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A I R O P E R A T I O N S
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A lecture delivered by Hauptmann Baltrusch
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A. GROUND OPERATIONS

On the eve of June 22nd 1941, the deployment of the German Army and Air Force was completed on a front 2,500 km wide and stretching from the Danube Delta to the Arctic. A brief survey of the battle order of the German Army units and of the operations carried out in 1941, will show the framework within which the Air Force carried out its operations.

The German Army was divided into three Commands. Army Group South comprising the 11th, 17th, and 6th Armies and the 1st Panzer Group had its right wing established in Roumania. Joining on to it in the North was Army Group Centre, comprising the 4th, 2nd, and 9th Armies and the 2nd and 3rd Panzer Groups. To Army Group North for its operations in the Baltic countries were subordinated the 18th and 16th Armies and the 4th Panzer Group. Korps FEIGE and DIETL based in Finland came under the operational control of Army Command Norway.

The first aim of our army strategy was to split the Soviet Forces by quick and deep penetration into their rear by our powerful mobile forces. Utilising these break-throughs, the divided Russian armies could then be liquidated.

After a successful break through the border fortifications, the intention was to reach and overpower the defences along the Dnieper-Duna Line, in order to prevent the Soviet Army from retreating and re-establishing itself there.

Up to the 26th June, strong new fortifications west of Lwow had been overrun and German troops were advancing on the city. Further North, Panzer troops had captured Lyck and were advancing Eastwards. Two Russian armies were contained in a pocket east of Bialystock. By-passing this pocket on both sides, Panzer and motorised divisions had reached the Minsk area. The tank battle North of Kowno was concluded on June 26th and a number of Soviet divisions trapped and destroyed. Our troops in the North had reached the Duna and occupied Dunaburg, crossing the river at a number of points.

By July 29th German and Rumanian troops had forced the crossing of the Dniester and broken through the Stalin Line at all important points. North of the Dniester, German troops were before Kiev. North of the Pripot Marshes a strong defence line on the Dnieper had been forced and Vitebsk occupied on July 11th and Smolensk on July 16th. East of Lake Peipus, Panzer troops were advancing on Leningrad. By the August 19th the 6th, 12th and parts of the 18th Russian Armies had been annihilated in the battle of Uman, and Korosten reached.

The battle for Smolensk was won by August 7th and the Soviet troops, caught in a pocket about Roslawl destroyed. In Estonia our troops occupied Wesenberg and pushed forward to the Gulf of Finland.

By August 21st Kherson was reached, the battle for Gomel finished, and, after many days of heavy fighting, a strongly defended position between Ilmen and Lake Peipus breached. The towns of Novgorod, Kingisepp and Narva had been captured.

On August 24th, strong Soviet forces were defeated South of Lake Ilmen and thrown back over the Lovat. The troops fighting in Estonia were advancing on Reval from all sides. In the South the Panzer Group von Kleist had taken Dnieperpetrovsk.

On September 19th a surprise advance of the Panzer forces von Kleist and Guderian resulted in 4 Soviet armies being surrounded. At the same time Poltava was taken. South of Lake Ilmen, strong forces of the Russian 11th, 27th and 34th Armies were beaten and the Newa reached on a broad front before Leningrad. Schlüsselburg was taken by storm. This completed the Finno-German

ring around Leningrad, which was now isolated from the mainland. Between Lake Ladoga and Lake Onega, the Finns had reached the Svir.

In October, attacks in the Ukraine and a break-through in the centre of the Eastern front led to further mopping up battles. The Russian 9th Army was annihilated at Melitopol and three further Armies suffered the same fate during the battles of Briansk and Viasma.

Despite the steadily deteriorating weather, German and Allied troops were still advancing east from the Sea of Azov to the Waldai mountains. The towns of Kaluga and Kalinin were occupied on October 16th. By October 10th our troops were in positions 60 Km from Moscow. Kharkow and Bielgorod were captured on October 24th.

At the end of October the entrance to the Crimea was forced; Feodosia was taken on November 4th and Kertsch on November 17th. After the occupation of Rostov on November 22nd., movement came to a standstill.

By the beginning of December, large scale German movements had ceased. The front was shortened in the course of the change from a war of movement to one of position for the winter. The bitter winter battles had begun in the East.

B. AIR OPERATIONS

1. Order of Battle

For the carrying out of strategic and tactical air operations, one Luftflotte was allotted to each Army Group. Thus Luftflotte 4, comprising Fliegerkorps IV and V and Flakkorps II was attached to Army Group South; Luftflotte 2, comprising Fliegerkorps II and VIII and Flak Korps I was attached to Army Group Centre; and Luftflotte 1, comprising Flieger Korps I and Fliegerfuhrer Ostsee, was attached to Army Group North. Korps FEIGE and Korps DIETL in Finland were supported by elements of Luftflotte 5.

In addition, long and close range reconnaissance Staffeln and Flak and Signals Detachments under the command of the Luftwaffe General at Army Supreme H.Q., (Gen. d. Lw. beim Ob.d.H.) were employed in direct support of the Armies. Each Infantry Korps had one close range reconnaissance Staffel each Army and Army Group one long range reconnaissance Staffel; each Panzer and Motorised Division one tank reconnaissance Staffel, and each Panzer Korps one tank or close range reconnaissance Staffel attached to it. The main difference between a close range reconnaissance Staffel and a tank reconnaissance Staffel was the greater mobility of the latter, and special training of the crews in cooperation with tank formations.

When plans for the war in the East were first made, the Air Force was given a very definite role to play as regards reconnaissance. It was necessary to get advance information of the disposition of enemy troops and their intentions and also to provide details of the targets for our ground troops. A further necessity was that of supplementing partly incomplete Russian maps by photographic reconnaissance.

Up to the beginning of operations, air reconnaissance and radio monitoring had revealed the presence of some 7,300 enemy aircraft in European Russia. Against these, the Luftwaffe had at its disposal in the East:-

- 31 Bomber Gruppen
- 8 Stuka Gruppen
- 2 T.E. Fighter Gruppen
- 19 S.E. Fighter Gruppen
- 1 1/3 Ground attack Gruppen
- 21 Long range reconnaissance Staffeln and
- 51 Close range reconnaissance Staffeln.

/With

With a strength of 25 aircraft per Gruppe, 10 aircraft per long range reconnaissance Staffel and 8 aircraft per close range reconnaissance Staffel, the Luftwaffe on the Eastern front comprised only 2,150 front line aircraft. This would give the Russians a numerical superiority of 3:1, but since transport, reserve and training aircraft have been included in the Russian figures this ratio dwindles to approximately 2:1. Although most of the German aircraft types were superior to those possessed by the Soviet Air Force, it was later discovered that the enemy strength had been considerably underestimated at 7,300 aircraft, thus giving an actual ratio against us of considerably more than 2:1.

Not long ago, the British General Montgomery stated with regard to the Invasion: "Before a land or sea battle can start, mastery of the air must be obtained". This fact was fully realised by the German Air Force. Air Supremacy was our main advantage at the beginning of the operations in Poland, in the West and in South-East Europe and what it means to be without this air supremacy is only too well known to the English from their experiences in these early campaigns.

On June 22nd 1941, the Luftwaffe had for the first time to commence operations under conditions of numerical inferiority. This meant on the one hand, that we had to try and destroy the main part of the Soviet Air Force at the very beginning and so even out the odds against us by making full use of the element of surprise, and on the other, that we had to concentrate our forces in certain areas during the campaign, so as to regain temporary and local superiority in the air at all crucial points.

All our other tasks, including that of army cooperation, had to be subordinated to this main objective. The tasks allotted to the Air Force in the operation were therefore:

- (1) The destruction of the enemy Air Forces
- (2) Support to the Army by
 - (a) attacks on all movements by road and rail
 - (b) direct support on the battle field immediately in front of armoured forces and by affording them aerial protection,
 - (c) further attacks on the enemy Air Force.

The question of at what stage the first task could be abandoned, in order to increase support of the Army, demanded the most careful consideration.

2. Chain of Command

The operational control of our units was organised according to experience gained in previous campaigns. Operations were ordered by the Fliegerkorps, in accordance with directives received from the Luftflotten, which were in close contact with the Army Groups.

For special duties in connection with Army Cooperation, "Gefechtsverbaende" were formed. Working closely with spearhead formations, the commanders of these formations controlled their bomber, dive-bomber and fighter squadrons.

For direct support of the army on the battlefield, Stuka squadrons were combined under a Nahkampfuehrer (close support leader), usually a Stuka Staffel Commander. These officers were not in command of an independent fighting formation, but carried out operations within the Fliegerkorps, often getting assistance from other elements of the Korps,

/bomber

bomber, fighter, reconnaissance or transport formations.

3. Strategic and tactical bombing operations

The battle against the enemy Air Force and its ground organisation began in the early morning of June 22nd. The surprise was complete. In most cases, anti-aircraft defences did not come into operation until our planes had completed their missions. Fire was inaccurate and the few Russian fighters encountered, mostly J 16s, showed little inclination to attack.

Further operations against the Soviet Air Force followed in the course of June 22nd and 23rd. By the evening of the second day, 2,582 Russian aircraft had been destroyed, which was more than the total number of aircraft available to our forces. We now seemed to have achieved somewhat like numerical equality with our enemies, and it was possible to employ our heavy formations in support of the Army. These operations were most successful and were the turning point in many battles, and even brought actual victory in some cases.

Attacks were diverted against roads and railways in the enemy rear. The main tasks were to prevent the escape of enemy armies, and their reestablishment behind the Dnieper-Duna Line, to break the morale of troops surrounded in pockets, disrupt enemy attempts at relieving their surrounded troops and to guard our own open flanks. On the battle field, Stuka and ground attack units assisted primarily the armoured and motorised divisions. Because of the relatively small number of aircraft available, we could not always support the infantry.

The enemy now carried out increasing attacks against our armoured spearheads and the lines of communication of our other divisions. The air raids on Roumanian towns, the oilfields at Floesti and East Prussia, however, soon ceased.

Again and again Ob.d.L. asked the Luftflotten to obtain an accurate picture of the Soviet Air Force by means of thorough aerial reconnaissance, and to assist the Army by vigorous attacks on enemy aircraft and airfields. The Luftflotten undertook a number of powerful attacks on the enemy air force but soon returned to support of the army, at first mainly by attacks on the Russian railway network. It became evident however, that it was impossible to maintain German air supremacy in view of our steadily diminishing fighter strength. The attrition of our own formations was considerable. In addition to operational losses, the frequent transfers of units, shortage of technical personnel and the number of operational flights per day, were showing their effect only too plainly.

The attacks on Moscow ordered by Ob.d.L. effected a further reduction in our operations, since on account of these long range attacks our units could not carry out so many sorties as in the case of attacks of up to 100 Km behind the enemy lines. Although the results of these attacks on Moscow were at first regarded as satisfactory, they later proved to have had little effect. This can be ascribed partly to the bad weather, and partly to the strength of the Russian defences. Over Moscow night fighters were met in addition to anti-aircraft fire with a balloon barrage reaching a height of 4,500 m.

The further we penetrated into Russia the more frequent were the demands of the Army for air support. Attacks on industrial areas had constantly to be abandoned, and with the beginning of the winter battle, the position on the ground demanded the assignment of the majority of air units to direct support of the Army.

4. Tactics

Bombers

Luftflotte 4 supported our Navy in their fight against Russian naval forces in the Black Sea, while Luftflotte 1, with units of Fliegerfuhrer Ostee was engaged against the Russian Baltic Fleet. Bombing and torpedo attacks on Russian warships and enemy merchant shipping proved successful in the Black Sea, particularly during the retreat from Odessa. Successes were also gained in the raids on Sebastopol, Feodosia, Noworossisk and Mariopol. During the winter campaign, Stuka and bomber aircraft also attacked the Russian landings in the Crimea. Formations of Fliegerfuhrer Ostsee attacked the locks of the Swir Canal and the enemy Fleet, at anchor in the Bay of Cronstadt after the clearance of the Baltic ports. Minelaying operations were also flown in both the Black Sea and the Baltic and escorts were provided for our convoys.

Our heavy bomber units were equipped with Ju 88 and He 111 aircraft. In view of the large number of targets to be attacked it was very unusual for more than one Gruppe to be engaged in any particular raid. The attacks on Moscow were made at night on the basis of experience gained over England.

Weather permitting, our Ju 88's always made a diving attack on the target. It became necessary however to vary the height at which bombs were dropped, since Russian fighters frequently attacked at the lowest point of the Ju 88's dive, at an altitude of about 1,000 m.

He 111's usually carried out high-level bombing. Against badly defended targets, such as railway stations and trains, low-level attacks were found very successful. As regards attacks on railway stations, it was found that only very rarely was it possible to destroy them completely and so make them useless for any length of time. Single lines were nearly always still usable, even after the heaviest attacks. Therefore the Luftwaffe switched over to attacks on open lines, preferably where a train could be damaged simultaneously, since damage to rails alone was often repaired by the Russians within 6 hours. Therefore it was usual to cut the line at three different places. In order however to achieve lasting results, it was necessary to raid certain lines almost continuously.

The importance of disrupting Russian rail traffic was fully appreciated. At the end of September, the Reichsmarschall ordered the formation of special "Bridge busting" units. Special crews drawn from various units were to be employed on this task; tactics employed by these special formations depended on the weather, the target defences, type of munition used and type of aircraft, but the low-level or dive-bombing attack proved the most satisfactory.

Army co-operation was carried out by single aircraft when giving close support, and in numbers when attacking targets some distance away from the front. The efficacy of the enemy defences permitted low-level attacks to be made only when the element of surprise could be exploited. Since the success of attacks on enemy front line troops depended largely on recognition and had to be carried out at low-level, it is evident that heavy bombers were not well suited to such tasks.

Since high-level attacks on moving targets near the front brought but little success, while the danger of hitting our own troops was considerable, enemy concentrations and troop movements in the frontal area were usually attacked from medium height (1,000-1,200 m). The aircraft were reasonably safe from infantry fire and the bombing results with an o.V. fuse were satisfactory, while the aircrafts armament could still be usefully employed.

/Stukas

Stukas

Stuka formations employed the dive-bombing, glide or night attack. Their operations were mainly in support of the Army on the battle field and had to be carried out under fighter cover, since even in the East the Ju 87 was too slow and its defensive armament too weak to operate alone. Although the low flying ground attack aircraft were able to find their targets by themselves, some means had to be found of indicating the targets to the Stuka formations; for this purpose the firing of smoke shells by Army artillery was found to be very effective.

During the months of rapid advances, it was particularly necessary for the Air Force to be in constant touch with the armoured spearheads. It was then possible to fly the maximum number of operations, to avoid too long an interval between flights during which the situation on the battle field might have changed considerably, and to allow attacks to be switched immediately to any desired point.

Fighters

On June 22nd, S.E. fighters carried out low level machine-gun and cannon-fire attacks on grounded enemy aircraft and when possible, S.D.2 bombs were also dropped. It had been assumed that owing to the element of surprise, the task of escorting our bombers could be suspended. The results achieved fully justified this policy.

Frequent enemy bombing attacks on forward road communications made their constant supervision by our fighters essential. Scrambles took place on sighting or after reports by advance patrols. The experimental use of advanced landing grounds by at the most one Staffel together with the necessary ground staff, ammunition and fuel proved most successful. When the ground situation precluded the establishment of advanced landing strips, connection was maintained by patrols. Apart from these protective duties, low-level attacks on the battle field were carried out, but owing to strong Russian infantry fire and the extreme vulnerability of the engine and radiator of the Me 109, considerable losses were sustained.

The constant movement of flying formations, usually without adequate ground personnel, resulted in such bad servicing that a Luftflotte had often on a sector of about 400 Km only 10-12 serviceable fighter aircraft. Only the strictest concentration of our resources, the most careful selection of targets, and the provision of better servicing facilities could improve our position.

Signals

The huge areas involved in the Russian campaign, and especially the rapid advances of the early days severely taxed the resources of the Signals Detachments in 1941. Whereas in previous campaigns it had been possible to repair and use existing systems, in Russia the Luftwaffe had to construct a completely new network.

The frequent movement of flying units which virtually precluded the attachment of motorised signals detachment, showed us the importance of signals aircraft in maintaining the most essential communications. In order to keep the Luftwaffe Commands informed of the position on the front, Air Signals Liaison Officers were attached to the Army, and proved most valuable.

Supply

The basic condition for successful air operations was the maintenance of adequate supplies to all flying units. This task was carried out in the main by the Luftgauern.

The transport difficulties can be understood, when one appreciates that the daily supplies needed by the Air Force in the occupied territories amounted to 14,000 metric tons. The problem was solved by the establishment of supply bases every 300 Km. The first base had to be provisioned by motor transport, and the supplying of the second base could not begin until railway communication had been established at least as far as the first base.

Supply by air was maintained by 9 Special purpose bomber Gruppen, of which 6 were divided amongst the Luftflotten and 3 were held in reserve by the General Quartermaster. In addition, freight gliders towed by aircraft and carrying between 1-20 metric tons were also used.

C. CONCLUSIONS

In 1941, our High Command and troops gained considerable experience. The purpose of this lecture is to draw certain conclusions from the experience thus gained.

As has been mentioned above, the Luftwaffe, like the Army, started the Russian campaign in a position of numerical inferiority. A policy of strategic air warfare was impossible against the Soviet Union. While its main industrial areas were well out of the reach of our planes, those minor industrial areas which could have been attacked were not sufficiently important to have any bearing on the outcome of the war.

The Air Force could therefore only be used as an instrument of cooperation with the Army. The attacks carried out against the Soviet Air Force and against the aircraft industry were of indirect help to the Army. They showed that despite a loss of 20,392 aircraft the Soviet Air Force could not be eliminated. Although the importance of the fight against the Soviet Air Force was recognised, the ground position demanded the use of our formations in support of the Army, and our limited strength did not allow both tasks to be fulfilled simultaneously. A further factor was the size of the battle field, allowing of extensive and effective dispersal by the Russians, particularly during the later stages of the campaign.

Direct support of the Army on the battle field demanded the closest cooperation between the Air Force Commands and the Korps and Divisions of the Ground forces. The formation of "close support" formations under their own leader proved most satisfactory.

The lack of unified air reconnaissance was found to be very disadvantageous. Despite the smaller number of reconnaissance units available, these were divided amongst a number of different commands, so that many sorties were duplicated.

Due to our constantly diminishing operational strength it was impossible for the Air Force to help everywhere. Both troops and commanders realised that success could only be achieved by the strict concentration of forces at individual point of effort.

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