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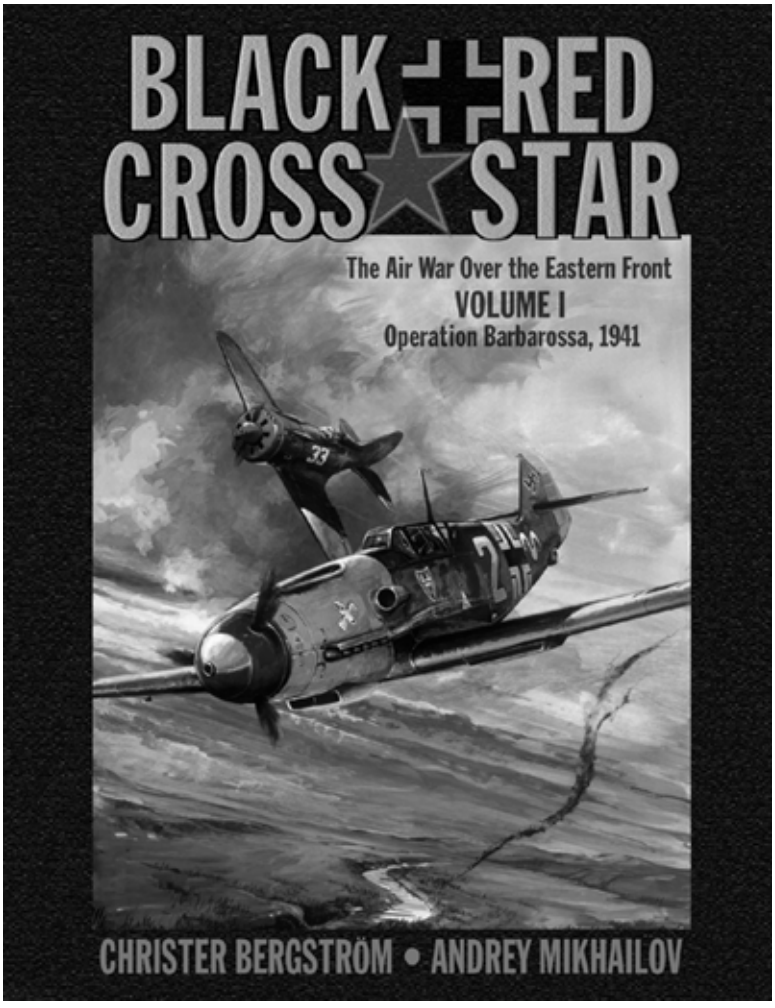

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Note: The following sample chapter is excerpted from the book ***BLACK CROSS / RED STAR***™, *Air War Over the Eastern Front,* Vol. I, *Operation Barbarossa, 1941* by Christer Bergström and Andrey Mikhailov. The book will be available in August 2000 in a US$39.95 large-format hardcover edition published by Pacifica Military History™. ISBN 0-935553-48-7

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Chapter 23
Typhoon Against Moscow

In late September 1941, the situation looked grim for the Soviet Union. Most of the Red Army had vanished from the Earth. Millions of soldiers had been lost, 2.5 million of them ending up in German prison camps, where hundreds of thousands would perish during the coming months. According to German sources, the Red Army had lost 19,000 tanks (of which 8,000 had been captured by the Germans) and 30,000 artillery pieces (of which 11,000 had fallen into enemy hands). (These figures are largely supported by official Soviet records, according to which the Red Army lost 20,500 tanks and an astonishing 101,000 artillery pieces and mortars.) By September 30, Luftwaffe claims had mounted to 14,500 Soviet aircraft destroyed, of which approximately 5,000 had been shot down in aerial combat. At this point Hitler launched what his Soviet counterpart had feared most since July: the final major offensive against Moscow.

Before opening the powerful offensive against Moscow on September 30, 1941, the German Army Group Center had been considerably strengthened, the bulk of tank units on the Eastern Front having been hastily transferred to its command. Luftflotte 2, back at full nominal strength with the return of Fliegerkorps VIII from the Leningrad sector and reinforced by units from Luftflotte 4, was tasked to provide the ground-assault forces with air support. The operation was given the illustrative code name Typhoon (Taifun).

Operation Typhoon was planned to take place in two stages. During the opening stage, Panzergruppen (soon to be renamed Panzer armies) 3 and 4, covered by the infantry of the Fourth and Ninth armies, were placed

on the highway to Moscow to attack to the north and south of Smolensk, aiming at the city of Vyazma, in the hope of surrounding the entire Soviet Western Front. At the same time, Generaloberst Heinz Guderian's Panzergruppe 2 was to strike from the Konotop-Romny sector, in the south, and advance in a northeasterly direction. The aim of this operation was to envelop General-Leytenant Andrey Yeremenko's Bryansk Front, which had been severely crippled by Guderian's troops in the Battle of Kiev.

After three months of war, the majority of the Soviet combat aircraft that had been on hand in the western parts of the USSR on June 22, 1941 had either been shot down, destroyed on the ground, or deserted during the retreat. This photo shows the remains of downed Su-2. (Photo: Pavlichenko.)

Following the planned annihilation of the Western and Bryansk fronts, the second stage of Operation Typhoon was to be aimed at the direct capture of Moscow. The ancient city was not only the Soviet capital, it was also he most important Soviet communications hub. The Germans assumed that the seizure of Moscow would deal a death blow to Soviet morale and ability to organize resistance and from which the USSR would not be able to recover.

Severely handicapping the Germans were time and resources. The unexpectedly prolonged and costly battles in the Ukraine, the Baltics, and White Russia (Belorus) had placed the attackers in a most difficult situation. The Wehrmacht had suffered half a million casualties between June 22 and the end of September.

A total of 1,603 German aircraft had been destroyed, and a further 1,028 had been damaged on the Eastern Front between June 22 and September 27. Indeed, the Luftwaffe's losses during the three first months of Operation Barbarossa were higher than during the Battle of Britain, where it sustained 1,385 combat losses from July to October 1940.[15] Recently, a number of Luftwaffe units had been pulled out of action due to the severe losses. Among them were the two Zerstörergruppen of ZG 26 and the Bf 110-equipped SKG 210. These units had achieved impressive results: ZG 26 claimed to have destroyed about 1,000 Soviet aircraft in the air and on the ground, plus 300 vehicles and 250 tanks; and SKG 210 was credited with the destruction of 519 Soviet aircraft, 1,700 vehicles, and 83 tanks. But their own losses rendered these Gruppen unbattleworthy after three months of combat. The loss of the Bf 110 units would be detrimental to the close-support missions of the Luftwaffe. Even though Luftflotte 2 had been reinforced by Stab, II., and III./JG 3, plus a fresh Jagdgruppe (I./JG 52) brought in from the western Europe, the replacements did not make good the accumulated losses. At the opening of Operation Typhoon, the strength of Luftflotte 2 had dropped from 1,200 aircraft in June 1941 to 549, of which no more than 158 were bombers.

The situation was even worse on the Soviet side. As Operation Typhoon was about to commence, only 800,000 soldiers and 770 tanks stood at the disposal of the Soviet Western, Reserve, and Bryansk fronts, while the Germans attacked with 1.5 million soldiers and 1,100 tanks. The only—and not unimportant—advantage held by the defenders was the time they had bought. Operation Typhoon was opened just ahead of the notorious Russian fall, with its heavy rainfall, which would make most roads almost impassable, thus creating a terrible obstacle to any major military operation. The Germans were fully aware of this and hence rushed the commencement of Typhoon, thus providing the forces allocated to it with too little preparatory time.

The offensive was initiated by heavy Stuka and bomber attacks against Red Army installations. Concentrated tank spearheads roared through the thin defense lines at full speed, advancing on dry roads in sunny weather. This was Blitzkrieg at its worst. Wherever any serious resistance was made, Stukas swarmed from the skies. The entire Soviet defense collapsed during the first

forty-eight hours. During the first day, Generaloberst Guderian's Panzergruppe 2 advanced fifty miles south of the city of Bryansk.

The Soviet commanders called in all the air support available. The air was the only field on which the Soviets could compare numerically to the Germans. Five days prior to the offensive, the commander of the Western Front, General-Polkovnik Ivan Konev, had desperately asked the Stavka for reinforcements, because all that remained of the VVS in this sector following the intense commitment of his air force during the battle of Yelnya were 373 planes. His badly mauled air units immediately were backed up by five DBA Divizii and several aviation regiments from the Moscow Military District, detached from the 6 IAK/PVO and special GKO reserve air groups. By this time the GKO had formed half a dozen reserve air groups, each consisting of four to six aviation regiments, directly subordinate to the Stavka. Thus, on October 1, the number of VVS combat aircraft opposing Army Group Center had been brought up to 863 (578 bombers and 285 fighters), of which 301 bombers and 201 fighters were serviceable.[16]

During these desperate days, the VVS provided its enemy with a series of unpleasant surprises, including what would become a benchmark of the Eastern Front, the flying night intruders: "From October 1, special night-bomber regiments equipped with obsolete machines were formed in accordance with GKO instructions. Of the first night-bomber regiments planned and prepared for operations in October and November, seventy-one were equipped with the fragile U-2 biplanes, thirty-two with R-5 and R-Z light-bomber biplanes, and five with SB bombers. Eventually the U-2 (Po-2) was to become the standard workhorse of the night-bomber regiments, with pilots making their way individually to the designated target area at heights of between 400 and 800 meters with engine throttles back to shower grenades or small bombs on any light or sign of activity."[17]

The efficiency of these nocturnal intruding U-2s—nicknamed "sewing machines" due to their characteristic engine sound—was proven not only by the diversion of Luftwaffe fighters to night operations but also by the fact that the Germans later plagiarized this tactic on the Eastern Front, forming the Nachtschlachtgruppen,

At the onset of Operation Typhoon, clear skies dominated, thus enabling Luftflotte 2 to launch all its forces in a maximum effort against the elements of the Soviet Western, Reserve, and Bryansk fronts. During the first five days of October 1941, Luftflotte 2 carried out more than 4,000 sorties in support of Army Group Center. (Photo: Bätcher.)

"flying museums" equipped with obsolete aircraft such as Fw 58s, Ar 66s, He 45s, and He 46s.

In daylight, the Soviet aircraft launched formations of three to six aircraft in incessant low-level attacks against the Panzer spearheads. Already, after the first day of the offensive, the German fighter bases had been left too far behind the forwardmost Panzer spearheads. This was one of the Blitzkrieg dilemmas: To sever the enemy's retrograde supply lines, the tank columns had to rush far ahead of the infantry, leaving large numbers of Red Army units behind in a far-from-cleansed area.

The VVS was quick to exploit this situation, striking at the advancing tank formations at places where there were no German fighters present and making a quick escape before the Bf 109s appeared. Flying in at altitudes of 75 to 150 feet, these aircraft climbed from 300 to 600 feet shortly before arriving at their target, and then carried out swift diving attacks.

The new Soviet twin-engine Pe-2 bomber; its heavy fighter version, the Pe-3; and the Il-2 Shturmovik began appearing in large numbers over the front area for the first time. In the Pe-2, the Soviets possessed a modern bomber quite comparable to the best German types. Josef Stalin once stated that "the Il-2 is as essential to the Red Army as air and bread."

One of the first successful air strikes by Il-2s on the Moscow front was carried out by 74 ShAP when four of its pilots surprised a motorized column on the road from Orel to Mtsensk, and destroyed fifteen armored vehicles and three gasoline trucks in a low-level bombing pass. As a result of incidents such as this, the Second Panzer Army, having reached Orel on October 3, filed sore complaints with the Luftwaffe: "Own fighter escort lacking due to too large distance."[18]

The Il-2 Shturmovik also gave the Soviet ground-attack pilots a completely different chance in air combat. Unteroffizier Walter Tödt of I./JG 52 describes the Il-2's ability to withstand even heavy cannon fire: "During a return flight from the front area, Leutnant [Karl] Rung and I came across a lone Il-2. We attacked and the Ivan dived in the direction of Moscow. He was too low to permit us to attack him from below, where we could have hit his Achilles heel, the radiator. We fired from both sides, aiming at the tailfin, which flew apart. But the Il-2 kept flying! Suddenly, light antiaircraft fire was thrown up against us, and we had to disengage at treetop level. These birds were a most difficult target. When you attacked them from behind, the shells simply bounced off their springy plywood fuselage. And the pilot was seated in an armored tub!"[19]

As the Soviet lines of communication broke down following the rapid advance of the Panzer units deep into the Soviet lines and the devastating blows by the Luftwaffe, the Red Army came to rely completely on air reconnaissance. Early on October 2, Soviet reconnaissance aircraft spotted heavy concentrations of German armored columns ten to fifteen miles to the west of Belyye Berega, southeast of Bryansk. This was the German XXIV Army Corps, advancing toward Orel, threatening to cut off the Bryansk Front from the Southwestern Front. At noon, forty Pe-3s of 95 IAP and sixty fighters of 27 IAP and 120 IAP were dispatched against this target. The twin-engine Petlaykovs struck first, followed by rocket-firing I-153 Chaykas. The entire raid, lasting no more than thirty minutes, caused outrage among the German troop commanders—even if the Soviet claims of thirty trucks and forty-three tanks destroyed by the Pe-3s were exaggerated. All the Soviet planes managed to escape before German fighters appeared.

On October 3, one of the major aces of JG 51, Oberfeldwebel Heinrich Hoffmann, with sixty-three confirmed victories, was missing following an air engagement near Shatalovo. It is possible that he fell prey to 233 IAP's Starshiy Leytenant Sergeyev, who claimed a Bf 109 (his first victory) in the same area.[20] In total, 233 IAP was credited with seven aerial victories—three Ju 88s, three Ju 87s, and one Bf 109—on October 3.[21]

The harshest strikes from the air were dealt by the Luftwaffe. On October 3, the units under command of Luftflotte 2 conducted 984 combat sorties and reported the destruction of 679 enemy vehicles and the serious disruption of movements by Soviet troops. Early on October 4, forty-eight Stukas and thirty-two medium bombers were dispatched against rail lines and troop movements in the Sumy-Lgov-Kursk area, where they severed communications between the Bryansk and the Southwestern fronts.

Despite having sustained paralyzing blows during the first days of the Moscow offensive, Soviet resistance mounted on October 4. On that day, the famous commander of the Second Panzer Army, Generaloberst Heinz Guderian, narrowly escaped death in a strafing attack by Pe-3s. Meanwhile, the German Second Army, operating

on the northern flank of Guderian's force in a pincer movement aimed at surrounding the Bryansk Front, was confronted with a powerful counterattack from armored forces with strong air support. A total of 152 dive-bomber and 259 medium bomber sorties were carried out against this counterattack. These raids were followed up by strikes by 202 Stukas and 188 medium bombers against long supply columns in the Bryansk–Spas-Demensk area. The Luftwaffe airmen claimed the destruction of 22 tanks (including 4 of the very heavy KV type), 450 motor vehicles, and 3 fuel depots, and they completely routed the Soviet counteroffensive.

The full dimension of the impending disaster was not discovered by the Soviets until it was too late. On October 5, a Pe-2 reconnaissance crew discovered a ten-mile-long German tank column—the main body of the Fourth Panzer Army—moving eastward on an axis south of Vyazma, halfway between Smolensk and Moscow. Although two further reconnaissance missions from 120 IAP confirmed this report, it was dismissed as "false" by the Soviet High Command. Polkovnik Nikolay Sbytov, the VVS commander in the Moscow Military District, who had forwarded the report, was interrogated by the NKVD and accused of being a "panic-monger." Under "pressure" brought to bear upon him on instructions by People's Commissar for Internal Affairs Lavrenty Beria, Polkovnik Sbytov eventually withdrew his report. On the following day, October 6, German troops swarmed into the city of Yukhnov, 110 miles southwest of Moscow, without encountering any ground opposition. Suddenly the Stavka realized that the pincers were closing behind the bulk of the Red Army forces charged with defending Moscow.

All VVS units were launched to this sector to compensate for what the ground troops had failed to do. Early on October 6, U-2, I-15bis, and R-5 night intruders took off in the fog and attacked the German Fourth Army in the Yukhnov sector. Later that day, I-153s of 120 IAP, SB-2s and Pe-2s of 173 BAP and 321 BAP, R-5s of 606 LBAP, and Il-2s of 502 ShAP continued the attack. The Soviet airmen managed to destroy a bridge over the Ugra River, but they were met with strong enemy fighter opposition. By now the complaints from the German front-line troops had compelled the German fighters to use advance airstrips in areas not completely cleared of Soviet ground troops. These forward bases were used for landing and takeoff during daytime, and supplies were brought in by air. Before dusk, the fighters returned to their main base in the rear again.

Following the capture of Orel on October 3, strong fighter units were deployed to the large air base there. The nine Jagdgruppen of Luftflotte 2 soon were able to regain control of the skies. Hauptmann Gordon Gollob's II./JG 3 was particularly successful against the new Pe-2s, claiming four of 173 BAP's Petlaykovs on October 6, of which two fell before the guns of Hauptmann Gollob's Bf 109—his fifty-second and fifty-third victories. The 215 ShAP Il-2 piloted by Leytenant Aleksandr Novikov reportedly carried out a "fire taran" against German ground troops after it was shot down in flames.[22]

On October 6 and 7, Luftflotte 2 launched nearly 1,400 sorties. Attacks on October 7 alone resulted in (according to German sources) the destruction of 20 tanks, 34 artillery pieces, several bunkers, and 650 vehicles of various kinds.

Just as during the two previous deadly threats against Russia in history—from the Swedes in the eighteenth century and the French in the nineteenth century—the invader reached the pinnacle peak of his success exactly at a point when a shift in weather caused a major deterioration to his situation. During the night of October 6–7, the first snow fell in the Moscow area. Early on

One of several thousand Soviet aircraft shot down in 1941. This Il-2 Shturmovik, which fell prey to Hauptmann Gordon Gollob of II./JG 3, descends toward earth with its oil tank fully ablaze. It is obvious that the pilot of this aircraft was not experienced enough to protect the vulnerable belly of the Il-2 by flying at extremely low altitude. Caught from below, the Il-2 was easy prey to Luftwaffe fighter pilots. (Photo: Gollob.)

the seventh, the ground was covered with a white coating. A few hours later, a thaw set in, turning the dirt roads and front-line airstrips into muddy quagmires.

But the Soviet Western Front could not be saved. On October 7, the German Third and Fourth Panzer armies linked up in the vicinity of Vyazma, thus surrounding General-Polkovnik Konev's Western Front to the east of Smolensk. Konyev was immediately relieved of command and General Armii Georgiy Zhukov, one of the outstanding Soviet military commanders, was brought from Leningrad to take command of the Western Front.

The VVS of the Soviet Fifth Army, in charge of the Mozhaysk defense line on the highway to Moscow to the east of Vyazma, was hastily reinforced with 41 IAP and 172 IAP, equipped with MiG-3s, LaGG-3s, and Yak-1s. But they could not prevent the disaster, nor were they able to drive away the large formations of Luftwaffe aircraft or protect their own bombers. Despite deteriorating weather, with low clouds and ground fog that prevented any major operation by the Luftwaffe—only 139 sorties were carried out on October 9—the southern flank of Army Group Center managed to close the pincers behind three armies of the Bryansk Front during the following days.

Between October 2 and October 10, I./JG 52 recorded fifty-eight aerial victories against seven losses.[23] Counted among the Soviet losses on October 10 was one of the most daring pilots in 11 IAP/6 IAK, Kapitan Konstantin Titenkov, credited with six kills, including one taran.

Practically the entire Red Army in front of Moscow—40 percent of the entire Soviet military—had been enveloped and threatened with annihilation. During the following days, weather proved to be a not altogether reliable ally of the Soviets. With clear skies on October 10, Luftflotte 2 was able to mount 537 sorties against forces of the Western Front that attempted to break out. During these strikes, 450 vehicles and 150 artillery pieces were reported destroyed.[24]

Reinforced by four bomber regiments from the Central Asian Military District on October 10, the Moscow Military District launched an all-out air-base offensive from October 11 to October 18. The Soviet air offensive was initiated just at a point when Luftflotte 2 was becoming successively weakened. Early in October, II. and III./JG 53 had been pulled out of combat for rest and recuperation. Shortly afterward, II./JG 3 was transferred to the Crimean sector, in the South.

General Armii Georgiy Zhukov was one of the ablest Soviet army commanders of World War II. He served in the Red Army during the Russian Civil War and rapidly rose to high command. In 1939 he led the successful operation at Khalkhin-Gol, which prevented the Japanese from occupying Mongolia. In January 1941 Zhukov was appointed Chief of the General Staff of the Red Army. When he was assigned to organize the defense of Leningrad in September 1941, the transport aircraft that flew him into the beleaguered city narrowly escaped being shot down by Bf 109s of JG 54. Shortly afterwards, Zhukov assumed command of the Western Front and led the successful counterattack that relieved the capital from German threats. Zhukov prepared the Stalingrad operation in 1942–43 and finally directed the attack on Berlin in 1945. He received the German capitulation and was appointed Minister of Defense of the USSR in 1955. Two years later, however, he was unexpectedly removed from his post. Zhukov passed away in 1974, at the age of seventy-eight. Apart from the two leading fighter aces, Aleksandr Pokryshkin and Ivan Kozhedub, Georgiy Zhukov was the only man awarded as a Hero of the Soviet Union three times during World War II. (Photo: Authors' Collection.)

On October 11, despite poor weather conditions, 74 ShAP dispatched twelve Shturmoviks—all that remained of that unit—against the large forward German air base at Orel. Kapitan Georgiy Zimin, one of six fighter pilots of 42 IAP acting as fighter cover, described the raid:

> Six MiG-3s of 42 IAP took off on a mission to escort twelve Il-2s. The Shturmoviks were tasked with a strike on the airfield near the city of Orel. The fighters had to escort them, and if opportunity should arise, to participate in the strike. The cover en route was organized as follows: One fighter sec-

tion led by Kapitan Morozov formed a close escort group to the Shturmoviks, while the section led by the group leader, the author of these lines, formed an assault group and flew in front of and higher than the Shturmoviks, in order to detect the main concentration of the enemy aircraft and direct the Shturmoviks by diving in this direction.

I saw the main concentration on the airfield—more than 200 bombers, standing wing to wing—and signalled "attention" and then started diving. The Shturmoviks reformed in right echelon and formed a circle turning to the left, heading toward the mass of the enemy aircraft, and started to attack them one by one, aiming individually. During the first pass, the Shturmoviks dropped their bombs, during the second they fired rockets while diving, and during a third pass they attempted to destroy the remaining planes with cannon fire, pulling out of the dive at extremely low altitude.

As the main group of our aircraft approached the airfield, four Me 109s were scrambled. Our escort fighters attacked and destroyed them during takeoff. At this moment, I noticed five Ju 52s approaching the airfield from the south at an altitude of 200 meters. We bounced them and were able to shoot down all five."[25]

Also on October 11, Soviet aircraft raided the airfield at Dugino—just as the inspector of the Fighter Air Arm, Oberst Werner Mölders, arrived for an inspection.

During these operations, the Soviets had the advantage of raiding air bases where they themselves had been stationed only a few weeks earlier. Hence the attacking air crews had a good picture of the targets they were sent against. An NCO from the ground crew of I./JG 52, stationed at Dugino during these days, wrote bitterly: "October 12. . . . Several Russian bombers attacked us today again. They set fire to a fuel depot, and this in an outrageously brazen manner which clearly showed that they were well acquainted with our airfield."[26]

Apart from a few lucky strikes and some attacks by particularly skillful pilots, the majority of these raids were characterized by poor bomb-aiming—the direct and indirect results of the punishment the VVS units had taken at the hands of German fighters. This is clearly illustrated in the following German account:

Someone cries: "Air raid! Take cover!" Drowsy with sleep, we abandon the truck and rush toward a piece of woodland, where we seek cover from the Russian bombers. We watched as they opened their bomb bays. Their "blessings from the sky" went down several hundred meters away. This scene was repeated over and over again on this day. . . .

Airfield Kalinin-North. . . . Suddenly, there's another attack by a large formation of bombers and Ratas. Everyone ran into cover. I searched for refuge in one of the destroyed hangars. A number of German aircraft were airborne, and they frustrated the entire raid. Several bright fireworks in the sky told us that our fighters did a good job.[27]

The air-base offensive brought further heavy losses to already crippled VVS units. Among the airmen killed was Mladshiy Leytenant Dmitriy Kokorev, of 124 IAP, who had four victories to his credit, including a Bf 110 brought down by ramming on the first day of war. He was shot down on October 12. On that day, the MiG-3 fighters of 16 IAP/PVO had a difficult encounter with the Bf 109s of Hauptmann Karl-Heinz Leesmann's I./JG 52. As they charged a group of Ju 88s, the Soviet pilots were bounced by I./JG 52. Mladshiy Leytenant Ivan Shumilov, one of the Soviet pilots participating in this engagement, later recalled: "Suddenly two Messerschmitts approached our formation. . . . [Mladshiy Leytenant Ivan] Zabolotnyy singled out one of [the Ju 88s] and attacked. But the Germans always took the advantage of such single attacks. They charged him from behind with blazing guns. Although Zabolotnyy managed to destroy one of the German planes, he was himself severely hit and had to bail out. He returned to the unit three days later. The victory he had scored—it was in the vicinity of Kamenka, close to Maloyaroslavets—was his first."[28]

Also on October 12, an Il-2 pilot hit a Bf 109 with his guns in the air east of Medyn. The German fighter lost one wing and crashed, burning on impact, and killing the pilot, Leutnant Joachim Hacker of 7./JG 51. Hacker was credited with thirty-two aerial kills.

October 12, 1941, also saw the American-built Curtiss P-40 Tomahawk single-engine fighter draw its first blood on the Eastern Front. The first P-40s delivered to the USSR were shipped directly to 126 IAP, a crack unit operating in the Moscow combat zone. But, just as with the British Hurricane, the Tomahawk was far from an excellent fighter plane. Although superior to the

Spanish pilots in the Luftwaffe on the Eastern Front. In return for the decisive contribution provided by the German airmen of the Condor Legion during the Spanish Civil War, the Spanish dictator Francisco Franco assigneed some of his nation's best fighter pilots to the offensive against Moscow. Forming 15.(Span)/JG 27, the Spanish pilots commenced operations in early October 1941. The seventeen pilots of 15.(Span.)/JG 27 were credited a total of 79 victories during the Civil War; the Staffelkapitän, Comandante Angel Salas Larrazábal, alone had a total score of 16-1/3. The operations on the Eastern Front, however, did not lead to any great successes by the Spaniards. Teniente Luis Alcocer Moreno-Abella was killed on the staffel's very first mission, on October 2, 1941. After achieving ten aerial victories—including six credcited to Comandante Larrazábal—against six losses, 15. (Span.)/JG 27 returned to Spain in January 1942. (Photo: Roba.)

Hurricane and roughly equivalent to the Bf 109E, it proved inferior to the Bf 109F. Not least due to frustrating technical and logistical problems, the equipment transition of 126 IAP from MiG-3s to Tomahawks resulted in a decline in morale.

By October 13, the Western Front in the northern pocket had been almost completely annihilated by Luftwaffe attacks.[29] The confused battle to the west, northwest, and southwest of Moscow during these days made an appraisal of the combat situation almost impossible. A state of almost total chaos reigned. The entire area was a huge battlefield without any fixed front lines.

On October 13, the commander of 180 IAP, Kapitan A. P. Sergeyev, and his adjutant, Starshiy Leytenant Khlusovich, landed their MiG-3s at Mikhailovo Airdrome—which was occupied by the enemy. Khlusovich managed to take off at the last minute, but the commander failed to do so and was killed.

Oberleutnant Friedrich Lang, the Staffelkapitän of 1./StG 2, recalls a rare incident at his billeting during one of these days:

The construction of a runway had been begun by the Russians. The half-completed work blocked much of the airfield for takeoffs and landings.

The first U.S.-built Curtiss P-40 Tomahawk fighters to reach the Soviet Union arrived with a Murmansk-bound convoy in the fall of 1941 and were immediately delivered to 126 IAP of 6 IAK/PVO for in the defense of Moscow. (Photo: Seidl.)

Well hidden under the trees of a Russian forest, a U-2 light bomber undergoes maintenance. The Soviet decision to deploy U-2 trainers and R-5- and R-Z biplanes in the role of harassment bombers over German rear areas at night proved to be quite successful. The Polikarpov U-2 (later redesignated Po-2) was nicknamed "Sewing machine" by the Germans due to its characteristic engine sound. The U-2 was one of the most-produced aircraft in the world. In all, 32,711 U-2s/Po-2s were delivered by the Soviet aircraft industry between 1929 and 1949. Additional numbers were manufactured on license by Poland under the designation CSS-13. More than half pf the 19,993 U-2s/Po-2s produced during World War II were delivered from State Aircraft Production Plant No. 169 in Kazan. (Photo: Grubich.)

Mounds of earth and mud were severe obstructions to the operations of our aircraft. . . .

We were billeted into some small wooden houses in a village around three kilometers from the airfield. We, the officers of the 1st Staffel, took possession of such a house, which was made up of an anteroom, a large room with a baking stove, a smaller room, and a chamber. The grandmother of the house slept in the stove room together with her four to eight kids. . . .

During one of the last days of our stay at this house, we returned from the airfield earlier than usual because of a heavy snowfall. The woman came to meet us and seemed more excited than ever. From the flow of words that came over her lips, we could understand that her dear husband, who definitely was no Communist, had returned home. He had been left in the Vyazma pocket and had made it through the woods until he arrived at his village. We barely had made the woman understand that we understood her before she flung the door open. A man dashed into the house, threw himself on his knees, and attempted to kiss my tunic. To us, his flow of words appeared as nothing but an incomprehensible sound effect. We adopted ourselves to the shining faces of the family and I patted the man on his shoulder and said something, which he didn't understand anyway. The performance was over and he dashed out of the room, in the same way as he had arrived, beaming with joy, followed by his family. We never saw him again.[30]

On October 18, the Soviets lost another of their most experienced airmen on the Moscow front: Starshiy

Leytenant Vasiliy Khitrin, who was credited with seven vitories. When his I-16 was damaged by antiaircraft fire over the front lines, Khitrin attempted to bring it back to base at low altitude. But during the return flight, one of the Ishak's wings broke off. The airplane plunged to the ground, and Khitrin was killed.

The annihilation of the two southern pockets of the Moscow front on October 17 and 20 was the climax of Operation Typhoon. The German armies rounded up 673,000 prisoners and sent them to a confinement from which few would return alive. The total losses sustained by the armies of the Soviet Western, Reserve, and Bryansk fronts between September 30 and December 4, 1941, numbered 514,300 soldiers killed, wounded, missing, or captured. Nevertheless, instead of leading to a German victory, which could have been expected, these encirclement battles in fact marked the turning point of the Battle of Moscow.

The dirt roads where heavy tank units had passed soon became almost impassable streams of deep mud. Advance tank units found themselves almost completely cut off from supplies in a sea of mud. While supply columns were stuck on the roads between Orel and Tula, south of Moscow, rations had to be air-dropped by Luftwaffe units.

Not the winter, as is widely believed, but the sleet and the mud—the notorious Russian *rasputitsa,* for which the German armies were not equipped—were what saved the Soviet capital. The snow and rain brought the German offensive to a halt at the last moment.