings, an artillery post, 20 complex missions in support of the ground troops by the anti-aircraft artillery. We lost: 195 airplanes (34 destroyed in flight, 161 on the ground) and 109 guns.

According to the doctrine of the Romanian General Staff and of the operations department in the Aviation Staff on 1 September 1944, the 1st R.A.C. was deployed to Sibiu where in the evening, after setting its Headquarters in the location of the 1st Air Region Dumbrava took over the command of the 1st Air Region commanded by Colonel Corneliu Ionaș.

The air situation was critical because the enemy attacked and came to the Târnave rivers. To handle these critical situations until 9 September 1944, the 1st R.A.C. made the following decisions: a) it reorganized the anti-aircraft system, b) it deployed the 44th IAR-80 Fighter Squadron of the fighter aviation school to Turnișor, in order to stop the air attacks over Sibiu, c) it endowed the 1st and 4th Romanian Armies with an observation squadron each and a liaison structure made up of aircraft and personnel from the military center for pilots and the School for Aviation Officers, d) it sent a liaison group to the two Romanian Armies, e) it fought in air missions against the German and Hungarian aviations with the Romanian Aviation units in the South of the Carpathians. Until 20 September 1944, the 1st R.A.C. acted continuously counterattacking on the Transylvanian Plateau and the Mureș Gorge.

Meanwhile, the Soviet Aviation came into the country between 2 and 19 September 1944 and the American and British Air Forces used the Romanian air space to be able to bomb the German troops located in the Balkans.

Regarding the air enemy on 6 September 1944, the German Air Force withdrawn in Transylvania was made up of 40 bombardment aircraft, 70 Me-109 G fighter aircraft and 50 Focke Wulf (FW)-190 attack airplanes, placed on the fields in the Satu Mare-Nușfalău-Târgu Mureș-Reghin. Besides these, there were 70-80 aircraft of different types on the Ecika field in the Serbian Banat (17 km South of Petrograd).

The Hungarian Air Force had light elements on the fields in Debrecen-Beckesaba and the rest of the equipment in Budapest-Formas. In Szolnoc, Feriehegy, Budaros, Tapioszentmarton, Cluj, Debrecen, Ujudvar, there were approximately 250 airplanes.

The 3rd R.A.C. units remained in the country and ensured the provision with forces for the 1st R.A.C. beginning with 3 September 1944 (operational from 1 September 1944). Because of the bombings performed by the German and Hungarian Aviations on the 2nd Ukrainian front in the Sibiu-Blaj-Tâlmăciu-Sebeș-Alba Iulia, the command of the Soviet Air Forces coordinated by Major-General Selesnirov requested that the 1st R.A.C. cover the air space over the area mentioned above.

Unfortunately, on 8 September 1944, the Me-109 aircraft no. 8 of the 8th Fighter Group, flown by Adj pilot Gheorghe Bucholzer "was hit by the allied Soviet anti-aircraft" over Sibiu and the pilot died in the fire. It has always been a question whether this was an incident, an intention, or it was due to miscommunication.

On 31 August 1944, after the withdrawal of the units from Moldavia and because of the events that took place afterwards, the battle capacity of the Romanian Aeronautics was reshaped, as imposed by the important material losses, by the fatigue of the personnel and by the new missions that were to be carried out. The reorganization was not made in good conditions, because the time allowed to it was scarce (1-6 September 1944).

The reorganization of the Romanian Royal Air Force was changed to ensure efficiency under the new circumstances of war, comprising the 1st R.A.C. as operational forces, units of the anti-aircraft artillery command and the Passive Defense Command. The 3rd Romanian Air Corps took over the command of the aviation units that remained in the country.

After the victory, the most important objective was the liberation of the Romanian territory temporarily occupied. In the area strategically occupied by the Romanian

troops in Southern Transylvania and in Banat, a vast deployment and concentration of Romanian and Soviet troops was started.

The second deployment of the 1st R.A.C. consisted in deployments on the new airfields, between 6 and 8 September 1944, with the fighter aviation and the reconnaissance one on the Turnișor airfield; and the rest of the units on the fields at Balomir. The machines deployed to Sibiu on the Olt Valley, on motorway and railway.

After 9 September 1944, the Romanian Aeronautics was subordinated to the 5th Soviet Air Army, and the command of the 1st R.A.C. operations became the responsibility of the 5th Soviet Air Army after 21 September 1944.

CONTRIBUTION OF THE ROMANIAN ROYAL AERONAUTICS TO THE LIBERATION OF TRANSYLVANIA (9 SEPTEMBER – 25 OCTOBER 1944)

At the beginning of the Romanian-Soviet cooperation in At the beginning of the Romanian-Soviet cooperation in the Second World War, the subordination of the Romanian units led to a dangerous overlapping of forces and responsibilities until the great Soviet units were regrouped in their own areas of responsibility.

The misunderstandings between the Soviet Aeronautics and the Romanian one were mainly due to the essential variations in military doctrines. During the military missions in the Western campaign of the Romanian Aeronautics, the commander of the Red Army Air Forces was Marshal Aleksandr Aleksandrovici Novikov, commander of the 5th Soviet Air Army was General Podgorni and then, beginning with November 1944, General Gorionov, Chief of Staff was General Selesnirov, and commander of the Soviet Anti-aircraft Artillery in Romania was General Iankovsky.

The Romanians carried out many sacrifice missions even from the start of this cooperation, when the aircraft capability was obsolete and the Soviet pilots considered them impossible.

The beginning of the cooperation was made under difficult circumstances. On 8, 9, 11, 13 September 1944, the Romanian aircraft were hit by the Soviet anti-aircraft artillery.

After 9 September 1944, as a result of the change of doctrine regarding the employment of the 1st R.A.C., the Aeronautics executed more tactical missions in support of the 1st and 4th Romanian Armies and the Soviet 6th Armored Army, 27th and 40th Armies. Permanently, during the missions in Transylvania, the operation orders stated that the effort should be concentrated on two main directions, named the "the Northern front" and "the Western front", a fact that required that the Romanian Aeronautics simultaneously focus on both directions, when needed.

The Romanian anti-aircraft artillery units participated in this period in the ground battles. The 4th Anti-aircraft Artillery Regiment cooperated with the great units of the Mountain Corps during the offensive for the liberation of South-Eastern Transylvania, as far as Târgu-Mureș, and, in Banat, the 23rd Anti-aircraft Artillery Battalion took part in the battle that took place on 13 September 1944, near Arad. Here, Capt. Romulus Petre fought for 6 hours in the Lipova Gorge, with a cannon and two machine-guns manned by his personnel, and destroyed three tanks, damaged one, and forced three other ones to retire. Unfortunately, the last shot of the German tanks killed six gunners and Capt. Petre himself.

In order to support the Păuliș Detachment, from 15 September 1944 on, the Aviation executed the following missions: tactical reconnaissance, bombardment of ground targets (with the cannons on the concentration of tanks and machines, while the Romanian troops were able to leave the trenches and attack the enemy), fighting (in support of the bombardment and assault aviation, even during the target attack) and individual fighting. For six days, the aviation fought over the Radna-Păuliș area, focusing on that sector, where the "General Trofimenko" Group of Armies was active.

Between 1 and 20 September 1944, when the Romanian Aeronautics was subordinated to the Soviet Aviation, the 1st R.A.C. executed 463 missions, 1,220 aircraft take-offs, 1,541 flight hours, launched 177 tons of bombs and used 9,672 tons of ammunition, which destroyed 34 enemy airplanes, 2 gliders, 33 tanks and armored vehicles, many vehicles, 25 trains carrying troops, equipment, ammo, fuel, and other materials. For the way in which it provided support for the ground troops in Păuliș, Ghioroc, and Miniș, and for the outcome of the battle, the 1st R.A.C. was cited in the daily Order no. 2 from 2 September 1944 of the 1st Romanian Army.

Between 20 September and 5 October 1944, the 1st R.A.C. subordinated to the 5th Soviet Air Army provided support with most of its forces, the great ground units acting between Târgu Mureș and Cluj, engaging vast forces in support of the 6th Soviet Tank Army attacking from the North of Turda to prepare the Debrecen Operation. The dramatic fights for Dej, Tureni, Ceanul Mic, Ceanul Mare, Câmpia Turzii, Turda, Apahida, Ocna Mureșului, between 20 September and 11 October 1944, are part of "the battle for Cluj". Concerning the air missions, this was the most intense fight on the Transylvanian front. The 1st R.A.C. carried out most of the air missions in order to prepare and execute the offensive of the Romanian and Soviet troops on the Transylvanian Plateau.

After 5 October 1944, the preparations for Debrecen started. The 1st R.A.C. intervened in the sector of the 4th Romanian Army, in Ceanul Mic, Apahida, Mircești



Echipajul unui avion de bombardament Savoia Marchetti 79B5



Ju-87 Stuka aircraft marked with the tricolor emblem



September 1944, Balomir aerodrome



Romanian pilots on Turnișor aerodrome (near Sibiu) in front of an IAR-81C, in October 1944: 2nd Lt. Mircea Teodorescu, Lt. Dumitru Baciu, Lt. Gheorghe Postecă, Capt. Dan.Valentin Vizanty, Capt. Constantin Cantacuzino, Capt. Traian Gavrilu and Lt. Mircea Dumitrescu



17-18 October 1944, Cluj



Aviators of the 5 Group on the Western battle front, taking part in the liberation of Northern Transylvania until Bohemia



Inspection at an aerodrome in Transylvania



General Emanoil Ionescu on the Transylvanian battlefield



General Emanoil Ionescu decorating a Romanian aviator on the Transylvanian battlefield

de Câmpie and Târgu Mureș. The commander of the 1st R.A.C. contacted, between 4 and 6 October 1944, the Soviet generals Komanitch in Făgăraș and Selesnirov in Apoldul de Jos, to establish the missions and the airfields.

The Romanian aviation units intervened with all their strength to support the 4th Romanian Army, the 27th Soviet Army located in Hungary and the 40th Soviet Army. The close air support missions consisted of air attacks with the fight aircraft, on the ground targets placed near own troops and needed exact coordination with the actions of the 4th Romanian Army and the 27th Soviet Army.

Between 20 September and 25 October 1944, the activity of the 1st R.A.C. consisted in 990 missions, with 2,420 aircraft take-offs and 3,259 flight hours, 340 tons of bombs launched, and using 15 tons of ammunition and 693 tons of fuel. They destroyed: 650 tanks, 90 trucks and fuel cisterns, 29 trains and 1,000 wagons with troops, equipment, ammo, 8 stations, artillery posts, forces, and supplies.

THE ACTIONS OF THE ROMANIAN ROYAL AERONAUTICS IN HUNGARY (8 OCTOBER – 20 DECEMBER 1944)

During the new stage of World War II, the Romanian Armed Forces fought again outside the national borders, this time alongside the Allied Nations from the West, in Hungary and Czechoslovakia. Fighting against the Hungarian and German troops on the Hungarian front, from 8 to 30 October 1944, the 1st R.A.C. conducted its operations as part of the Debrecen Operation, and after that, up to 20 December 1944, as part of the Budapest Operation.

Therefore, starting with 25 October 1944, the 1st R.A.C. continued its aerial actions on Hungarian territory, exclusively supporting the Soviet 27th and 40th Armies and the 4th Romanian Army, and provided liaison aircraft for the two Romanian armies.

In Hungary, the largest number of aviation missions were performed for: immediate support of the Romanian and Soviet ground forces; destroying the enemy antiaircraft artillery; aerial reconnaissance and surveillance. The missions of the Romanian Aeronautics units had as paramount feature the cooperation at both operational but mainly tactical level, because the Soviet Comand mainly requested strikes performed by the bombardment and assault aviation in order to neutralize the enemy's ground troops in the proximity or engaging the Romanian and Soviet troops. The 1st Aviation Corps received its orders from the 5th Soviet Aviation Army and the 27th and 40th Soviet Armies had as their first missions: 1) the attack against the airfields located South-West of Budapest, under the command of the 5th Soviet Aviation Army; 2) aerial support for the actions of the 27th and 40th Soviet Armies.

There were other missions, too: strategic reconnaissance missions deep into the enemy's territory in order to establish the dispositions of the aviation and antiaircraft assets, as well as the transportation flow on terrestrial routes and on the Danube; tactical reconnaissance in the area where the Romanian-Soviet troops were displaced.

Starting with 8 October 1944, after the beginning of the Debrecen Operation, the Romanian Aviation units fought hard in order to support the 4th Romanian Army and the 27th Soviet Army, which were acting on Hungarian soil, and towards the end of the month they were the support element for the 40th Soviet Army.

On 20 October 1944, the 5th Soviet Aviation Army established the mission axis for the 1st Aviation Corps the direction being from Satu Mare – Nyregyhaza. The most difficult missions performed in the last ten days of October, up to 17 November 1944, were the reconnaissance missions flown West of the river Tisa, in order to establish the enemy's new dispositions and lines of defense, the traffic on the roads and the presence of antiaircraft artillery. The decision to deploy the aviation units beyond the mountains was taken on 3 November 1944. New airfields were also established in the Oradea – Turkeve area. The order to set up new landing and take-off sites in the area Oradea – Turkeve was also given.

Antiaircraft units and subunits were attached to the ground forces as well. As for the Romanian antiaircraft artillery attached to the 1st Aviation Corps or the 5th Soviet Aviation Army, it was organized in a way which would lead to effective active antiaircraft defense in order to counter the German and Hungarian aerial actions, another task being the protection of own interests such as providing airfield defense. The Romanian passive air defense was not to be used outside the national boundaries, it would remain ready for combat, but only for the defense of the national air space. On 10 October, on the Racozişfalva road, Lieutenant Nicolae Vrânceanu died, the first to graduate as an artillery officer from the Military Artillery Officers' School.

After 3 November 1944, the Romanian bombardment and fighting squadrons engaged in fighting in the area Hatvan – Komarom – Szekesfehevar – Budapest, as part of the offensive towards the Hungarian Capital city, and the reconnaissance aviation performed missions in support of the troops on the right flank of the front, which attacked towards Miskolc. The bombardment squadrons from Oradea and the rest of the units from Turkeve performed strategic reconnaissance missions deep into enemy's territory in order to determine the enemy's aviation and antiaircraft assets displacement, as well as the traffic flow on ground routes and on the Danube.

After identifying the enemy's airfields, the aerial attack against them was the constant mission of the 1st Aviation Corps. Starting on 22 November 1944, the 1st

R.A.C. started bombing the airfields in the vicinity of Budapest and the one from Szekesfehevar, coming against the German and Hungarian heavy artillery fire during the entire flight, especially over important inhabited areas in Hungary.

Discontinuous rains, the fog, and the low ceiling which lasted up to 20 December 1944, made it impossible to take off and fly. Nevertheless, the 1st R.A.C. completed its mission, supporting the 27th Soviet Army, heavily taking fire in the valley of the river Sajo. Although the airfields were impracticable, the assault aircraft and the fighters acted as of 11 December 1944. This drawbacks were overcome due to the craftsmanship of the Romanian pilots who, between 12 and 15 December, used the favorable weather time windows efficiently to successfully accomplish the missions which eased the task of the 27th Soviet Army to approach the Hungarian-Czech border. In light of these deeds, Captain Constantin Cantacuzino and NCO Iosif Moraru from the 9th Fighter Group were cited in the daily Order for the abnegation, courage, and sacrifice they showed during the days of 12, 13, 14 December 1944, when in difficult circumstances they performed enemy-engaging missions from the Turkeve airfield which was completely flooded.

The antiaircraft cover of the operational Romanian and Soviet Armies during this period was the attribute of the 1st and 2nd Antiaircraft Artillery Brigades stationed in the country in Transylvania and Banat; for the 1st R.A.C. this task was performed by an antiaircraft artillery regiment. For the fightings in Hungary, the 1st and 4th Romanian Armies received each an antiaircraft artillery battalion. On 1 January 1945, the 1st Antiaircraft Artillery Division was founded (the first from Romania; its first commander was Colonel Horia Roman and it consisted in the 1st and 2nd Antiaircraft Artillery Brigades), with the purpose of covering the airfields from Hungary used by the Soviets with three regiments, the bridges over the Tisa from Szolnok, and to protect the Romanian Banat with two regiments.

The 1st R.A.C. had a consistent activity around Budapest using all the types of aircraft at its disposal. On 12 January 1945, the great Soviet offensive started North of the Carpathians (Vistula – Oder) simultaneously with the offensive of the Romanian-Soviet troops on the right side of the 2nd Ukrainian front, which acted on the Czech territory. The 1st R.A.C. was given the mission to support the 27th Soviet Army and to attack the bridges over the Danube from the center of Budapest.

In this context, the bombing mission from 13 January 1945 in Budapest against the bridges over the Danube (The Elisabeth bridge was hit by four bombs, the Chain bridge by two bombs) stopped the determined resistance of the enemy, this mission was believed to be a self-sacrifice one and only the skill of the Romanian pilots, the war experience of the flight leader, Lieutenant Mircea T Bădulescu, led to the safe return of the eleven bombing flight formations sent to a certain death. The Allies (the American, British, and Soviet Aviations) could not cope with this mission, although they had tried several times, and they sent others to do their job as they had done before at Oraba de Mureș; in this case they tasked the 1st R.A.C. squadrons. Moreover, General Selesnirov declared: "Whoever hits the bridge becomes a hero of the Soviet Union". The Soviets denied the joy of success to the Romanian crews, no Soviet medal was awarded, and, what is more, with the same type of perfidious behavior in the evening of 15 January 1945, two days before the complete conquest of Pest, the 7th Romanian Army Corps, which decisively contributed to the defeat of the German-Hungarian enemy from the Hungarian Capital city, was sent to the Czech front.

In the morning of 19 November 1944, using his personal example, the commander of the 1st R.A.C. went to the church in Turkeve together with several officers. The mayor of the town thanked the Romanians for their benevolence and encouraged the population to support the Romanian military in their actions. Actually, the 1st R.A.C. received gratitude letters from the 27th Soviet Army Command and the 5th Aviation Army Command for their military actions and the chairman of the Temporary Committee of the town of Turkeve thanked the Romanians for the help given to open new schools and churches. Only during December, the medical service of the 1st R.A.C. provided medical assistance to 400 patients, inhabitants of Turkeve. In the same spirit, the teachers of the Miskolc high school took part in the funeral of NCO Vasile Scripcariu (a talented painter and war correspondent) who died during the fights meant to free the town, promising the 1st R.A.C. in a letter dated 25 January to take care of the grave of the hero as to enhance the friendship between the Romanian and Hungarian people.

On Hungarian soil, the 1st R.A.C. used fifteen squadrons, 174 aircraft, 2,907 airmen and 7,004 antiaircraft artillery soldiers, 34 artillery batteries with 217 cannons and 12 projectors. The balance of the 1st R.A.C. activities was: 612 performed missions, 805 take-offs, 1,335 hours of flight, 71 tons of bombs dropped, 9,199 tons of different caliber ammunition fired, 205,121 tons of petrol, 14,008 tons of oil, the result being the destruction of the two bridges, 21 vehicles, 3 trains, 5 railway stations, 1 antiaircraft artillery battery, 2 airfields. We lost 11 people and 13 aircraft.

THE ACTIONS OF THE ROMANIAN ROYAL AERONAUTICS IN CZECHOSLOVAKIA (21 DECEMBER 1944 – 25 MAY 1945)

During the military actions conducted over an interval of five months, as this is the amount of time fights took place on the Czech territory, the Romanian and Soviet



Messerschmitt 109G airplane on the Transylvanian battlefield



Romanian bombers patrolling the Western battlefield



Inspecting an antiaircraft artillery subunit deployed on the Western battlefield



Miskolc, 1944. Lieutenants Mircea Șenchea, Horia Pop, Ion Dobran.



Miskolc, Hungary. Lt. Av. Mircea T. Bădulescu next to the Ju-87D no. 2, that he flew to command the dive-bombing formation that bombed the Elisabeta Bridge and the Chain Bridge in Budapest on 13 January 1945.



Lucenec, April 1945. One of the last known photos taken on the Western battlefield: Capt. Av. Constantin Cantacuzino, Lt. Av. Mircea T. Bădulescu, and Squadron general aviator Traian Burduoiu.



Captain Constantin Cantacuzino congratulated by a Soviet General



The Commander of the Romanian Air Corps, General Av. Emanoil Ionescu, inspecting the 48th Fighter Squadron, Colonel Ion Dobran, Miskolc, Hungary aerodrome (January 1945)

armies initiated the following: 1) initially, the switch Altsohl-Neusohl; 2) the centers line Zvolen-Banska-Bistrica and the switch along the river Hron; 3) the centers line Zvolen-Banska-Previzda-Trentschin; 4) the area of the centers Ugerski Brod-Olomouc. The advancement was slow and at a low pace, due to the terrain features: mainly mountains in the theater of operations, which meant focusing the main actions along the valleys. Another drawback were the weather conditions which rendered the fights more difficult. Right at the beginning of the aerial fights, on 24 December 1944, the airmen gave their share of blood, airman Dumitru Niculescu being shot down at the Austro-Hungarian border.

Around 25 December 1944, the Romanian reconnaissance aviation identified the location of the enemy fighter squadrons in the region Keperes-Nagytarosa-Iszasse and the other types of German and Hungarian aircraft at Komorn, Nitra, Gyol, Bratislava, Suombately, Sopron, Viena and Olomouc. The enemy aviation reacted, especially during daytime, as well as from 20 to 25 February 1945, when at noon Me-109 and F.W-190 fighters in groups of 4 to 14 aircraft attacked the Romanian and Soviet columns. For this reason, the Romanian Aviation started attacking ground targets and provided covering fire for the offensive ground troops and communication lines.

From the beginning of the military operations in Czechoslovakia, great efforts were made in order to keep the operational status of the great Romanian Aviation unit. If on 20 December 1944 the 1st R.A.C. had 14 squadrons, from February 1945 on, the following were added to it: a new group of fighters, two liaison squadrons for the two Romanian armies, a transport squadron and a reconnaissance squadron, the total being 20 combat-ready squadrons.

The 1st R.A.C. was deployed during the campaign in Czechoslovakia, between 21 December and 19 May 1945, in the following locations: at Lucenec (on the airfields in Rima Szombat, Vlk Luka), then at Altsohl, Piestany, at Tri Dubi in Kocser, on the airfields in Miskolc, Lucern, then at Kisterehy, on the airfields from Szeny, Zlate, Moravce, Topolcany, Treatschin, Debrecen.

The deployments of the antiaircraft artillery in Czechoslovakia were the following: the 6th Antiaircraft Artillery Regiment from Miskolc to Lucern, then to Tri Dubi and after that to Piestany; the 17th Antiaircraft Artillery Battalion from Miskolc to Lucern, then to Tri Dubi, after that to Piestany; the 18th Antiaircraft Artillery Battalion at Miskolc; the 8th Vickers battery at Miskolc; the 29th Vickers battery from Oradea to Tri Dubi and then to Piestany; the 139th Rheinmetall Battery from Oradea to Tri Dubi and then to Piestany; the 146th Rheinmetall Battery to Miskolc.

The 1st R.A.C. executed massive attacks against roads with the purpose of making them impracticable and against troops and columns in order to destroy or demoralize them. The fighters provided protection for the bombardment and assault aircraft, as well as for the fields and areas used for regrouping. The Romanian Aviation unit was often used for close air support in the benefit of those in the first lines, by means of all available aircraft, and for the conquest of locations of paramount importance that the enemy wanted to defend at any costs.

During the first stage of the aerial fights from Czechoslovakia, the focus was on the ground fights from the frontier between Hungary and Czechoslovakia to the river Hron. The 1st R.A.C. missions on Czech territory during this stage were executed in order to support the 27th and 40th Soviet Armies and the 4th Romanian Army (for close air support and immediate support; paralyzing the traffic at the first switch Altsohl - Neusohl, and tactical aerial reconnaissance), as well as for the 5th Soviet Aviation Army, for missions carried deep into enemy lines (especially for the attacks against airfields with heavy ammunition bombers, as well as the employment of strategic reconnaissance aircraft).

The intensity of the aerial actions of the Romanian pilots reached its peak during this stage between 20 and 25 December 1944, when bombardment and assault missions were performed against the enemy resistance centers, thus helping in a considerable measure the ground troops to break the enemy defense lines, leading to the success of the attack since the reconnaissance and aerial information was extremely efficient.

Besides the close air support missions, the status of the German aviation fields and the amount of aircraft at Komorn, Nitra, Gyol, Bratislava, Suombately, Sopron, and Vienne were considered of great importance.

After 14 January 1945, the axis of the military actions ran by the 1st R.A.C. focused on the support for the group of armies led by general Jmatchenko; the group included the 40th Soviet Army and the 4th Romanian Army, as part of the operation named "Roznava".

Between the rivers Hron and Morava, starting 15 January 1945, after the town of Lucenec was freed, and up to the end of the month, the 1st R.A.C. focused on contributing to the success of the battle of Roznava and made it difficult for the enemy to withdraw to the West using the road on the upper course of the river Hron.

On 1 February 1945, the 5th Soviet Aviation Army decided to deploy the 1st R.A.C. until 7 February 1945, "the light aircraft and the headquarters at Lucenec, the bombers at Miskolc, and a well-organized liaison detachment at the command post of the 40th Soviet Army (general Jmatchenko)"

Between 5 and 9 February 1945, the 1st R.A.C., besides being deployed for four days, performed a series of missions helping the 40th Soviet Army to advance towards Detva and Zvolen. For four days, the pilots attacked "the digs and dams, the bunkers, and three enemy lines". It was an exhausting period, when the returning aircraft were armed again, the pilots ate canned food in the cockpits then took off in 30-minute missions, not recognizing what was there the previous attack, striking with great accuracy more and more objectives. Gradually, after being armed again, the aircraft were took off not taking into account any type of formation, which was against any rule. For this reason, the commander of the 40th Soviet Army thanked General Emanoil Ionescu personally.

Next came the days in which the Romanian airmen contributed in an extraordinary manner to the operations undertaken in extremely difficult circumstances on the front. The contribution of the Aviation was one of the factors that led to the defeat of the enemy resistance in what was the unquestionable victory from Ocsova. The density and level of complexity which characterized the missions reached the highest level of the entire Western campaign.

On 6 March 1945, the Petru Groza Cabinet came to power, the position of Air Ministry-Secretary of State was given to General Emanoil Ionescu, while Colonel Traian Burduoiu, a bomber pilot, was appointed commander of the 1st R.A.C.

With the aerial support of the 1st R.A.C., the 40th Soviet Army and the 4th Romanian Army freed the towns of Zvolen (16 March 1945), Hronska Breznika (20 March 1945), Banska Bystrica (25 March 1945) over the following few days, in heroic fights.

The beginning of spring brought the last year of war and "during the reconnaissance missions performed deeper and deeper into Czech territory, the Romanian pilots were flying over airfields full with German fighters, from which only extremely rarely one took off because of the lack of petrol. The logistic effect of not benefiting from the oil from the Prahova Valley was affecting the Axis troops." Our pilots were concerned about the enemy's jet fighters which fortunately did not appear on the sky where our pilots fought. In this general context, the second stage of the 1st R.A.C. actions began, the purpose being for the Romanian and Soviet troops to reach the alignment of the centers Zvolen - Banska Bystrica and performing the switch along the river Hron (25 March - 11 April 1945)

The Soviet Aviation on the 2nd Ukrainian front was led at this time by General Stepitchev, and the mission of the 1st R.A.C. was to support the Allied troops by destroying the enemy's rear lines, as well as the communication lines and the traffic centers of either roads or railways.

As a consequence of the Romanian and Soviet troops' advancement towards the river Vah, a new deployment was necessary as the airfields were too far behind. The Aviation units, no matter the type, were deployed on the Tri Dubi airfield; later on, they were sent to the airfield in Zvolen, because the Germans prepared a strong defense in the Tatra and White Carpathian mountains. The ground and aerial battles were extremely hard and they took place from the beginning of April 1945 on. On 3 April, marshal Joseph Stalin congratulated the entire 2nd Ukrainian front and explicitly the ground troops and the 1st R.A.C. for the fights of 2 April which led to the conquest of the town and of the railway crossing from Kremnitze.

As requested by the 5th Soviet Aviation Army, in order to train the Ju-52 aviators, pilot Leonida Țăruș and warrant officer 1st class Nicolae Neață were transferred to this unit. They started training the Soviet military designated to fly this particular aircraft.

After the Allied forces placed themselves on the line of defense Nitra-Kremnitze-Sz Marton-Previzda-Tentschin, on 11 April 1945, the third stage of the 1st R.A.C. fights started, which was tasked to support the Allied armies in order to neutralize the resistance in the mountains South East of Vah and, at the same time, to destroy road and railway centers behind enemy lines towards Ugerski Broad and Ostrovite.

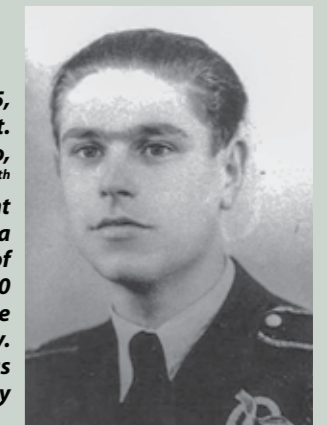
The enemy fought back in order to keep the line of defense Zilina-Ugerski Brod-Staro Meste. The Romanian Aviation acted in order to strike the forces and traffic of the line of defense, the troops gatherings, vehicles, and railway stations in support of the 4th Romanian Army going towards Ugerski Brod and the 40th Soviet Army to push the enemy beyond Vah. In a consecutive effort, from 7 to 16 April 1945, the Romanian pilots flying assault aircraft flew tens of missions, destroying the enemy's withdrawal routes towards Puchov and Bynlice. On 16 April 1945, the enemy's Brandts shot down the Hs-129 no. 313 aircraft flown by Lieutenant Lazăr Muntean, who succeeded in saving himself and he flew the following day back to Zvolen.

On 17 April 1945, on the entire front the Romanian Aviation stroke intensely against enemy targets in support of the 1st Romanian Army as well as in the areas where the 40th Soviet Army and the 4th Romanian Army operated (the Aviation operated in the North West in order to neutralize the enemy South of the river Vah). It was an extremely good day, due to the activity of the 1st R.A.C. which received congratulations on behalf of General Jmatchenko. Moreover, the 1st R.A.C. also flew missions in support of the 1st Romanian Army and the 40th Soviet Army as to deny the enemy an easy traffic behind the line of defense.

In the contest of on-going planning preparations for the Berlin Operation, the German aircraft attack on 19 April 1945 against the 1st R.A.C. was quite surprising.



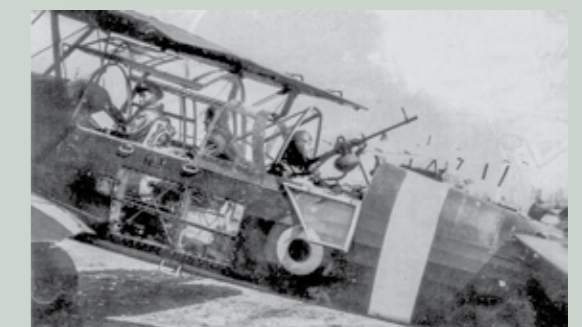
Preparing a bombing mission



On 25 February, 1945, a crew made of Capt. Băzu Cantacuzino, commander of the 9th Group, and adjutant Traian Dârjan met a German formation of 8 Focke-Wulf 190 airplanes. During the air battle, Adj. Av. Traian Darjan was deadly hit, heroically sacrificing himself.



Gunner of an IAR-39 airplane



The IAR-39 airplane, mainly used for intelligence missions, had a crew made up of a pilot, an observer, and a tail-gunner.



April 21st, 1945. Two Romanian IAR-80 airplanes attacked a retreating German convoy near Zvolen in Czechoslovakia. After the first attack, several vehicles were set on fire. Romanian aircraft came back and started fire. One of them, flown by Lieutenant Gheorghe Mociorniță, was hit by the enemy anti-aircraft artillery and went down in flames. So, only 26, he became one of the Romanian Aviation heroes. When our ground troops arrived in this position they found out from the local people that the remains of the Romanian aviators were piously collected and taken to the cemetery of the Romanian heroes located in this peaceful place of Moravia. He was the last Romanian pilot who died in the Second World War. In 1988, some pieces of his aircraft were donated to the national Military Museum by the Czech people

On 20 April 1945, the order to move as soon as possible the 1st R.A.C. from Zvolen to Piestany was given. Trains started carrying the equipment the following day and the aircraft flew to the new airfield on 24 April 1945. Due to the great number of missions flown, the Romanian pilots felt at the time as if it was never going to stop, all the personnel being exhausted, including the technicians and the staff officers. During the fights for the access route towards Uherski Brod, Lieutenant Gheorghe Mociorniță, a pilot from the 2nd Fighter Squadron, died heroically: on 21 April 1945, during an air-to-ground mission, was hit by the anti-aircraft artillery, his aircraft caught fire and he crashed into the attacked German column.

The fourth stage of the 1st R.A.C. in Czechoslovakia started once the line of defense between the two towns, Uherski Brod and Olomuc, was reached. After being deployed at the Piestany airfield, the operations area was extended to the North and North-West, the climax of the aerial fights at this time was 26 April 1945, when attacks against the enemy's support units in the areas Korytna, Slavkov, and Banov were flown. According to general Jmatchenko's belief, the taking over of the Uherski Brod center was almost entirely the result of the Romanian Aviation's actions. A lot of bombing missions were performed, especially in the Eastern part of the town, at the junction between the two roads and the railway, from altitudes between 2,300 and 3,000 meters. During this stage of the battle for Czechoslovakia, the following gave their lives: Adj. Prisecaru with IAR-81 no. 308 of the 2nd Fighter Group and, during a target attack with Ju-87 no. 14 aircraft, the crew made up of Adj. Paul Lăzăroiu, Sergeant gunner Constantin Popescu (the third member of the crew managed to save himself, hit by the enemy anti-aircraft artillery).

From 30 April 1945 on, the Romanian Aviation focused on the roads in the Morava Valley, especially to support the 40th Soviet Army which was heading towards Olomuc. East of Morava, during the first days of May 1945, the Romanian bombers and assault aircraft continued to ease the way of the ground troops towards Holesov and Hulín, while the fighters contributed by covering the movement of the Soviet and Romanian troops which were gathering near the Morava for operation Prague, moving towards Prostějov, the last operation of World War II, and this way they made it difficult for the enemy to act and this applied also to the withdrawal which started on 1 May 1945. On 2 May 1945, the Romanian pilots successfully attacked the enemy's ground troops located at Ostrovitz, then, on 4 and 5 May 1945, the troops from the Golesov railway station. Adj Victor Dumbravă was hit: he jumped from the plane and landed in the Soviet lines with a burned parachute, being helped to get back to his unit by the Soviet General Susaikov in person.

On 9 May 1945, while being involved in performing air missions over Prostějov and in the surrounding areas of Olomuc, the news of the unconditional surrender of the German troops travelled fast amid the military units, but it also reached the civilian population which manifested its immense joy.

The military actions of the 1st R.A.C. continued up to 12 May 1945, by flying reconnaissance aircraft and fighters which performed information-gathering missions informing the headquarters about the directions in which the enemy defeated during Operation Prague was withdrawing. On the whole, in Czechoslovakia, the 1st R.A.C. executed: 2,578 missions, 4,981 take-offs, 6,304 flying hours, 946,265 tons of bombs, 29,687 tons of ammunition of different calibers, 1,498,154 tons of oil, 97,491 tons of oil, the results being 2 aerial victories in which were destroyed: 444 vehicles, 4 trailers, 14 tanks and armored vehicles, 38 trains, 94 wagons, 55 railway stations, 6 railway junctions, 37 portions of railway, 15 cannons, 11 artillery batteries, 5 artillery positions,



Final combat missions on the Western front



V-Day in Czechoslovakia



4 anti-aircraft artillery batteries, 4 logistic locations, 29 troop groups in formations and localities, 239 wagons, 4 bridges, 2 small bridges, 12 enemy columns, 27 factories, 2 warehouses, 5 airfields. Our losses amounted to 65 airplanes and 39 people.

The commanders of the 5th Soviet Aviation Army and those of the 27th Soviet Army sent thank-you letters to the 1st R.A.C. for their efficient support given on 20, 21, 22 December 1944, while forcing the enemy's defense lines. For its exceptional war deeds, the 1st Aviation Corps was cited in the Order of the day by Stalin himself and by the Romanian Minister of War, General Vasiliu-Rășcanu.

THE END OF THE WAR AND THE RETURN HOME OF THE ROMANIAN AERONAUTICAL FORCES

The end of the war and the joy brought by peace led, however, to some concerns regarding the future of the aerial fighters, the situation in the country and the status of the military equipment. In the end, the concern regarding the aircraft was lingering in the airmen's minds because they could not accept the idea of sending the aircraft home by train. It did not matter if there were few of many, they were their aircraft and they were very fond of them. The greatest ambition was for all the crews to get back home flying their own aircraft and, why not, the rest on their wheels. This decision was the equivalent of a fighting mission and it meant to summon up all the intelligence, ingenuity, and efforts. The massive concentration of efforts in order to accomplish this last mission was a success because in the end the entire equipment was rendered functional and thoroughly repaired for the flight back home.

On 18 May 1945, the enemy was considered defeated, the operations came to an end, and the Romanian aeronautical units could start preparing for the return to the home country. Meanwhile, the Romanian Aviation took part in three air shows: on 19 May 1945 (for the celebration of three years since the 5th Soviet Aviation Army was set up); on 1 June 1945 (on the Vainori-Bratislava airfield); and in June 1945 at the Wiener Neustadt, in Austria (when Lieutenant Tudor Greceanu was asked by the organizers to fly a jet-engine Me-262 aircraft, this being the first flight of a Romanian pilot with such an aircraft).

In order to return back home, General Traian Burduloiu went to Baden, where he got the much-awaited approval from the 1st Ukrainian front. The equipment on wheels took the following route: Trencschin-Nitra-Komarom-Budapest-Cegled-Oradea-Cluj-Sibiu-Braşov-Bucharest.

The movement of the detachments which left previously by wheel formations started on 11 July 1945 in a single column with 32 cars at 6 a.m., moving on the road next to the airfield from Piestany. On 1 August 1945, the flying formations went back home, that is the mixed squadrons of air transport and the attached wheel equipment. The 6th Anti-aircraft Artillery Regiment entered the country in Cisnădie, starting 26 July 1945. The last to leave Czechoslovakia was the personnel from the headquarters of the 1st R.A.C. on 8 August 1945, and the commander and chief of staff flew home on 14 August 1945.

In the next edition, we will continue the brief foray into the history of the Romanian Air Force. The series of articles is based on the book "Aeronautica Militară Română" published in 2003, as well as articles from the archive of the CER SENIN magazine



May 1945, Piestany aerodrome. Pilots (above) and technical personnel (below) of the 9th Fighter Group.



Miskolc, after 9 May 1945. Above: Ștefan Ciutac, Ion Dobran, Constantin Ursache, Emil Georgescu, Constantin Rozariu, Ioan Micu, Ștefan Lucaçi, Mircea Șenchea. Not standing: Ioan Galea, Mălăcescu



Glory to the heroic airmen

ITALIAN NAVY

Mare Aperto Exercise

Objective on the Mare Aperto (Open Sea) exercise

The launch of the vast Mare Aperto training activity gave us the opportunity to observe live and up close the F-35B and AV-8B+ fighter-bombers of the Navy in action with the Cavour aircraft carrier.

Since the 1980s, the MARE APERTO (MA) exercise has been the annual training event of the Naval Squadron (SN).

Initially structured over three editions a year of two weeks each, it has now evolved into two, each lasting a month and with a scenario developed in continuity with the previous one.



With the Mare Aperto the capabilities of the Naval Squadron are tested and at the same time consolidated and refined to respond to the growing challenges affecting the maritime dimension. It is a highly challenging test bed, characterized by simulated scenarios with maximum realism and with the real involvement of all the components of the Navy (ships, submarines, naval aviation, amphibious forces, mine countermeasures, C4S, technical-specialist support, logistic-administrative and medical-health) and at all levels (complex commands embarked and on the ground, related staff, single units and functional

components such as the national aircraft carrier group, the amphibious projection capability or the activation of an advanced medical post). Another consolidated feature of the Mare Aperto is the ability to compete with planning and actions in a multidimensional context; not only sea and not only above the surface, but also aerial activity, projections of forces from the sea towards the coastal and littoral belt, with massive use of the functions offered by the cybernetic and spatial domains. International participation is another peculiarity of Mare Aperto, which for this edition sees the involvement of forces and personnel

from 23 nations (12 NATO and 11 Partners). Added to this are the inter-forces with men, means and capabilities of the Army, Air Force and Carabinieri - the inter-institutional ones - Guardia di Finanza, Civil Protection and auxiliary bodies of the Italian Red Cross - and the interagency ones, with Confindustria, Assoarmatori, Federpesca and various Think Tanks and national universities. Over 70 university students, including students and accompanying teachers, were embarked on board the units of the Naval Squadron for this edition, fully integrated within the embarked staff, according to their studies.





MARE APERTO
The first 2023 edition of Mare Aperto took place from 13 April to 6 May, the joint training activity of the Navy organized and led by the Command in Chief of the Naval Squadron. Conducted since the 1980s, the Mare Aperto is structured in two editions a year (initially there were three), each lasting about a month and with a scenario that develops continuously between the first and second. The exercise aims to test and, at the same time, consolidate and refine the capabilities of the Naval Squadron necessary to respond to the growing challenges affecting the maritime and underwater dimension.



It is a highly challenging test bed, characterized by highly realistic simulations against conventional and asymmetric threats, with the involvement of all components of the Navy (ships, submarines, naval aviation, amphibious forces, mine countermeasures, C4S, technical support -specialist, logistic-administrative and medical-health) and at all levels (Complex commands embarked and on land with related staff, single units and functional components such as the national aircraft carrier group, the

amphibious projection capability or the activation of an advanced medical post) .

Therefore, in addition to Naval Aviation aircraft and helicopters, there were also the amphibious departments of the San Marco Marina Brigade, the Incursori and Palombari of COMSUBIN, naval vehicles and aircraft of the Corps of the Port Authorities, Army vehicles and personnel (operators and assets of the "Pozzuolo del Friuli" Brigade with AAV7 and Blindo Centauro amphibious vehicles), Air Force (with CAEW G550 aircraft,

Eurofighter and F-35 fighters and KC767A in-flight refueling aircraft), Arma dei Carabinieri and Guardia di Finanza, as well as assets and personnel from 23 countries (12 NATO and 11 Partners), for a total of around 6,000 soldiers.

Also present were civilian personnel from various university institutes (over 70 among students and accompanying teachers integrated, based on their training path, in the staff embarked on board the units of the Naval Squadron), Research

Centers, Civil Protection and Auxiliary Corps of the Red Cross .

During the exercise (carried out in the maritime spaces between the Adriatic, Ionian, Tyrrhenian seas, the Strait of Sicily and the Sea of Sardinia, including the high seas, the coastal areas and the relative portions of the surrounding territory and the relative airspaces) the participants conducted planning and operational activities in a multidimensional maritime, land

and air context, with projections of Forces from the sea towards the coastal strip and the massive use of a complex system of information networks supported by space and cybernetic domains; context, the latter, on which the activity called Chironex 23-1 was focused.

Thanks to the availability of the Public Information and Communication Office of the Navy (UPICOM), our magazine had the

opportunity to follow the initial phase of Open Sea, witnessing the arrival of the first two F-35Bs, which landed on Nave Cavour at 11.43 on 14 April, followed by 4 AV-8B+. During the exercise, the F-35Bs operated from Nave Cavour in close collaboration with the other embarked aircraft, fully integrated into the daily flight cycles programmed by the Air Operations at Sea Coordination Cell, embarked on the aircraft carrier.



Interview with the first female jet pilot of the Italian Navy and F-35B

During our visit, while pilots and technical personnel worked in synergy at a frenetic pace on the flight deck, we were finally able to observe and photograph the new 5th generation aircraft embarked on the Italian aircraft carrier. We also had the opportunity to meet Ensign E.R. (for security reasons we were asked not to disclose her full name), the first Italian female F-35B pilot and to ask her a couple of questions to learn more about this profession seen from a female point of view.

What does it feel like to be the first female fighter pilot in the Navy and the first Italian qualified on the 5th generation F-35B aircraft?

The emotions I feel on a daily basis are difficult to describe. Seeing the dream that has inspired me since I was a child come true is a source of deep personal pride, not because I am the first Italian woman qualified to fly the F-35B, but because the aircraft I fly is a flagship of technology and innovation, which must be treated with awe. In short, a very strong sense of pride in myself for having managed to get to this point in my career and a great sense of responsibility towards the Navy and the Defense that allowed me to fulfill a dream.

Would you describe your training process which, we recall, led you directly to operate on the F-35B without converting on the Harrier.

After the course at the Morosini Military School, I attended the Naval Academy of Livorno for 8 months as a Trainee Pilot Officer (AUPC). During this highly formative period, both professionally and personally, I acquired the basic notions necessary for the training of a pilot. I then left for flight schools in the United States where I had the opportunity to train on the T-6B single engine fixed-wing aircraft; at the end of this course, the Primary flight training, I was selected to continue my training process on the aerotactic line with the T-45C jet aircraft, on which I achieved the Wings of Gold, patenting myself as a military pilot. Since last autumn I have been involved in the operational transition on the 5th generation F-35B fighter, which saw me first follow the academic phase at the Marine base in Beaufort (South Carolina) and then at the 32nd Wing of the Air Force in Amendola (where I am currently) to carry out the training flight activity which is conducted under the joint supervision of the instructors of both Armed Forces.

In the last twenty years, within the Italian Armed Forces, the role of women has changed profoundly, with their integration in all operational roles. What prompted you to take up this profession?

Mine was a choice made at a very young age and influenced by various factors. First of all, the admiration I felt in seeing who was already wearing the stars: I envied their sense of belonging to an organization that goes far beyond the individual and the sharing of values such as homeland, honor and esprit de corps, which made them the my eyes a large family ready for personal sacrifice. Secondly, since I was a child, despite my Piedmontese origins, I have always had a strong bond with the sea having lived for several years on the French Riviera with my family. So, as soon as I had the opportunity to make my two passions coincide, I decided to complete my secondary education in Venice at the F. Morosini Military Naval School. During the years spent in Venice I had the opportunity to get to know the different specialties that make up the Armed Forces directly and accurately, and therefore the passion for flying and Naval Aviation prompted me to choose this path.

Have you already carried out activities on aircraft carriers with F-35Bs or will this be a next step?

At the moment I have not yet carried out activities on aircraft carriers with the F-35B aircraft; it is a step foreseen in my training process that will lead me, in the near future, to operate from the ship Cavour.

You have fulfilled your dream, what message do you want to give to those like you who have this desire in the drawer and what are your plans for the future and what are your ambitions.

I want to remind young people who have this dream in their drawer that in life you have to dare: with ambition, passion, desire to get involved and certainly a lot of study you can reach goals that seem unimaginable... and then finally take off!

I wish for myself to take advantage of every opportunity that training will give me in this period, to improve every day as a pilot and as an officer: I would like to acquire all the operational qualifications required on the F-35B aircraft with the necessary time, to then become an instructor flight and point of reference for the new recruits who will take my place. I conclude with the ship's motto Vespucci which sums up my life in a few words "Not who begins but what perseveres"



By Gian Carlo Vecchi

Note: The author would like to thank Admiral Aurelio De Carolis, Captain Enrico Vignola, Rear Admiral Marco Casapieri, Frigate Captain Gian Battista Molteni, Corvette Captain Antonio Rossi, UPICOM and all ship personnel Cavour for his kind availability.



The Role of Morale During Military Operations

Morale is a motivational concept that can have a significant impact on performance (Britt & Dickinson, 2006). It is defined as "the motivation and enthusiasm to perform well in a specific context" (Britt et al., 2007, p.35). While morale has traditionally been a concern in the context of military operations during deployment, it is also crucial in non-deployment contexts (Britt & Dickinson, 2006; Britt et al., 2007). Morale can be used to describe both individuals and groups (Boxmeer et al., 2010).

There are specific indicators of optimal military morale that commanders can identify. These indicators include the level of commitment to the mission, military confidence in the group's functioning and performance, leadership, and civic behaviors such as altruism, camaraderie, awareness, and initiative in accomplishing tasks. On the other hand, low morale can be evidenced by an increase in requests to avoid risky tasks, indifference and lack of involvement in tasks, counterproductive behaviors like substance abuse and indiscipline, jokes about leadership shortcomings, the spread of rumors, and low confidence in colleagues, commanders, and the unit's functioning. Low morale is also associated with pre- and post-deployment hostility and high levels of stress (Maguen et al., 2004; Jones et al., 2012).

In empirical literature, morale has been investigated through several facets such as confidence, optimism, enthusiasm, loyalty, distress, and a sense of attachment to common group interests or goals (Boxmeer et al., 2010; Britt & Bliese, 2003). A study on 1685 U.S. military personnel found that morale was related to mission determinants like commitment to mission accomplishment, mission purpose, and confidence in unit effectiveness and leadership (Britt & Bliese, 2003). Another longitudinal study on U.S. military personnel who participated in missions in Iraq found that high military morale moderated the relationship between combat action exposure and specific manifestations of post-traumatic stress disorder (PTSD) (Britt et al., 2013). High morale was found to mitigate the negative consequences of combat action-specific stressors (Britt et al., 2013).

So, what can military leaders do to maintain high morale during missions? One important resource that leaders can provide to subordinates is psychological safety. Psychological safety refers to the beliefs individuals hold about how their colleagues or leaders will respond when they ask unpredictable questions, seek feedback, report mistakes, or suggest improvements or changes (Edmondson, 1999). Creating an environment of psychological safety allows military personnel to feel more resilient, optimistic, focused on mission objectives, and better equipped to navigate the anxieties and fears associated with deployment. Conversely, low levels of psychological safety hinder learning and performance improvement.

Additionally, effective operational stress management can contribute to maintaining morale during military operations. Some recommendations that can be part of a commander's strategy include:

- Allowing sufficient time for rest and sleep
- Ensuring a healthy diet for military members
- Encouraging a reduction in cigarette consumption
- Monitoring coffee consumption when possible
- Promoting actions to increase group cohesion
- Paying attention to military members who isolate themselves from others
- Observing significant changes in the behavior of military personnel
- Getting to know subordinates and participating in joint leisure activities

- Actively listening to their opinions
 - Promoting physical fitness
 - Providing training on stress management principles
 - Managing rumors by keeping military personnel well informed
 - Focusing on meeting immediate objectives
 - Emphasizing the mission and the importance of each subordinate's work or tasks
 - Seeking specialist psychological or medical assistance only when necessary
 - Contributing to improving living conditions and hygiene
 - Initiating and leading discussions after difficult actions to normalize emotional reactions
 - Paying attention to poor performance, indifference, task avoidance, lack of esprit de corps, and general dissatisfaction
- In summary, morale plays a crucial role in military operations and can significantly impact performance. Military leaders can contribute to maintaining high morale by fostering psychological safety, implementing effective stress management strategies, and providing support and resources to their subordinates.

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