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THE GERMAN AIR FORCE VERSUS RUSSIA, 1942

by

Generalleutnant Herman Plocher

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2005

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USAF HISTORICAL DIVISION
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THE GERMAN AIR FORCE VERSUS RUSSIA, 1942

by

Generalleutnant Hermann Plocher

Edited by Mr. Harry R. Fletcher
USAF Historical Division

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A just critic dares not take the subsequent course of events as seen in retrospect for the measure of his judgement, but, instead, must ask himself what the leaders of these events could have known at the time of the occurrences.

A detailed account of the governing circumstances almost always reveals that measures which must appear reprehensible to an unbiased critic were never as faulty as they seemed at first sight.

Count Helmut von Moltke,
Kriegslehren (War Instructions)
Published by the Great General
Staff, War Historical Branch 1

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FOREWORD

The German Air Force versus Russia, 1942, written by Generalleutnant Hermann Plocher, and revised and edited by Mr. Harry Fletcher, is one of a series of historical studies written for the United States Air Force Historical Division by men who had been key officers in the German Air Force during World War II.

The overall purpose of the series is twofold: 1) To provide the United States Air Force with a comprehensive and, insofar as possible, authoritative history of a major air force which suffered defeat in World War II, a history prepared by many of the principal and responsible leaders of that air force; 2) to provide a firsthand account of that air force's unique combat in a major war, especially its fight against the forces of the Soviet Union. This series of studies therefore covers in large part virtually all phases of the Luftwaffe's operations and organization, from its camouflaged origin in the Reichswehr, during the period of secret German rearmament following World War I, through its participation in the Spanish Civil War and its massive operations and final defeat in World War II, with particular attention to the air war on the Eastern Front.

The German Air Force Historical Project (referred to hereinafter by its shorter and current title, "The GAF Monograph Project") has generated this and other especially prepared volumes which comprise, in one form or another, a total of more than 40 separate studies. The project, which was conceived and developed by the USAF Historical Division, was, upon recommendation of Headquarters Air University late in 1952, approved and funded by Headquarters USAF in early 1953. General supervision was assigned to the USAF Historical Division by Headquarters USAF, which continued principal funding of the project through 30 June 1958. Within the Historical Division, Dr. Albert F. Simpson and Mr. Joseph W. Angell, Jr., respectively Chief and Assistant Chief of the Division, exercised overall supervision of the project. The first steps toward its initiation were taken in the fall of 1952 following a staff visit by Mr. Angell to the Historical Division, Headquarters United States Army, Europe, at Karlsruhe, Germany, where the Army was conducting a somewhat similar historical project covering matters and operations almost wholly of interest to that service. Whereas the Army's project had produced or was producing a multiplicity of studies of varying length and significance (more than 2,000 have been prepared to date by the Army project), it was early decided that the Air

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Force should request a radically smaller number (around 40) which should be very carefully planned initially and rather closely integrated. Thirteen narrative histories of GAF combat operations, by theater areas, and 27 monographic studies dealing with areas of particular interest to the United States Air Force were recommended to, and approved by, Headquarters USAF in the initial project proposal of late 1952. (A list of histories and studies appears at the end of this volume.)

By early 1953 the actual work of preparing the studies was begun. Col. Wendell A. Hammer, USAF, was assigned as Project Officer, with duty station at the USAREUR Historical Division in Karlsruhe. General der Flieger a. D. Paul Deichmann was appointed and served continuously as Control Officer for the research and writing phases of the project; he also had duty station at the USAREUR Historical Division. Generalleutnant a. D. Hermann Plocher served as Assistant Control Officer until his recall to duty with the new German Air Force in the spring of 1957. These two widely experienced and high-ranking officers of the former Luftwaffe secured as principal authors, or "topic leaders," former officers of the Luftwaffe, each of whom, by virtue of his experience in World War II, was especially qualified to write on one of the topics approved for study. These "topic leaders" were, in turn, assisted by "home workers"--for the most part former general and field-grade officers with either specialized operational or technical experience. The contributions of each of these "home workers," then, form the basic material of most of these studies. In writing his narrative the "topic leader" has put these contributions into their proper perspective.

These studies find their principal authority in the personal knowledge and experience of their authors. In preparing the studies, however, the authors have not depended on their memories alone, for their personal knowledge has been augmented by a collection of Luftwaffe documents which has come to be known as the Karlsruhe Document Collection and which is now housed in the Archives Branch of the USAF Historical Division. This collection consists of directives, situation reports, war diaries, personal diaries, strength reports, minutes of meetings, aerial photographs, and various other materials derived, chiefly, from three sources: the Captured German Documents Section of The Adjutant General in Alexandria, Virginia; the Air Ministry in London; and private German collections made available to the project by its participating authors and contributors. In addition, the collection includes the contributions of the "home workers." The authors have also made use of such materials as the records of the Nuremberg Trials, the manuscripts prepared by the Foreign Military Studies Branch of the USAREUR Historical Division, the official military histories of the United States

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and the United Kingdom, and the wealth of literature concerning World War II, both in German and English, which has appeared in book form or in military journals since 1945.

With the completion of the research and writing phases in 1958, the operations at Karlsruhe were closed out. At that time the project was moved to the Air University, Maxwell Air Force Base, Alabama, where the process of editing and publishing the studies was begun by the USAF Historical Division.

Basic revising and editing of the monographs has been handled by Mr. Edwin P. Kennedy (1958-61), Dr. Littleton B. Atkinson (1960-62), Mr. Gerard E. Hasselwander (1962-63), and the present Editor, Mr. Harry R. Fletcher. Final review and editing has been the responsibility of Dr. Albert F. Simpson, Chief, USAF Historical Division, with the assistance of Dr. Maurer Maurer, Chief of the Division's Historical Studies Branch.

The complexity of the GAF Monograph Project and the variety of participation which it has required can easily be deduced from the acknowledgments which follow. On the German side: General Deichmann, who, as Chief Control Officer, became the moving force behind the entire project, and his assistant, General Plocher; General Josef Kammhuber, a contributor to, and strong supporter of, the project, who became the first chief of the new German Air Force; Generaloberst a. D. Franz Halder, Chief of the German Army General Staff from 1938 to 1942, whose sympathetic assistance to the project was of the greatest value; the late Generalfeldmarschall Albert Kesselring, who contributed to several of the studies and who also, because of his prestige and popularity in German military circles, was able to encourage many others to contribute to the project; and all of the German "topic leaders" and "home workers" who are too numerous to mention here, but whose names can be found in the prefaces and footnotes to the individual studies.

In Germany, Colonel Hammer served as Project Officer from early in 1953 until June 1957. Colonel Hammer's considerable diplomatic and administrative skills helped greatly towards assuring the project's success. Col. William S. Nye, USA, was Chief of the USAREUR Historical Division at the project's inception; his strong support provided an enviable example of interservice cooperation and set the pattern which his several successors followed. In England, Mr. L. A. Jackets, Head of Air Historical Branch, British Air Ministry, gave invaluable assistance with captured Luftwaffe documents.

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The project is indebted to all of those members of the USAREUR Historical Division, the Office of the Chief of Military History, and the USAF Historical Division, whose assistance and advice helped the project to achieve its goals.

At the Air University, a number of people, both military and civilian, have given strong and expert support to the project. The several Commanders of Air University during the life of the project in Karlsruhe (1952-58) without exception were interested in the project and gave it their full backing. Other personnel at Headquarters Air University who contributed time and experience include: the several Directors of the Aerospace Studies Institute since 1952; Dr. James C. Shelburne, Educational Advisor to the Commander; Mr. J. S. Vann, Chief of Special Projects Branch, DCS/Operations; and Mr. Arthur P. Irwin, Chief, Budget Division, DCS/Comptroller.

The project is grateful to Lt. Col. Leonard C. Hoffman, former Assistant Air Attaché to Germany, who gave indispensable aid during the project's last year in Germany, and to Mr. Joseph P. Tustin, Chief Historian of Headquarters, United States Air Forces in Europe during the years when the project was at Karlsruhe, who rendered substantial assistance by solving a variety of logistical and administrative problems.

Mrs. Mary F. Hanlin deserves special thanks for her expert typing of the final draft.

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AUTHOR'S FOREWORD

This work, volume two of a series, is devoted to a descriptive account, in some parts in great detail, of German aerial operations in the Eastern Theater of Operations during 1942. The most important fact evolving from the contents of these volumes* is that the Luftwaffe--created originally in the spirit of Douhet's theories--was committed almost exclusively in direct and indirect support of the Army on the Eastern Front, and had thus become a purely tactical air force. This was all the more true because the steadily mounting severity of critical situations which developed, especially during the crucial winter battles of 1941-42, made it obligatory for the Luftwaffe to render direct support to the ground forces as its sole and principal mission.

The few operations carried out against strategic objectives should not be allowed to obscure this fact, since they were never part of a systematically planned and integrated operation. Although in some cases excellent results were achieved, the effects were local in character and had no decisive impact upon overall operations in the Eastern Theater of Operations, and far less on the conduct of the entire war.

The account of events in the Eastern Theater in 1941 showed that the Luftwaffe had become what might be termed a "fire-fighting force," which could be flexibly and speedily brought to bear whenever and wherever a crisis might arise. It demonstrated further that the planning and conduct of ground operations, whether tactical or strategic in nature, were effected on the premise of this use of air power. The Luftwaffe was thus required to compensate for the frequent deficiencies in personnel and materiel resources of Army units.

In 1942 these circumstances remained basically unchanged, and Luftwaffe operations continued to be clearly dependent upon the plans and operations of the Army. For these reasons the numerous close support operations in behalf of the ground forces have not been treated in great detail. As in 1941, the individual air operations of 1942 were logical

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*See Generalleutnant Hermann Plocher (Ret.), The German Air Force versus Russia, 1941, USAF Historical Studies No. 153, Maxwell AFB, Alabama: USAF Historical Division, ASI, July 1965.

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results of ground requirements and situations, and were carried out in conformity to the same principles as those in the first year of the campaign. These operations also followed similarly recurring patterns.

The demands for air support, the crucial situations on the ground, and the execution of attack missions were similar or identical in all parts of the Eastern Front, and a detailed study of the bases for rendering air support would therefore be superfluous. Nevertheless, those situations and operations in which the Luftwaffe's actions played a special or decisive role in either attack or defense will be treated as fully as possible in accordance with the presently available materials. Likewise, all basic problems concerning new tactics resulting from technological changes or progress, or enemy action, are discussed, together with all command and organizational changes effected or which could have been effected, inasmuch as they influenced or were intended to influence the conduct of operations in the East in 1942.

Since all Luftwaffe operations hinged upon the actions of the Army, it is necessary to consider Army plans and operations in some detail. Although the author is a qualified Army General Staff Corps officer, he has not presumed to express critical opinion concerning the merits or shortcomings of ground force operations, but has attempted to draw upon the works of such well-known Army authorities as Field Marshal Erich von Manstein, General der Infanterie Kurt von Tippelskirch, General der Infanterie Guenther Blumentritt, and Generaloberst Franz Halder. Contrasting points of view have been quoted, when applicable, in an effort to present a more balanced picture of the then existing situations.

The military operations of 1942 in the Eastern Theater of Operations tend to make a more natural separation of this study into subdivisions by individual combat zones, Far North, North, Center, and South. Although standard German practice calls for an enumeration of units from right to left, the reverse has been followed in order to stress the significance of the fateful operations on the Don and the Volga. The battle for Stalingrad has therefore been treated in a separate chapter, and, in order to trace those tragic events more fully, the entire operation has been discussed to the capitulation on 2 February 1943. Efforts have been made to present all known views concerning the conduct of these operations as dispassionately as possible, and the author has not hesitated in expressing his personal opinions and criticisms concerning these events. He does so,

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however, in awareness that the subsequent disclosure of new documentary evidence may necessitate a revision or supplementation of this present work.

Hermann Plocher
Generalleutnant (Ret.)
of the German Luftwaffe

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PREFACE

At dawn on 22 June 1941 the German Wehrmacht embarked upon a campaign against the Soviet Union. At that time no German leader was more impressed with the striking power of the Reich's armed forces and the successes achieved during the Blitzkriegs of 1939 and 1940 than Adolph Hitler, the Supreme Commander. Bold, yet increasingly capricious in thought and action, he was impressed with the idea that a campaign could be waged against Russia and brought to a victorious conclusion within three or four months. Few of the more responsible military commanders of the Army or Luftwaffe concurred in this point of view or shared the Fuehrer's great optimism in such a hazardous venture. According to Generaloberst Franz Halder and Field Marshal Erhard Milch, Hitler decided to attack Russia despite all logical arguments to the contrary, chief among which were the inadequate logistical preparation for such a gigantic undertaking and the Wehrmacht's multifarious commitments elsewhere.

Despite a brilliant beginning, by the end of 1941 German forces were still far short of their strategic objectives and ground and air forces had suffered a heavy attrition in pushing to the gates of the Soviet capital. Neither Leningrad nor Moscow could be taken, and an unexpectedly stubborn Soviet defense combined with bad weather and logistical problems to force the Wehrmacht over to the defensive. These experiences demonstrated clearly that the cardinal objectives in Russia could not be attained without the defeat of the Red Army in the field, and this could be only if Russian units were prevented from withdrawing into the interior of the country. While geographical conditions placed certain natural limitations upon withdrawals in the northern and central sectors of the front, vast areas in Combat Zone South could be easily relinquished in order to buy time for the Soviet Union. Time was indeed working for the Russians.

Cracks also began to appear in the German High Command by the end of 1941. Perhaps the most important of these was Hitler's decision to carry out a summer offensive in Combat Zone South in 1942. Profoundly convinced that a victory of decisive significance could be achieved in the lower Volga and Caucasus regions, he brushed aside warnings concerning the Wehrmacht's already staggering logistical problems which had arisen during the course of the first year's operations. Hitler compounded these very serious supply and replacement problems by splitting his areas of main effort, thereby dissipating the striking power of the German Army. At the same time, increasing demands for air support

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at the fronts, and increasingly large areas of operational responsibility for Luftwaffe units, caused a more general violation of the principle of concentration in the use of air power.

On 19 July 1941 Hitler dismissed Field Marshal Walther von Brauchitsch and assumed the additional role of Commander in Chief of the German Army. He thereby took a direct hand in the conduct of military operations, frequently confusing issues by his practice of by-passing regular command channels in dealing with combat units. A major example of such interference was the Stalingrad disaster, the first instance since 1806 in which a Prussian or German field army was encircled and annihilated.

In this, his second volume of The German Air Force versus Russia, Generalleutnant Plocher examines the command, organizational, logistical, and planning efforts made by the Wehrmacht in preparation for the military operations of 1942, and discusses the positive and negative aspects of these operations in terms of their effect upon the course of the war against Russia and World War II. General Plocher's work is based principally upon a considerable body of primary source material, chiefly official German military documents, and upon the testimony of many former Army and Luftwaffe officers who had first-hand knowledge of the events. While several years have passed since this study was written, no substantially new material has appeared to detract from or alter either the significance of this work or the author's conclusions.

The original of this manuscript has been abridged, and several of the longer quotations have been sharply reduced in an effort to improve the narrative for the reader. Extensive editing has been done by the USAF Historical Division, yet a positive effort has been made to preserve the character of General Plocher's work, the essence of his commentary, and the significance of the remarks and opinions presented by others.

In conformity to general practices arising from the difficulty of finding precise American equivalents for grades and positions of German general officers, all ranks above colonel have been left in the German form, with the exception of Field Marshal.

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ABOUT THE AUTHOR

Generalleutnant Hermann Plocher was born 5 January 1901. His career in the German military service began in October of 1918 as an officer candidate in the 126th Infantry Regiment. He was commissioned 1 December 1922 in the 13th (Wuerttemberg) Infantry Regiment, a unit whose junior officers included such able men as Erwin Rommel and Hans Speidel. Three years later Plocher began training as a pilot, and in 1928 went with other German officers to the Soviet Union to take special courses in aerial combat and reconnaissance during the period when such activities were proscribed in the Reich. Following his promotion to Captain on 1 April 1934 he attended the Army War College (Kriegsakademie) in Berlin, receiving special air force training, and a year later was assigned to the Organization Branch of the Luftwaffe General Staff.

In August of 1936 Plocher, then a Major, was sent to Spain as part of the German contingent to assist General Franco, and participated actively in the Spanish Civil War. In October of 1937 he was appointed Chief of Staff of "Legion Condor." By virtue of his record, Plocher earned on 1 March 1938 an extraordinary promotion to Lieutenant Colonel.

Prior to the outbreak of World War II he was assigned to the Luftwaffe General Staff as Chief of Plans and Mobilization. He then assumed the post of Chief of Staff of the V Air Corps (redesignated 1 April 1942 as Luftwaffe Command East) on 5 January 1940 and served with this organization during its campaigns in the West and in the Soviet Union. On 1 February 1943 he took command and directed the formation of the 19th Luftwaffe Field Division, and in April, following his promotion to Generalmajor, went with his unit to Normandy. General Plocher assumed command on 1 July 1943 of the 4th Air Division, and in October became Chief of Staff of the Third Air Fleet (Western Front). Following his promotion on 1 July 1944 to Generalleutnant, he became Commanding General of the 6th Airborne Division (Western Front). On 10 May 1945 he surrendered to Canadian forces in the Netherlands.

From 1953 until the spring of 1957, Generalleutnant Plocher gave generous and valuable assistance to the USAF Historical Division's German Monograph Project in Karlsruhe, Germany, adding his contributions to those of his colleagues to round out the story of German Air Force operations during the war. On 1 March 1957 he returned to active

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duty as a Generalmajor in the new Luftwaffe, holding the positions of Inspector of the Air Force and Chief of the Luftwaffe Operations Staff until his final retirement 31 December 1961.

As a former commander of German air and ground forces and as a General Staff officer of considerable experience and ability, he is ideally suited to document the course of events on the Eastern Front, where he played such a significant role.

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Chapter 1

THE MILITARY SITUATION IN THE EASTERN THEATER AT THE BEGINNING OF 1942

On 21 July 1940 Hitler ordered Field Marshal Walter von Brauchitsch, Commander in Chief of the German Army,* to make plans for a campaign against the Soviet Union. The Fuehrer was convinced that a showdown was coming between Germany and Russia and intended to strike the first blow, confident from his previous military accomplishments that victory could be secured in a swift and daring war of four or five months' duration. Hitler originally planned to attack the Soviet Union in the autumn of 1940, but was persuaded to postpone such plans until the following May because of poor routes of communication in Poland, which would have severely hampered any autumn or winter offensive, and because of generally inadequate logistical preparations.

Directive No. 21 (Operation BARBAROSSA),/ outlining the plan for the conquest of the Soviet Union, was issued 18 December 1940 and remained, with certain alterations, as the basic guide for all German operations during the early months of the war. It entailed a two-pronged attack, one in the south toward the Ukraine and the Crimea, and one in the north (the major effort) aimed toward destroying Soviet forces in White Russia and the seizure of Leningrad and Kronstadt. A relatively smaller operation was to be carried out by Army Command Norway (Finnish area) with the objective of preventing possible British landings on the Kola Peninsula and severing Russian supply lines by the capture of Murmansk and Kandalaksha. Three army groups were prepared for the operation, Army Group South, Army Group Center, and Army Group North. The two latter groups were separated from Army Group South

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*For additional information on von Brauchitsch and other important persons involved in these operations see the Biographical Section at the back of this study.

/See Generalleutnant Hermann Plocher (Ret.), The German Air Force versus Russia, 1941, USAF Historical Studies No. 153, Maxwell AFB, Alabama: USAF Historical Division, ASI, 1965. Cited hereafter as USAF Study No. 153. See also documents relating to this subject in Karlsruhe Document Collection.

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by the Pripyat Marshes, an extensive swampy area interspersed with streams and tributaries of the Pripyat River, which formed a natural division of the front.*

Hitler was virtually impervious to criticisms of his plans and shrugged off questions raised by military leaders such as Field Marshal von Bock, who inquired how the government of the Soviet Union might be induced to make peace if her field armies did not choose to make a stand of it and permit themselves to be captured. Grossadmiral Erich Raeder tried to distract Hitler's attention from adventures in the East by suggesting the advantages of reinforcing the Axis position in the Near East, but without effect. The most immediate and outspoken objections to the Russian campaign, however, came from the leaders of the German Air Force which had enjoyed no complete respite from war since 1 September 1939, and especially since May of 1940. Hermann Goering, the Commander in Chief of the Luftwaffe, and many of his staff were reluctant to break off the air war against Britain in order to provide air power for the Eastern operation.† Failing to dissuade Hitler from his intentions, Goering made a solemn and prophetic commentary on the situation:

> My Fuehrer, the ultimate decision is yours to make. May God guide you and help you to prove your rightness in the face of opposition! I, myself, am forced to oppose your point of view in this respect. . . . I'm not at all sure that you can beat Russia in six weeks. . . . There's nothing I'd like better than to have you proven right, but, frankly, I doubt that you will be.[1]

A ground force of 145 divisions (19 of which were armored) was readied for the invasion, while all but a handful of Luftwaffe units were withdrawn from the West and concentrated along the eastern borders of Germany and those of its allied and occupied associates. From these forward positions it was to launch attacks to destroy the Soviet Air Force and to provide cover for the advancing Wehrmacht ground units.

The Ground Situation

The operation against the Soviet Union (scheduled for May of 1941) was again postponed, this time because of the late thaw in Russia

*See Map No. 1.
†See Figure No. 1.

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Figure 1
The Supreme Commander of the Wehrmacht Adolph Hitler, Commander in Chief of the Luftwaffe Reichsmarschall Goering, and General Foerster

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which promised to make roads and airfields in that area unusable until the end of May, and because of the overthrow of Prince Regent Paul of Yugoslavia in a coup d'etat 27 March 1941, which altered the political climate in the Balkans with respect to Germany and induced Hitler to stage a campaign in that region. As a result, the invasion of Russia was moved up to June.

At 0300 hours 22 June 1941 German air and ground forces crossed the Soviet frontiers and began what was to be a "lightning campaign." Possessing the most experienced, best trained and equipped army and air force on the continent of Europe, and flushed with previous successes, many German field commanders were openly optimistic. Moreover, initial operations tended to confirm these ideas. Operations reports coming in to the High Command of the Wehrmacht described a rapid succession of victories on all fronts. It appeared that German military forces were indeed irresistible.

In the first week of fighting, Army Group Center had entrapped 20 enemy divisions around Minsk, while Army Group North had annihilated another 15 divisions in its advance beyond the Dvina River. Army Group South experienced greater difficulties in its offensive because of unexpectedly stubborn Soviet resistance, and was at first unable to advance beyond the Rovno area in the north and the area southeast of Lvov in the south.*

The victories of the Luftwaffe were equally impressive. Within two days German air units had swept nearly all of the Soviet combat aircraft from the skies, destroying the greater part of the Russian air forces and establishing air supremacy over every sector of the Eastern Front. By 28 June the High Command of the Luftwaffe announced that 4,000 Russian planes had been destroyed.[2]

Germany's offensive continued unabated throughout the late summer and autumn of 1941. By mid-November, however, periods of bad weather, shortages of supplies (especially winter clothing and ammunition), and a lack of reserves began to drag the German march to a halt. Great as had been the tactical victories of the Wehrmacht, and enormous as had been the destruction and capture of Soviet arms, materiel, and men, large masses of Russian troops had managed to escape from the several large encirclements and were able to withdraw to the East, where they bolstered

*See Maps Nos. 3, 4, 8, and 13, USAF Study No. 153. See also Maps Nos. 1 and 3, this study.

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the stiffening Soviet defenses. Joining hands with fresh units, they were able to stall the German offensive at its most crucial point; they then prepared to seize the initiative when the momentum of the Wehrmacht had come to a stop.

By 5 December German armies in the south stood to the east of Taganrog, Izyum, Kharkov, and Belgorod; in the middle sector they had advanced beyond Kursk, Tula, and Kalinin, almost reaching the Volga Canal north of Moscow; and in the northern area of the front they had driven beyond Ostashkov and Demyansk in the vicinity of the Valdai Hills and had thrust a salient to the northeast near Tikhvin. In the north, Leningrad was tightly hemmed in by German and Finnish forces on three sides, while in the heart of European Russia, Moscow, the nerve center of the U.S.S.R., was in imminent danger of attack.[3]

Hitler's Reichstag speech of 9 October 1941 indicated clearly to the Russians that Germany planned to launch an assault against Moscow before the turn of the year. This meant an immediate, large-scale effort by the Germans to concentrate sufficient military equipment in the Moscow area. There these supplies might be damaged by severe weather changes or seized in sudden Soviet counterattacks.

The Soviet High Command considered mud, snow, cold weather, and swampy terrain to be its most potent allies, which it intended to exploit to the limit by attacking the Wehrmacht in its most sensitive spot, materiel. The Soviet leadership also assumed that since most motorized guns and armored equipment did not operate well in temperatures of -4° Fahrenheit, and since Germany had placed its sole reliance upon mechanized mobile equipment (having abandoned the horse cavalry), a few days of intense cold would be sufficient to immobilize German armored units and break the Wehrmacht's back. A report issued by the Soviet High Command outlined the objectives of Russian strategy:

> The main thing is to destroy materiel. For this purpose we must employ our air forces. Once the German forces are stripped of their materiel and are in flight, winter conditions will do the rest.
>
> We will achieve a major victory if we above all succeed in destroying German military materiel, with not so much emphasis upon the troops. Until April the Germans will have no opportunity to move forward further materiel to the eastern theater. . . .

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> We have seen time and again that even good German tank and gun crews give up in despair once their God--in the form of a tank or an engine--proves vulnerable. If we succeed in destroying their materiel--against which we can operate only after it is rendered inoperable--victory is ours.[4]

The German ground offensive which was continued in the area of Army Group Center (Field Marshal Fedor von Bock)* bogged down in the first week of December 1941. The full fury of winter, with temperatures as low as -40° Fahrenheit, struck the nearly exhausted German troops as they struggled to reach Moscow. Although one armored unit (Fourth Panzer Group commanded by Generaloberst Erich Hoeppner) drove within 25 miles of the Soviet capital before its progress was halted, the German effort to capture Moscow in 1941, which was to be the high-water mark of the entire campaign, ended in failure.

On 8 December the High Command of the Wehrmacht issued an order declaring that the bulk of the Red Army had been destroyed and that the general objectives of the 1941 campaign had been secured from an enemy possessing immense advantages in men and materiel. That same day Hitler also issued an order (Directive No. 39) in which he blamed the early and unexpectedly severe onset of winter for the halting of the German drive and directed all but a few of his units in the East to go over to the defensive, availing themselves of as much rest and rehabilitation during the winter as was possible in order to prepare for offensives in 1942. Armored and motorized equipment was to be withdrawn for overhauls and repairs as conditions permitted.

The High Command ordered Army Group North to continue its operations south of Lake Ladoga and to push onward to join the Finnish forces in Karelia. At the same time the grip on Leningrad was to be maintained against all enemy opposition.

Army Group Center was to hold a strong defensive line after withdrawing from the Moscow area, its motorized units being sent behind the forces of Army Group South for rest and rehabilitation, ready to return at once in case of Soviet threats from the vicinity of Voronezh.

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*Editor's Note: Replaced because of illness 18 December 1941 by Field Marshal Guenther von Kluge.

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Army Group South was to establish shorter lines of defense and to stop any Russian offensives aimed toward penetrating German positions between the Donets River and the Sea of Azov. Meanwhile it was to cooperate with Army Group Center in holding Kharkov. Hitler and the High Command of the Wehrmacht expected to develop practical defensive lines, with an emphasis on economy in forces and materiel, but Soviet winter offensives, begun late in December 1941, soon began to jeopardize the entire German position in the Eastern Theater. By the turn of 1942 all Wehrmacht forces along the front lines were involved in a succession of grave crises.*

By 16 December Hitler saw that a general disaster was in the making. He thereupon ordered a rigid defense of all front line positions designated "strongholds" (festen Plaetze). All enemy attempts to break through at these points were to be repulsed to the last man, and at all costs.† Hitler assumed that only an order of this nature could stop the Soviet flood and restore some semblance of order in withdrawing German Army units.

Three days later a number of sweeping changes were made in eastern commands. Since early December Field Marshal Walther von Brauchitsch, although Commander in Chief of the German Army, had been increasingly reduced to the position of the Fuehrer's errand boy. Finding his situation impossible, von Brauchitsch resigned (for reasons of poor health) on 19 December. Hitler then immediately and directly assumed his command. On the previous day another able commander, Field Marshal Fedor von Bock, resigned his post as Commander of Army Group Center and was replaced by Field Marshal Guenther von Kluge. Two weeks earlier the Commander of Army Group South, Field Marshal Gerd von Rundstedt, had relinquished his command after a difference with the Fuehrer. Into his place stepped Field Marshal Walter von Reichenau, who took command on 3 December.

One of the most talented armored commanders was also lost to the Army with the dismissal of Generaloberst Heinz Guderian on 22 December. He had incurred the ill will of his superiors by withdrawing his Second Panzer Army to the Oka-Susha line on his own initiative.[5]

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*See Maps Nos. 3 and 4.

†"Not a step backwards," Fuehrer Directive of 16 December 1941. See Appendix I.

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The German commanders were determined, in spite of cold, snow, and ice, to halt the onslaught of the Russians and to regain the initiative in a consolidated front line so that the strategic objectives in the East might be secured in the new year 1942.

In the Army Group South area, Field Marshal von Reichenau succeeded, despite numerous trials, in establishing a new, continuous front extending from Taganrog on the Sea of Azov to the area east of Kursk, and in defending it against all Soviet assaults. Units withdrawn from the forces enveloping Sevastopol were moved at top speed to the critical areas where Army Group South had sealed off Russian forces that had landed 29 December 1941 on the Crimean Peninsula at Kerch and Feodosiya. Germany lost its hold on the Kerch Peninsula during these operations, but the Russian attempt on 5 January 1942 to land at Yevpatoriya, northeast of Sevastopol, was quickly frustrated by German troops.

In the central sector specially trained, winter-equipped, and hardened Siberian divisions launched a large-scale counteroffensive in the closing days of 1941, the impact of which struck the completely exhausted and heavily decimated armies of Army Group Center with full force. These Wehrmacht forces were neither trained nor equipped to withstand the rigors of severe Soviet winters, and in order to avoid complete envelopment were compelled to withdraw, albeit at a terrible cost in personnel and materiel. Armored equipment, heavy materiel, and large numbers of guns, much of which were bogged down or stuck fast in snow and ice, had to be abandoned to the enemy.

These events reminded many Germans of their past history lessons, evoking visions of Napoleon's Grand Army of 1812 struggling in abject defeat through the ice and snow-covered wastes of central Russia. (Indeed, the spectre of the great catastrophe of 1812 seemed to hover over the German command itself.) The Soviet High Command recognized this mentality after interrogating German prisoners, and was quick to exploit it by distributing leaflets and picture postcards over the front lines, portraying the horrible scenes of 1812 in which only the rifles and hats of the frozen French soldiers were visible above the snow fields. Russian propaganda efforts of this sort were generally unsuccessful.[6]

Fighting in the area of Army Group North seemed to subside around Christmas of 1941 and the situation remained fairly stable. However, the German failure to capture Tikhvin seriously disappointed the Finnish ally, who had hoped to effect a union between German and Finnish

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forces operating along the eastern shores of Lake Ladoga. This would have led to a tight envelopment of Leningrad and its early capture, thereby obviating the necessity of a front on the Karelian Peninsula.* Finland, hoping to achieve an early victory over the Soviet Union, had made every sacrifice by calling up its last reserves. The impact of the German failure before Tikhvin had an especially severe effect upon the Finnish economy, with the result that the Finnish High Command was forced to discharge numerous persons from the service and to merge or consolidate many of its remaining military units. Yet, despite these trying circumstances, the front northwest of Leningrad and along the Svir River held against all attacks.[7]

The German armies fought continuous delaying actions throughout the winter of 1941-42, some of them of extreme severity, and by the end of January 1942 succeeded all along the front in halting the gigantic Soviet winter offensives and in establishing a new, but in places critically thin, defense line.

Personnel and materiel losses notwithstanding, the crises on the Eastern Front (which often threatened to develop into disasters of massive proportions) had been surmounted. The problem of mastering these crises has been considered many times since the end of World War II by German Army and Luftwaffe leaders, and both have come to the same general conclusions. General der Infanterie Guenther Blumentritt analyzes the situation as follows:

> From strategic and tactical viewpoints the means of resolving the crisis were limited because of a shortage of necessary reserves. It then depended upon a versatile and flexible conduct of operations, whereby those sectors not under attack were weakened and the resulting available forces were employed to relieve the strain in immediately threatened areas.
>
> The command had to adapt itself to a "hand to mouth" existence. Personnel and materiel replacements arrived only in very limited amounts, and only in the field of winter clothing was a gradual improvement noted. Security for the openly exposed south flank of the [Fourth] army[†]

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*See Maps Nos. 3, 4, and 5.

[†]The Fourth Army, Army Group Center, was commanded until 26 December 1941 by Field Marshal Guenther von Kluge, and thereafter, until 20 January 1942, by General der Gebirgstruppe Ludwig Kuebler.

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was entirely out of the question. How fortunate that the still unwieldy Soviet Command facilitated our mastery of this crisis.

The cardinal factor in mastering this crisis lay clearly in the area of psychology. Here the spirit and inner cohesion of German troops proved themselves. These factors alone enabled them [German soldiers] to surmount the crisis. All personnel from general officer down to the ordinary soldier realized that their lives could be saved only by unity and utter determination. The close ties of the intermediate and lower commands served as a fine example for the troops.

The previously mentioned command by Hitler* calling for unconditional resistance was right in this situation! This must be clearly affirmed. If the front at that time had commenced to slide backward, the troops would have been completely exhausted after a few days' march in the ice and snow, and destroyed. It would have happened to them just as it did to the French Army in 1812!

However it would not be right to assume that the order [of Hitler] did anything to stiffen the spirit of the troops. Initially the wisdom of the measure was not recognized and was, in fact, doubted by many. The real reason that the crisis was overcome was that everyone realized that no prepared positions existed behind which they could fall back, and that the most determined resistance was the only thing that could save lives. It was the instinct of self-preservation--the will to live--that overcame the crisis. Yet there can be no doubt that Hitler's order was issued at precisely the correct moment.[8]

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*See Appendix I.

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Similar views were held by General der Infanterie Kurt von Tippelskirch, an officer with vast experience on the Eastern Front, who made the following evaluation:

> The hardness and solidarity of the German troops, which in this winter exceeded every conceivable standard, would alone have been insufficient to frustrate the Russians' plans. The Russian Command now made the mistake of overestimating its own strength and underestimating the power of resistance of the enemy, just as Hitler had done in his attack upon the Soviet Union. The daring plan to destroy two German army groups exceeded the capabilities of the weakened Soviet assault force and resulted in a dissipation of its forces. The Russians' rigid and unrelenting adherence to their initially planned objectives, and their efforts to achieve their aims through the most brutal and oft repeated attacks upon the same positions, helped the German Command in general and local units in particular to break the enemy attack.
>
> The slogans "Stand fast" and "Hold out at any cost" may have been considered justifiable as a one-time expedient on psychological grounds in the situation which existed in early winter of 1941-42. No proof can be adduced as to whether a planned withdrawal would have succeeded. Perhaps it was due solely to Hitler's ruthless intervention that the strategic reversal did not develop into a moral collapse. The German soldier succeeded by his superhuman performance, by bearing up in every tactical situation, by his successful defense against superior forces, sometimes 20 times his strength, and by trusting in his own power and in the German leadership in battle, which remained unimpaired to the end and makes it possible to understand the defensive successes of the years to come.[9]

The Air Situation

The Luftwaffe

Throughout the major Soviet winter counteroffensives (1941-42) German air forces in the East were committed in direct support of the Army against Soviet ground forces. These operations were often

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curtailed and sometimes stopped altogether by limited hours of daylight and by adverse weather, including snow, intense cold, and storms.

Excessively frequent personnel transfers, together with the effects of inadequate servicing facilities, supply shortages, and bad weather seriously reduced the effective operational strengths of flying organizations. Because of this, many bomber groups had an effective strength of 10 operational aircraft or less.* The following figures illustrate this decline:

Type of Unit	Date	Total Aircraft Strength Actual	Total Aircraft Strength Operational	Operational Percentage
Bomber Forces	28 Jun 41	1310	754	57.6
	27 Dec 41	1332	458	34.4
Fighter Forces	28 Jun 41	1266	885	69.9
	27 Dec 41	1472	670	45.6
Dive-Bomber Forces	28 Jun 41	410	278	67.8
	27 Dec 41	326	163	50.0

The above figures admittedly refer to the overall actual strength of the Luftwaffe, but the percentages shown reflect clearly the general decline in operational aircraft (particularly bombers) in the Eastern Theater, a condition which obliged the Luftwaffe to disband (at least for a time) some of its combat air organizations so that they could withdraw to the rear for rest and rehabilitation. Their aircraft were often turned over to units remaining in the combat zone.[10]

Personnel replacements were slow in arriving and never fully satisfied the heavy demands of combat units, a situation which became increasingly acute as the attrition of the war progressed.

With the onset of winter late in 1941 the Luftwaffe made a number of major modifications in its command and organization:

(1) In November 1941 the Headquarters and Headquarters troops of the Second Air Fleet and the II Air Corps were transferred to Italy.

*Editor's Note: Most bomber groups had 26 to 30 aircraft assigned, and some had only 6 planes operational.

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(2) Air Command Baltic (First Air Fleet) was dissolved, and some of its units were transferred either to the Zone of Interior or to the I Air Corps.

(3) At the end of November 1941, Headquarters and Headquarters troops and half of the command staff of the V Air Corps were moved to the Western Theater (Brussels). The other half of its command staff was transferred early in January 1942 to the Crimea under the V Air Corps Commander, General der Flieger Robert Ritter von Greim, as Special Staff Crimea (Sonderstab Krim). Early in February 1942 the command staff personnel in Brussels (under command of the Chief of Staff, V Air Corps, Col. Hermann Plocher) was returned to the Eastern Theater, where it helped in the withdrawal of the VIII Air Corps from Combat Zone Center, and in the assumption of control over air units in the area by the V Air Corps.[11]

The Commander in Chief of the Luftwaffe neither planned nor foresaw a reorganization of German air forces in 1942 into either tactical or strategic units, despite the fact that a critical appraisal of the general situation at the turn of 1942 would have revealed an urgent need for such reorganization. This state of affairs could be attributed to several factors:

(1) The continuing crises along the Eastern Front and the losses of irreplaceable artillery and motorized equipment (as well as personnel) by the Army during its withdrawals made air support a necessity. The Luftwaffe thus became a virtual "artillery arm" of the ground forces.

(2) The acute lack of close-support aircraft necessitated the commitment of bombers for ground-attack missions, thus removing a potential strategic air force from the control of the Luftwaffe.

(3) The attrition rate and general decline in operational aircraft obliged the Luftwaffe to commit every available plane in order to support the thin lines of resistance on the ground.

(4) A lack of suitable aircraft for strategic missions prevented the Wehrmacht from checking the flow of enemy personnel and equipment to the front from Soviet production areas deep in the rear sectors.

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The mode of employment of antiaircraft artillery forces also remained basically unchanged in 1942. The II Flak* Corps (under the command of the Fourth Air Fleet) transferred in late September 1941 from the southern area to the operational area of Army Group Center. There it served with the I Flak Corps as the main supporting arm of German Army units in their crucial defensive battles.

Flak combat teams were formed by combining one or two 88 mm. and a number of 20 mm. antiaircraft guns (in some cases 37 mm. guns were used in place of 20 mm. guns). Around these hard cores of resistance the weakened German ground forces would organize an all-around defense. Antiaircraft guns were the only really effective weapons against the ever-increasing number of Soviet T-34† tanks.

Flak battalions and regiments, hitherto controlled by the tactical air commands attached to armies, were to be consolidated into Flak divisions and assigned to appropriate local air commands (air fleets or, in unusual cases, air corps) for action in close cooperation with army commands. Their original mission, however, was also gradually relegated to the background by the more current and urgent demands of army units for direct support as rapid-fire, precision ground artillery, particularly to stop enemy armored attacks.[12]

Soviet Air Forces

Having inadequately trained and inexperienced personnel, technically inferior and largely obsolete aircraft, and awkward and stereotyped methods of command, the Soviet air forces had been almost annihilated in 1941. Their materiel losses, however, greatly exceeded their personnel losses.

Newly introduced types of aircraft, which were produced in plants undisturbed by German air attacks, were usually sent directly forward to units in the field. Here, exigencies of the moment required their immediate combat employment (although they were manned by poorly trained personnel), with utter disregard for dangers to Soviet airmen

*Editor's Note: Flugabwehrkanone or air defense cannon, an antiaircraft artillery designation used to describe all ground units or weapons designed for air defense operations.

†Editor's Note: Russia's most effective World War II tank, which operated even under the most unfavorable conditions.

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or aircraft. Concurrent with these measures an intensive training program was inaugurated at aviation schools situated deep in the interior of the Soviet Union in order to turn out hundreds of new aircrews.

At the end of 1941, deliveries of equipment began to arrive in Russia under the Allied Lend-Lease Agreement. The newly produced Soviet aircraft, however, proved to be far superior in performance to the older types of planes supplied in 1941 and 1942 by the Western Allies.

The combination of Soviet production and Allied deliveries gave the Russians a numerical superiority in aircraft, but the outstanding ability and high morale of German airmen enabled the Luftwaffe to retain air superiority. Soviet air inferiority stemmed from poor flying performances resulting from hastily contrived and sub-standard training, and from a certain mental inertness and standardization among Soviet commanders and pilots. Courageous acts by some Russian airmen, especially IL-2* pilots, could not offset this situation.

A report disseminated on 7 March 1942 by the Chief of the Luftwaffe Intelligence Branch showed that the Soviet Command had made the following disposition of its air forces:†

Fourth Air Fleet Area (Combat Zone South). A total of 480 fighters, 26 reconnaissance aircraft, 149 bombers, and 67 other planes were based on 40 separate airfields. Main concentrations were observed west of the Strait of Kerch (with 139 aircraft on 4 airfields) and east of that point in the Tamanskaya-Novorossiysk-Novominskaya-Pavlovskaya area (204 aircraft on 10 airfields).

VIII Air Corps Sector (Combat Zone Center). Twenty airfields in this area served as bases for 113 fighters, 6 reconnaissance aircraft, 12 bombers, and 64 other aircraft. While no clearly defined concentration of air power was discernible here, the fact must be emphasized that Moscow and vicinity was not under German air surveillance, and only partial reconnaissance coverage was given to the Ostashkov-Kholm-Velikiye Luki area. It was well known, however, that in the latter area

*Heavily armored ground attack aircraft, known as Stormoviks.

†Based on reports of aerial reconnaissance pilots. Although this report is about 60 days later than desired, it is the earliest available record found to give a reasonably accurate estimation of Soviet air unit strengths and dispositions in 1942.

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at least eight Soviet air regiments and probably a fighter regiment (equipped with 20 "Hurricane" aircraft) had been moved in, and that eleven airfields had been constructed.

First Air Fleet Sector (Combat Zone North). Here 218 fighters, 12 reconnaissance aircraft, 24 bombers, and 2 other planes were based on 16 airfields. A concentration of air power was noted east of Lake Ilmen, where 117 aircraft were stationed on 6 airfields.[13]

In accordance with Soviet military doctrine, Soviet air forces operated exclusively in support of the Russian Army. One remarkable feature was the increasing frequency of Russian night bombing missions, carried out primarily by U-2 aircraft.* These became a veritable nuisance to exhausted German troops who were robbed of their badly needed rest.

During the winter of 1941-42 Russians were first observed using air direction teams to guide Soviet interceptors toward approaching German aircraft. Unfortunately for the Soviet forces, however, these transmissions were invariably by voice in the clear and were immediately picked up by the German monitoring agencies. The Luftwaffe continued to exploit these Soviet transmissions with great success.

Russian forces made increasing use of dummy installations and other deceptive measures in order to force the Luftwaffe to split its attacking forces and to reduce the general effectiveness of German air operations. Soviet fighter pilots, who were generally less aggressive than German flyers, tended to remain over their own home territory so that they could quickly land if the need arose. This caused many Russian pilots to operate below 15,000 feet.

Despite the qualitative superiority of the Luftwaffe, the steadily increasing Soviet numerical superiority in aircraft, and the growing number of Allied aircraft sent to the Soviet Union, should have served as warnings to the Luftwaffe High Command that it was high time to attack

*Editor's Note: Not to be confused with the United States post-Korean War U-2 aircraft. This Soviet plane was a low-speed biplane, used for liaison, minor bombing, and partisan warfare operations. See General der Flieger a. D. Karl Drum, Airpower and Russian Partisan Warfare, USAF Historical Studies No. 177, Maxwell AFB, Alabama: Hist. Div., RSI, 1962, pp. 21-22, 29. See Figure 27.

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Soviet factories and supply installations, even at a cost of neglecting other important missions. The production of Russian aircraft had to be stopped or decreased sharply if Germany was to retain its air superiority.

Although the opportunities for such action were fast slipping by, it would still have been possible in early 1942 to attack a great proportion of the Soviet aircraft and tank manufacturing industries from bases then available to the Luftwaffe.

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Chapter 2

MILITARY OPERATIONS IN THE FAR NORTH*

Army Operations

At the beginning of the German campaign against Russia, the top Wehrmacht field commander in the north was Generaloberst Nikolaus von Falkenhorst, who held the dual posts of Chief of the Joint Command Norway and Commander in Chief of Army Command Norway./ As such, he directed all German forces in Norway and Finland, as well as the operations of the Finnish III Corps, situated in the central sector of the far northern front and designated for close cooperation with the German Twentieth Mountain Army. German units in southern Finland, however, came under the immediate command of the Commander in Chief of the Finnish Armed Forces, Field Marshal Baron Carl Gustav Mannerheim.[1]

The original objective of the far northern campaign was to seize Murmansk, thereby denying the use of that valuable port to the Soviet Union. This was to be facilitated by a simultaneous drive from the region west of Salla to the Bay of Kandalaksha. The Murmansk operation was dubbed Operation RENNTIER (Reindeer),// while the offensive against Kandalaksha was given the title SILBERFUCHS (Silver Fox). If successful, the former operation would place the vital Petsamo nickel area safely in German and Finnish hands, while the latter action would give the Wehrmacht a powerful grip on Karelia and enhance the operations against Leningrad. Nevertheless, Hitler directed that the defense of Norway was to take preeminence over all other operations.[2]**

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*This chapter is based largely upon the reports of Generalleutnant a. D. Andreas Nielsen and Generaloberst Hans-Juergen Stumpff, Commander in Chief, German Fifth Air Fleet.

/XXI Army Group, redesignated Army Command Norway, 15 April 1941. See Map No. 5. See Chart No. 1.

//Editor's Note: Reindeer were used by German forces in this area as beasts of burden. They were invaluable in the winter.

**Editor's Note: Hitler not only favored Norway's defense for geo-political reasons, he also had strong sentimental feelings for Norway, which was considered to be a nation with both cultural and ethnic affinities to Germany.

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German leaders were anxious to have Field Marshal Mannerheim launch an offensive between Lakes Onega and Ladoga, as well as a frontal assault on Leningrad. Mannerheim, however, thought Leningrad should be taken exclusively by German troops from the rear, since the strongest fortifications faced Finland and, in any case, Finnish cooperation in an assault against this revered Soviet city would give the Russians a pretext for later aggression against Finland. 3*

In the operations of 1941, Mountain Corps Norway, with Luftwaffe support, had driven along the northern coast of Finland toward Murmansk, securing the Petsamo region and moving across the Litsa River. There it bogged down in the face of determined Soviet counterattacks and, with the onset of winter, was barely able to hang on to its bridgehead. To the south, the XXXVI Corps, in cooperation with the Finnish forces on its right, assaulted the fortifications around Salla and pushed ahead beyond Alakurti, encircling and destroying the Soviet XXXVI Corps. This effort virtually exhausted the German forces in the central sector, which were soon forced to go over to positional warfare.

The Finnish III Corps reached Lake Top late in the autumn and held its position throughout the winter, while south of it the Finnish Karelian Army thrust ahead to the Arctic Canal, closing it to traffic moving in the direction of Murmansk. Meanwhile, the Karelian Army battled ahead beyond the Svir River, which joined Lakes Onega and Ladoga. North of Leningrad the Finnish Army drove within 40 miles of the city, where it faced heavy fortifications. †

On 10 November 1941, Hitler issued Fuehrer Directive No. 37, ordering von Falkenhorst to plan and assume command of a winter operation against Kandalaksha, an offensive to be coordinated with a separate Finnish drive toward Belomorsk or Loukhi. The German unit ear-marked for this offensive was to be reinforced by two mountain divisions, and was therefore redesignated the XXXVI Mountain Corps. The Corps Commander, General der Infanterie Karl Weisenberger, waited in vain for the promised

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*Editor's Note: The Paris treaty of 10 February 1947 with the Soviet Union gave the Russians possession of some of the best Karelian timber areas, the Petsamo nickel mines, and a strong strategic geographical advantage over Finland.

†The Finnish High Command was unenthusiastic about attacks down the isthmus toward Leningrad for reasons mentioned in paragraph 1 above. See Map No. 5.

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5th and 7th Mountain Divisions. Falkenhorst refused to embark on any ambitious undertaking without them, and, as a result, the operation never took place. 4*

The front all along the expanse ahead of the Finnish Army continued to be relatively quiet throughout the winter of 1941, and in January a great part of Finnish activities were relegated to tasks involving reorganization and reequipping. The German Army High Command, however, had become dissatisfied with the results achieved by von Falkenhorst and favored replacing him with a man of action, one who might inspire the lagging confidence of the troops and carry out new offensives. On 14 January 1942 von Falkenhorst was ordered back to Norway, and the command of German forces in Finland was entrusted to General der Gebirgstruppe Eduard Dietl, former Commanding General of Mountain Corps Norway. ǂ These German units in Finland were organized under the command of Army Command Lapland. 5

On the extreme left wing stood the XIX Mountain Corps (formerly the Mountain Corps Norway) under the command of Generalleutnant Friedrich Schoerner. To its right was situated the XXXVI Mountain Corps under Weisenberger, flanked on the south by the XVIII Mountain Corps commanded by General der Gebirgstruppe Franz Boehme. Flanking these units to the south were the III, VII, VI, and V Finnish Corps.

In January 1942, the 7th Mountain Division began to arrive in Finland, but the icing over of the ports prevented the entire unit from making its landing, with the result that one regiment did not reach its destination until March, and was then assigned to Army Group North instead of the XXXVI Mountain Corps. The Lapland Army was also deprived of a regiment of the 5th Mountain Division, which went to Army Group North. These units were badly needed in the Far North, and their absence prevented an early offensive by Army Command Lapland. By the end of February General Dietl had received instructions from the High Command of the Wehrmacht directing him to allot first priority to the defense of the Petsamo area from invading Anglo-Allied forces, or from those forces in conjunction with Soviet units making a frontal assault. The threat was doubly serious because of the enemy forces

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*The 7th Mountain Division was then being formed from a regular infantry division in Germany, while the 5th Mountain Division was on duty in Crete.

ǂDietl was known to be popular with the Finns and, because of his energy and offensive spirit, to be a favorite of Hitler. See Figure 2.

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entrenched on the Rybachiy Peninsula, many of which had heavy artillery emplacements. It was a problem which eventually had to be resolved for the security of the left flank.[6]

About 24 April the Russians launched a heavy assault against the Army Command Lapland from the Loukhi sector, threatening especially the forces defending the Kestenga area and the supply line to the Finnish III Corps. The Fifth Air Fleet was ordered to move to Kemi to support the defenses. The inclusion of additional forces from around Ukhta enabled the Germans and Finns to weather the storm. By early May several Soviet units of the assault force were badly decimated, and two had been completely wiped out. A second effort to force the German-Finnish forces out, an effort launched from the sector west of the Litsa River, also ended in failure. During this time the Army Command Lapland had the specific missions of restoring the situation near Kestenga and making such troops as could be released available to the Mountain Corps Norway.*

In June five fortress battalions were transferred to the Arctic coast to strengthen the Army Command Lapland, which, by the end of the month was redesignated the Twentieth Mountain Army. At this time it was feared that the Russians would attempt to evacuate Leningrad, and Hitler, wishing to forestall this possibility, ordered both the Army and Navy to prepare small boats for attacks against any such movement on Lake Ladoga. PT boats were made available, and the force was ready for action by 1 July.

A second plan of operations was laid out during June, and was designed to remove the serious threat posed by Soviet forces on the Rybachiy Peninsula. Operation WIESENGRUND (Meadowland), to be carried out largely by the XIX Mountain Corps in collaboration with the forces of the German Navy, was to be the basic plan for the conquest of the peninsula, but serious logistical problems convinced Dietl that the plan would have to be scrapped for the time.[7]

On 21 July, Fuehrer Directive No. 44 outlined a plan for the conquest of Kandalaksha by the Twentieth Mountain Army during the autumn./ The plan hinged upon the availability of Finnish troops in the

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*Redesignated the XIX Mountain Corps. See Maps Nos. 5 and 6.
/See Appendix III.

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Figure 2
Generaloberst Eduard Dietl in conversation with
Field Marshal Mannerheim of Finland

Figure 3
German infantry advancing in the
Far Northern Combat Zone

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event of the German capture of Leningrad (then expected to be completed by the end of September). At the same time, the directive reaffirmed the defense of Petsamo as a matter of first priority in all operations to be carried out in the Far North. The Kandalaksha operation, dubbed LACHSFANG (Salmon Catch), entailed a drive by one mountain division around the northern wing of the Soviet positions, while two other divisions of the XXXVI Mountain Corps drove ahead to Kandalaksha. This attack was to be timed to coincide with a Finnish assault upon Belomorsk. The Finnish High Command, however, insisted upon a link-up with Army Group North to the south and upon the German seizure of Leningrad as prerequisites to the attack on Belomorsk.

The German 5th Mountain Division was needed by the XXXVI Mountain Corps for the accomplishment of LACHSFANG, but it could not be obtained from Army Group North. The 3rd Mountain Division, scheduled to be sent in from Norway, was also transferred to Army Group North, forcing Dietl to abandon LACHSFANG, at least for 1942. All eyes now turned to the Soviet thrusts in the land corridor near Leningrad and the German efforts to capture the city.* Heretofore the seizure of Leningrad had been foreseen as a prelude to the assault on Kandalaksha and Belomorsk.

Operations in the Far North were largely defensive in the late autumn and winter of 1942, while Army Group North sought to reach a decision at Leningrad. Bad weather and exhaustion prevented the Wehrmacht from realizing its objectives in these areas, and it was able only to make moderate improvements in the lines. These difficulties brought about the cancellation of LACHSFANG in the Far North. 8/

Luftwaffe Operations in the Murmansk Area

Mission

On 8 October 1941, the High Command of the Wehrmacht announced that the military collapse of the Soviet Union might well occur in the near future, and accordingly directed the German Army in Norway to suspend its operations. This optimism was reflected in Fuehrer Directive No. 37 of 10 October 1941, which prescribed a change in mission for Wehrmacht

*Operation NORDLICHT (Operation North Light).
/See Figure 3.

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forces in the Far North. Under its provisions, the German Army was to maintain and consolidate its gains; to insure the defenses of the Petsamo nickel area against ground, air, and seaborne attacks; and to prepare for operations--these were intended for the winter--aiming at the capture of Murmansk, the Rybachiy Peninsula, and the Murmansk rail route in 1942.[9]

The tasks outlined for the Luftwaffe consisted of (weather permitting) the following:

(1) To maintain patrols over the coastal areas of northern Norway and Finland to protect German sea traffic and to interdict Soviet and other hostile seaborne traffic or forces.

(2) To defend against aerial attacks, especially in the Petsamo nickel producing area,* around ports and naval bases.

(3) To conduct aerial reconnaissance over the future operational areas and the Soviet supply base area of Murmansk, interdicting Soviet traffic by sea and rail to this place.

(4) To make preparations for the commitment of greater air power to support impending Army operations.[10]

Cooperation was required of the three branches of the Wehrmacht in order to repel possible enemy forces from the German front or its coastal flanks in the ensuing months. To insure this protection, the Navy was ordered to establish Naval Command North, while the Luftwaffe, in the event of its withdrawal to Norway, was required to organize Air Command North. Responsibility for the execution of the Luftwaffe mission was vested in the Fifth Air Fleet (Generaloberst Hans-Juergen Stumpff).[11/] The vast peripheral areas of the theater gave the Fifth Air Fleet responsibility over the Skaggerak, the northern areas of the North Sea and northern Scotland, the North Atlantic, the Arctic Ocean, the Finnish-Karelian and Murmansk fronts, and the Gulf of Bothnia north of the Aaland Islands.

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*Taken from Finland by the Soviet Union in 1940, recaptured during World War II, although largely under German control, and retaken by Russia in the autumn of 1944. See footnote, p. 19.

/Col. Andreas Nielsen (GSC) was Chief of Staff, Fifth Air Fleet. See Figure 4.

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Figure 4
Generaloberst Stumpff, CG, Fifth Air Fleet, and Generalleutnant Lundquist, Commander in Chief of the Finnish Air Force

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In order to perform a mission of this magnitude, which included both reconnaissance and combat operations, it was essential for the air fleet to decentralize its command structure, so Fifth Air Fleet Headquarters remained at Oslo, while a tactical command staff was established at Kemi (later at Nautsi), where the commanding general was usually to be found. The Chief of Staff, Fifth Air Fleet, controlled the air fleet's flying operations, most of which consisted of reconnaissance and fighter activities in the Skaggerak area, in the area along the western coast of Norway, and the waters adjacent to their bases. Supply, signal, and troop welfare undertakings were also directed from the headquarters at Oslo. Headquarters Tactical Command at Kemi established local air commands to conduct reconnaissance and combat operations, according to the individual situation and mission, for bomber, dive-bomber, and other types of flying units. The normally small fighter forces assigned were consolidated in each case under a fighter command.[12]

On the whole this command system was highly complex, especially in 1941, although even in 1942 operations were hampered because of the involved and poorly developed signal communications network.

Operations

Until the end of 1941, the locally organized* Air Command Kirkenes conducted the operations of Luftwaffe units committed in the Finnish-Karelian Front area in accordance with directives received from Fifth Air Fleet.[13] At the beginning of 1942, however, and pursuant to Fuehrer Directive No. 37, Air Command North (East) (Fliegerfuehrer Nord (O)), established in mid-December 1941, was given the responsibility for the conduct of aerial operations in the Finnish-Karelian area, where it faced Murmansk, the Soviet Union, and the Arctic Sea.

According to orders from the Fifth Air Fleet, Air Command North (East) was to place principal emphasis upon interdicting the Murmansk rail line, a particularly important route because it was the only railroad linking the Russian interior with the single, ice-free, northern port. This rail line had already played a most significant military role during World War I as a supply route for the movement of weapons and other essential materiel.[14] Moreover, owing to its close proximity to the parallel extended Soviet front, this route was of inestimable importance for the movement of troops in quick shifts of main effort. Possession of this

*Auf dem Kommandoweg aufgestellt (organized by local command; not a regular T/O staff).

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railroad line gave the Russians a distinct advantage over the German forces, which had to depend upon a single lateral route in the rear, the Arctic Road, which in winter was sometimes reduced to a one-lane wayfare.

In order to facilitate supply operations, the units of Air Command North (East) were situated on the airfields along the Kemi-Salla road and rail route as follows:

(1) 4th Group, 1st Training Wing - at Rovaniemi and Kestenga
(2) 1st Group, 30th Bomber Wing - at Kemi
(3) 2nd Group, 5th Fighter Wing - at Alakurti and Kestenga
(4) Twin-engine Fighter Squadron, 77th Fighter Wing - at Rovaniemi
(5) Headquarters Transport Squadron - at Kemijärvi
(6) Command Post, Air Command North (East) - at Rovaniemi

In spite of high barometric pressures in January 1942, air operations in the first few months of the year were possible only on a restricted scale because of the brief daylight hours, snowfalls, and fog. Whenever weather conditions permitted, however, the weak bomber and dive-bomber forces carried out interdiction missions, particularly against the Belomorsk-Murmansk section of the enemy rail route, and branch lines leading from it to the various sectors of the front. The targets most frequently attacked were the rail depots at Kandalaksha, Loukhi, Kovda, Kem, Ambarnyy, and Apatity. Luftwaffe units succeeded in cutting the rail line repeatedly, as well as in destroying large quantities of rolling stock and rail installations, yet they were unable to halt the traffic on the route for any considerable period.

The Soviet Command expended every effort and employed all available labor to repair damage to the railroad line and to the depots to maintain at all costs the flow of traffic, since once the ice had formed in the navigable channel of the White Sea leading to the railhead at Arkhangelsk, the Murmansk rail line remained the only route for the movement of Anglo-American supplies,* and was, in any case, the shortest and best way for

*Editor's Note: Anglo-American aid began to arrive in the U.S.S.R. in the autumn of 1941, but did not reach significant proportions until 1942. American efforts at this time to establish a military mission under Maj. Gen. John N. Greely to augment the Lend-lease staff were rebuffed by the Russians. For interesting details concerning this aid program to the Soviet Union, see Richard M. Leighton and Robert W. Coakley, "The War Department: Global Logistics and Strategy 1940-1943," The United States Army in World War II, Washington: Office of the Chief of Military History, DA, 1955.

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maximum traffic loads. For these reasons, the Soviet fighter units along the Murmansk rail line were strengthened considerably. Soviet bombers were also dispatched with increasing frequency to bomb German airfields in the area.[15] German dive-bomber and reconnaissance units were therefore compelled to operate with fighter escorts, while a pair of fighters were required to remain alert-ready at each airfield to ward off unexpected enemy attacks. This, of course, reduced the operational status, and availability, of German fighters for offensive missions.

In spite of these adverse factors, Luftwaffe fighter pilots achieved very good results in terms of enemy planes shot down, most of which were Hawker "Hurricanes."* Besides this, many attacks were made against Soviet airfields. Some air units supported the ground operations of the German XXXVI and Finnish III Corps by attacking Soviet shelter areas and occasional Russian troop movements. The Luftwaffe also doubled as artillery spotters for the German and Finnish forces.

From 25 March 1942, the emphasis of operations of Air Command North (East) shifted to attacks upon Anglo-American supply shipping through the Norwegian and Barents Seas. The main mission became the assault on ports and sea traffic. The interdiction of rail traffic and the destruction of rail installations, especially along the Murmansk line, was then relegated to a secondary position. All other activities, such as counter-air operations, were to cease in order to conserve supplies for intensified operations against Soviet seaborne supply traffic.† At the same time the German Army Command Lapland was to receive air support to preclude the development of crises in that area.[16]††

Pursuant to orders, Air Command North (East) abstained until May from further action against what had become secondary targets in the territory along the Murmansk railroad. Thereafter, good results were achieved against trains, railroad installations, and against the Murmashi electric power station. In the second half of May, four missions

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*A liquid-cooled, single-engine, low-wing British fighter which was widely used by Allied forces during World War II and early sent to the Soviet flying forces.

†See the next section of this chapter concerning air-sea operations, p. 31.

††Editor's Note: See Generalleutnant a. D. Hermann Plocher, The German Air Force versus Russia, 1941, USAF Historical Studies No. 153, Maxwell AFB, Alabama: USAF Historical Division, ASI, 1965, section entitled "Operations in the Far North."

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were flown by 54 planes against the rail bridge south of Olenegorsk. Twenty-five tons of bombs were dropped, but the bridge was only damaged.

Since the Russians not only reinforced their fighter and bomber forces, but also began to attack the overcrowded German airfields at Kirkenes, Petsamo, and Banak with increasing regularity, the Luftwaffe was obliged to strike at the Soviet air forces at their bases, even though it was contrary to direct orders which forbade them to engage in counter-air activities. Another reason for the counter-air operations was that Soviet air units had expanded the scope of their attacks on German convoys, especially in the area of Vardø, a fishing village without real port facilities, situated on a small island, around which point German ships usually came within sight of the Soviet guns on the Rybachiy Peninsula. Therefore, as late as October the Luftwaffe air command continued to concentrate upon local Soviet airfields, with the result that harassing raids on German shipping in the Norwegian and Barents Seas decreased perceptibly.[17] Soviet aerial mining operations in the coastal waters of northern Norway also subsided.

The Luftwaffe achievement of downing 648 enemy aircraft in the period from 24 March to the end of October 1942 also had a marked effect upon Soviet morale, and thus enemy air activity, and tended to reduce fighter opposition. Even though the Russians were able to replace their aircraft losses, partly by the transfer of British squadrons which flew in, non-stop, from the Shetland Islands, the Soviet air forces in the Murmansk area became considerably more cautious in their operations.[18]

In the second half of April the Soviet Fourteenth Shock Army attacked the opposing German XIX, XXXVI, and XVIII Mountain Corps between Kiestinki and the area west of Murmansk.* During the severe battles, lasting well into May, the defending German forces managed to stop local Soviet penetrations and to restore the situation by counter-attacks. These defensive actions were supported by flying units of Air Command North (East) which struck attacking Soviet troops in front of, and on the flanks of, the German ground forces. Excellent results were achieved against troop concentrations, shelter areas, the approaching Soviet 5th and 6th Reindeer-Ski Brigades, and enemy shipping on Litsa and Vichany Bays, close behind the Soviet lines on the Arctic coast.

By promptly committing its air units in September of 1942, the air command also contributed decisively to the frustration of Soviet

*See Map No. 6.

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amphibious landing efforts on the Rybachiy Peninsula on the flank of the XIX Mountain Corps. Air Command North (East) was required on 3 November to release the greater part of its squadrons for assignment to Combat Zone South, reducing its available combat units to the 1st Group, 30th Bomber Wing, and the 1st Group, 5th Dive-Bomber Wing.[19] By this time, however, the movement of enemy shipping through the Norwegian Sea to the Murmansk coast was appreciably restricted by ice conditions. The remaining combat aircraft were therefore again assigned interdiction missions against the Murmansk railroad route, especially the section between Belomorsk and Murmansk. This shift of emphasis for air operations called for a regrouping of forces, and on 1 December 1942 the organizations of Air Command North (East) were distributed as follows:

(1) 1st Squadron, 5th Dive-Bomber Wing	- at Alakurti
(2) 2nd Group, 5th Fighter Wing	- at Alakurti
(3) 13th Twin-Engine Fighter Squadron, 5th Fighter Wing	- at Kemijarvi
(4) Replacement Squadron, 1st Group, 5th Dive-Bomber Wing	- at Rovaniemi
(5) 16th Transport Squadron	- at Rovaniemi
(6) 1st Group (minus 2nd Squadron), 30th Bomber Wing	- at Kemi
(7) Elements of 1st Squadron (strategic), 124th Reconnaissance Group	- at Kemi

Designated for Coastal Defense

(1) Elements of 1st Squadron (strategic), 124th Reconnaissance Group	- at Kirkenes
(2) 1st Group (minus 1st Squadron), 5th Dive-Bomber Wing	- at Kirkenes
(3) 9th Squadron, 5th Fighter Wing	- at Kirkenes
(4) 1st Squadron (tactical), 32nd Reconnaissance Group	- at Petsamo
(5) 3rd Group (minus 9th Squadron), 5th Fighter Wing	- at Petsamo
(6) 2nd Squadron, 30th Bomber Wing	- at Petsamo
(7) 1st Squadron, 406th Coastal Air Patrol Group (Supported when necessary by the 1st Squadron, 906th Coastal Air Patrol Group)	- at Billefjord

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Air attacks were then directed primarily at trains to destroy rolling stock, and at the railroad repair and maintenance installations at Murmansk, Kandalaksha, Loukhi, Knyazhaya Guba, Chupa, Shonguy, Keret, and Polyarnyy. Other targets were the electric power station at Murmashi, the transformer station at Olenegorsk, and the nickel works at Monchegorsk.* None of these attacks produced more than partial success, since attempts to disrupt rail traffic for any considerable period, or to completely destroy installations along the rail line, including electric power stations, met with frustration.

After the withdrawal of combat air units in the autumn of 1942 and the beginning of winter weather conditions, operations against the Murmansk rail route gradually tapered off. Major emphasis for aerial operations then shifted to attacks on Allied convoys, which were again traveling to Murmansk because the port of Arkhangelsk was already icebound. During the month of December, Dvina Bay was also frozen solid.†

Air Operations Against Allied Convoys in the Norwegian Sea††

In full realization of the growing significance of the northern sea route for the transportation of Anglo-American goods to the Soviet Union, the Luftwaffe, in 1942, placed its main emphasis upon striking Allied shipping in the Norwegian Sea and in the ports used by the Allies, especially Murmansk and Arkhangelsk.

Increasing reports from counterintelligence sources, prisoner interrogations, aerial reconnaissance, and radio-intercept services

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*See Map No. 6.

†Editor's Note: The Dvina River is ice-free 174 days out of the year on the average, but the bay at the port of Arkhangelsk freezes about the end of October and remains frozen for about 140 days. The port of Arkhangelsk is blocked to almost all sea traffic for about 190 days a year, while Murmansk is ice-free the year around.

††This section is drawn largely from the work of Generalleutnant a. D. Andreas Nielsen, who was Chief of Staff of the Fifth Air Fleet, 1940-43, and from records of the 8th (Military Science) Branch of the Luftwaffe High Command.

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showed clearly that Allied supply efforts on behalf of Russia were increasing. The Fifth Air Fleet therefore concentrated upon air-sea reconnaissance over Iceland, northern Norway, Spitzbergen, and the Norwegian and Barents Seas, and in so doing, detected in early 1942 the first large convoys coming from the West. Commitments in other areas, however, prevented German airmen from attacking these convoys in the first months of the year. Forces of Air Command North (East) were obliged to restrict their activities to attacks against the port of Murmansk and to interdiction operations against the Murmansk rail route, at least insofar as such missions were possible with the prevailing visual and weather conditions. Because of the few hours of daylight in that region during the winter months, German aircraft would have been overtaken by darkness before they were able to reach the nearest enemy airfield or any sea-going target. Moreover, airfields available for such operations were unsuited either for bad weather or night landings owing to the terrain on which they were situated.

In October of 1941, the High Command of the German Navy had ordered the creation of an operations staff, designated Naval Command Norwegian Sea (Admiral Nordmeer),* to control coastal defense and anti-convoy operations in the Norwegian-Barents Seas areas. This staff was composed basically of the former staff of the Commander of Cruisers (Befehlshaber der Kreuzer), Vizeadmiral Hubert Schmundt, as an advanced command under Naval High Command North (Marinegruppenkommandos Nord).† Schmundt and his staff were directed to cooperate closely with the Luftwaffe in their coastal and high seas operations. In February there were already a number of heavy ships in the area, including the Tirpitz, a battleship of the Bismarck class, the "pocket battleship" Admiral Scheer, and the heavy cruiser Prinz Eugen (heavily damaged from a torpedo attack on 23 February by the British submarine

*Editor's Note: Sometimes called Naval Command Polar Sea. This organization operated in the waters of the Norwegian and Barents Seas, especially the former, against Allied merchant vessels and warships.

†Editor's Note: Although the author states that this organization was formed at Tromsø, naval records indicate that it was formed aboard the ship Tanga in Kirkenes harbor, where it remained until May of 1942, when the staff was transferred to the yacht Grille at Narvik. See Walter Lohmann and Hans H. Hildebrand, Die Deutsche Kriegsmarine 1939-1945, Band I, Bad Nauheim: Hans-Henning Podzun Verlag, 1956. Kapitel 40, p. 5. Cited hereafter as Die Deutsche Kriegsmarine.

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Trident),* as well as several lighter vessels and 12 submarines. The U-boats operated under orders of Naval Command Norwegian Sea in accordance with directions from Naval High Command North until the formation in January 1943 of the staff of Commander of Submarines Norway (Fuehrer der Unterseeboote Norwegen).

The Fifth Air Fleet, meanwhile, received orders to cooperate closely with the local naval command and to use its air power primarily for reconnaissance and attack operations against convoys approaching from the west, with the assurance that additional bomber and torpedo-bomber units would be assigned to it from other theaters for attacks on convoys as each case required.

Command Organization and Distribution of Forces

The reconnaissance and anti-convoy mission covered virtually the entire zone of operations of the Fifth Air Fleet, since it was essential to include the waters off Scotland where the convoys were marshaled. Operations of the Luftwaffe in this area were thus directed centrally from the command post of the Fifth Air Fleet's tactical staff. Whenever there was a suspicion of an approaching convoy or a report received indicating that a convoy was in the process of being assembled, the tactical staff transferred itself (for better communications) to Kemi or Nautsi, south of Kirkenes. Three local air commands were available to the Fifth Air Fleet for operations against convoys: Air Command North (East) situated at Kirkenes, Air Command Lofoten Islands located at Bardufoss, and Air Command North (West) at Stavanger.

Air Command North (East). Most of the Fifth Air Fleet's units were assigned to Air Command North (East) under Col. Alexander Holle

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*Editor's Note: The Tirpitz, flagship of the surface fleet under Vizeadmiral Otto Ciliax, with eight 15-inch guns, and the Admiral Scheer, with six 11-inch guns, arrived in the Faettenfjord, Trondheim, in January 1942. The Prinz Eugen was out of action upon arrival and on 16 May 1942 forced to go to Kiel for repairs. The heavy cruiser Luetzow, formerly called the armored ship Deutschland (Panzerschiff Deutschland), struck by a British torpedo plane 13 June 1941, did not arrive in Trondheim until May of 1942. The heavy cruiser Admiral Hipper arrived in Trondheimfjord on 21 March 1942. See Die Deutsche Kriegsmarine, Vols. I & II, 1956-1964. See Map No. 7.

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for operations against Soviet Russia. On 25 March 1942 this unit received orders to transfer its command post from Rovaniemi to Kirkenes and to organize its forces for attacks against approaching Allied convoys and the ports of Murmansk and Arkhangelsk. Its subordinate units, scattered in the Kemi-Alakurti area, were transferred as follows to the coastal area of Petsamo-Kirkenes-Banak:

To Kirkenes

2nd Group (minus 5th and 6th Squadrons), 5th Fighter Wing
10th Twin-Engine Squadron, 5th Fighter Wing
1st Group, 5th Dive-Bomber Wing
1st Squadron (Strategic), 124th Reconnaissance Group
Transport Squadron

To Petsamo

5th and 6th Squadrons, 5th Fighter Wing
3rd Torpedo Bomber Group, 26th Bomber Wing

To Banak

30th Bomber Wing Headquarters, with 2nd and 3rd Groups
1st Squadron (Strategic), 22nd Reconnaissance Group

To Billefjord

1st Torpedo Bomber Squadron, 125th Coastal Patrol Group

Air Command Lofoten Islands. This command, headed by Col. Hans Roth, was a staff especially organized in the spring of 1942 for anti-convoy operations. It had no permanently assigned units, the forces required for its missions being tactically assigned to it as the occasion arose. When the campaign against the Allied convoys opened in 1942, this organization was composed of the 3rd Squadron, 906th Coastal Patrol Group, and the 1st Squadron, 123rd Coastal Patrol Group, based at Tromsø.

Air Command North (West). The mission of this command was to conduct reconnaissance and combat operations south of a line from Trondheim to the Shetland Islands to Iceland. The following units were

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assigned to this organization to accomplish these tasks:

(1) 1st Strategic Reconnaissance Squadron, 22nd Reconnaissance Group
(2) 1st Group (Focke-Wulf 200),* 40th Bomber Wing
(3) 2nd and 3rd Squadrons, 406th Coastal Patrol Group
(4) Weather Observation Squadron North (minus one flight)

Counter-Convoy Operations

Air Command North (East), in cooperation with the adjacent Air Command Lofoten Islands and German naval units of Naval Command Norwegian Sea, attacked convoys enroute to the Murmansk coast by way of Iceland, the ports of Murmansk and Iokanga, the Polyarnyy naval base, and various port installations and ships in harbor./ Intercepted Soviet radio transmissions revealed that enormous supplies of fuel and foodstuffs were destroyed in the ports during these attacks.

Radio monitors had ascertained that for purposes of concealment the Allies had given their convoys traveling from west to east the designation "PQ," and numbered them consecutively. German forces used the identical designation in referring to these movements.

According to information available in the spring of 1942, a convoy (PQ) was dispatched about every four weeks. The German High Command spared no efforts to secure pertinent and timely intelligence concerning the arrivals, departures, and assemblies of Allied convoys, especially PQ convoys which carried vital war materiel to Russia. If positive intelligence reports were received, or if there was good reason to believe that a convoy was assembling, units of Air Command North (West), under the directions of the Fifth Air Fleet, immediately initiated systematic reconnaissance operations covering the ports of northern Scotland and Iceland.

Each convoy was kept under constant surveillance, as long as weather conditions permitted, from the moment it was detected. Allied

*Only a few Fw-200 aircraft were produced, most of which were used for raids on Allied shipping in the Atlantic and Norwegian waters. It was a four-engine plane having a range of 2,910 miles with a 4,400-lb. bomb load. It had a top speed of 261 m.p.h., could carry 11,000 lbs. of bombs, and was well armed.

/See Map No. 7.

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convoys were never sighted leaving port, however, because they invariably sailed at night or during periods of very poor visibility. The probable approach course of the convoy was plotted on the basis of the latest aerial reconnaissance reports, and the entire area in question was then covered with great care by reconnaissance planes, operating in broadly overlapping sectors. This reconnaissance continued until the convoy was again sighted at sea. Areas of responsibility during such missions were arranged so that hostile naval units at sea would also be detected.

The closer the convoy was assumed to be according to the computed course, the denser became the network of German reconnaissance units assigned to find it. Once it was found, everything was done to keep it under observation by one or two aircraft, noting its course, speed, and changes in composition or organization. Equally important in planning an attack was information concerning the type and location of escort units for the convoy.

If contact with a convoy was lost because of bad weather or other adverse conditions, thorough reconnaissance was again made of the probable area in accordance with the computed course. In such operations, reconnaissance units were again assigned widely overlapping sectors, calculated upon the basis of the known speed of the convoy or upon an estimated speed of between 6 and 14 nautical miles per hour. These reconnaissance units usually succeeded in guiding the permanently assigned submarines of Naval Command Norwegian Sea to the convoy. The U-boats then observed the progress of the Allied vessels and maintained contact with the appropriate German air command, reporting all changes in location and speed of the convoy, thereby facilitating an economy of aerial reconnaissance forces until the enemy ships came within effective range of the Luftwaffe. Responsibility for maintaining contact with the convoy then was returned to German air reconnaissance aircraft, which acted as flying radio beacons for Luftwaffe bomber and torpedo-bomber units.

Once the assembly of a PQ convoy was detected all German air units suitable for an attack, especially those of Air Command North (East), were withheld from other missions and deployed for action against the convoy. While Allied convoys were within striking range, aircraft could not be diverted for use against other targets, even those in support of the Army, except by express approval of the air fleet headquarters. As far as the situation allowed, the Fifth Air Fleet was also given temporary control over nearby air units from other command areas as soon as a PQ was discovered, but because of the frequent spells of bad weather, such units, or elements of them, almost always arrived too late to

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participate in the initial attack. The rash transfer of these units over long distances, and their combat commitment immediately upon arrival proved to be a severe strain and resulted in an early depreciation of their combat capabilities.

Newly arriving air units were stationed on a space-available basis at the airfields at Bodø, Bardufoss, and Banak, and placed under the command of Air Command Lofoten Islands, the command which directed the attack until the convoy reached a line extending from the North Cape to Spitzbergen. From that moment on, combat and reconnaissance responsibility passed to Air Command North (East), and the air units formerly assigned to Air Command Lofoten Islands. Whenever possible, aircraft stationed at Bardufoss transferred to Kirkenes or Petsamo in order to take the fullest advantage of their operating range. Units operating from Banak remained there, but were assigned to the new command (Air Command North [East]), whose mission it was to keep the convoy under continuous attack for the remainder of the voyage and to follow up this attack with strikes on the terminal ports after the vessels arrived.[20*]

Operation Against PQ 12. The Luftwaffe was prevented by unfavorable weather from making an adequate reconnaissance of the Norwegian Sea for convoy PQ 12, reputed to be underway and bound for northern Russia in February of 1942. A convoy estimated on 29 February 1942 to be about on a line with 35° East longitude was later identified by information from the German naval radio monitoring service as PQ 12, which had left the area north of the Minch on 24 February. It was expected to arrive in Kola Bay on 2 March. Reconnaissance missions carried out by the Fifth Air Fleet in northern waters as far as the ice line were fruitless. On 6 March the battleship Tirpitz and three destroyers under Vizeadmiral Otto Ciliax put to sea from Trondheim to seek out and destroy convoy PQ 12. The British Home Fleet provided a covering force consisting of three battleships, the King George V, the Duke of York, and the Renown, an aircraft carrier, and several cruisers and destroyers. Neither battle group succeeded in finding the other because of rough weather and poor visibility. Aerial reconnaissance could not be carried out under such conditions, and since the drift ice line was about 160 miles north of North Cape at the time, the German naval group

*See Maps Nos. 5 and 7.

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commander concluded that the convoy was farther to the south. As a result, it was never found.[21*]

Operations Against PQ 13 and 14. About noon on 28 March German flyers observed a convoy of enemy ships, which appeared to be made up of about 12 merchant vessels, divided into two groups, escorted by a cruiser, a number of destroyers, and patrol boats, all traveling on an easterly course at 10 or 11 nautical miles per hour about 90 to 108 miles north of Nordkinn, on the northern tip of Norway. By evening naval units of the German forces in Norway were on its trail, and on the 29th, 22 bombers went into action, as well as a number of U-boats and 3 destroyers. The light cruiser Trinidad was torpedoed and the destroyer Eclipse severely damaged and put out of action. Of the convoy, later found to have been made up of 19 ships, 5 were sunk by German forces, 2 by aircraft, 1 by a destroyer, and 2 by U-boats. During this action, a Ju-88 was forced to make an emergency landing, but its entire crew was rescued.[/]

Part of the convoy sighted on 29 March in grid square 27 East 3362 was not attacked because of unfavorable weather. Instead, information was exchanged between the German reconnaissance planes and units of the Naval Command Norwegian Sea, all of which were tuned in on a prearranged contact frequency. Efforts to guide U-boats by radiolocator frequencies were ineffective because some naval units had already made contact with the northern section of the convoy and because those

*Editor's Note: On 8 March, the two hostile battle groups and the convoy were within 80 miles of each other, each on a point of an equilateral triangle. Admiral Ciliax, unable to find the convoy--there was no radar in the German services then--and unwilling to risk Tirpitz on extended ventures, headed for home on the 9th. It was attacked en route by 12 British carrier-based planes, which made no hits and lost heavily themselves. The sole conquest was the sinking of an empty Russian freighter by the destroyer "Z 14." See Die Deutsche Kriegsmarine, Vol. I, Ch. 52, p. 3, and Friedrich Ruge, Der Seekrieg 1939-1945, Stuttgart: K. F. Koehler Verlag, 1954, p. 210. Cited hereafter as Ruge. See Figures 5 and 6.

/Large numbers of German and Allied airmen and sailors were rescued by air-sea rescue operations of the German Fifth Air Fleet. See Figures 7, 8, and 9.

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Figure 5
H. M. S. Duke of York in heavy seas while guarding an allied convoy enroute to Murmansk, 1942
(Courtesy of the Imperial War Museum, London)

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Figure 6
Ice-coated gun barrels on an escort vessel of an allied convoy en route to Murmansk, 1942
(Courtesy of the Imperial War Museum, London)

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German ships en route to the target area or just putting to sea were too far away.* Furthermore, weather conditions and darkness made it impossible for aircraft to remain in the vicinity of the convoy for any great length of time. The convoy, believed to be PQ 13, stopped in grid square 37 East 0300 to assemble its scattered units, and then, under the cover of darkness, proceeded on its way. On the following day the German High Command decided that this unit must have been PQ 14, and sent three reconnaissance aircraft and seven bombers against it, heavily damaging one of the medium-sized convoy ships.† By 30 March the remainder of the ships had reached Kola Bay.

On 29 March at 1130 hours units of Air Command North (West) had also spotted a convoy of about 25 ships, with an estimated total tonnage of 175,000 tons, escorted by a cruiser, 2 destroyers, and 2 sloops, traveling at a speed of 10 nautical miles per hour on a northwesterly course in grid square 26 West 3238. It was then uncertain whether this was a convoy coming directly from America or convoy PQ 14.

On 11 and 13 April 1942 a convoy, again identified as PQ 14, was attacked. Of the 32 bombers (Ju-88) dispatched on the mission of 11 April, 14 of them failed to find the convoy because of storms and poor visibility. The others employed dive-bombing and gliding bombing-run tactics in the attack, sinking one ship, damaging four, and probably sinking one other. One Ju-88 was subsequently reported missing and one had been forced to make an emergency landing.

On 13 April the same convoy was attacked by all available Luftwaffe units. They took off under favorable weather conditions, but the predicted change to bad weather came sooner than expected, scattering the attacking forces and resulting in a number of losses. The Fifth Air Fleet was obliged to take the risks, since the enemy formations traveled almost exclusively in areas where adverse weather was likely to prevail and

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*Editor's Note: PQ 13 sailed from Reykjavik, Iceland, 20 March 1942, but on 24 March ran into fierce gales which scattered the convoy over a wide area. On the 29th H. M. S. Furious attacked and sank the U-boat U-585.

†Editor's Note: PQ 14 did not get underway until 8 April, but was forced to turn back with 16 of its 24 ships because of pack ice. One of those which continued was sunk by a U-boat. See S. W. Roskill, The War at Sea, 1939-1945, Vol. II, London: Her Majesty's Stationery Office, 1956, pp. 125-127. Cited hereafter as Roskill, Vol. II. See also Ruge, p. 210.

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Figure 7
He-59 Air-sea rescue plane preparing to take off, 1942

Figure 8
A line is thrown to a German flyer downed
in icy northern waters, 1942

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since an attack on Murmansk could not be made on the 13th because of the weather conditions. One tanker was sunk by German airmen and three merchant vessels were damaged, one of them, a 6,000 tonner, being so badly crippled that a U-boat was later able to give it the coup de grâce. But the operation was not without its price. Five Ju-88's were lost in the action.

Reconnaissance to find this convoy continued for the next few days. Because it was assumed that troop transports were included among these ships, which could indicate an impending invasion of northern Norway, the Air Command Lofoten Islands was immediately placed under the tactical control of Air Command North (East). Reconnaissance was soon able to reestablish contact with the enemy formation, but, apart from single aircraft attacks in which a tanker was damaged, no further or more systematic operations could be carried out because of the very bad weather. This also frustrated German U-boat and destroyer efforts against the convoy. On 19 April German observers saw the Allied vessels entering Kola Bay.*

German aerial reconnaissance later detected convoy QP 11, steaming at medium speed on a course of 350° (grid square 27 East 6277) on 29 April. The formation appeared to be composed of 15 merchant vessels, under escort, but was not attacked because of bad weather conditions. This westward moving group, protected by a comparatively strong covering force, was shadowed by German naval units, and on 30 April was brought under attack. The submarine U-456 scored a hit on the cruiser Edinburgh, flagship of the covering force, crippling it and forcing it to withdraw toward Murmansk with two destroyers. On 1 May a few Luftwaffe planes were able to score some hits on the formation, and in the evening German destroyers set out to finish off any stragglers and to strike what they could of the convoy itself. The Edinburgh was torpedoed and sunk, and the destroyers Forester and Foresight severely damaged, but German forces lost the destroyer Hermann Schoenmann.[22/]

Operations Against PQ 15. It was thought that the movements of the convoy detected on 29 April between Iceland and Jan Mayen Island, identified as PQ 15, were connected with those of the hostile heavy naval

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*This was probably the remnant of the original PQ 14.

/Editor's Note: All hands were rescued by German destroyers, which then returned to base, having mistaken approaching minesweepers for destroyers. See Roskill, Vol. II, pp. 128-129. See also Ruge, p. 211.

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units steaming northward in the vicinity of the Faeroe Islands, and that an amphibious attack in northern Norway was planned in view of the current heavy Soviet attacks against the German Lapland Army. Air reconnaissance and combat operations at sea were carried out concurrently with those in support of ground operations in many cases, especially the sea operations against PQ 15. At the end of the month the same division of forces was true during the time of attacks against PQ 16.

Certain elements of units used in support of ground operations were pulled out of action and concentrated for the counter-convoy mission versus PQ 15. The convoy had been detected during bad weather on the night of 2 May, heading eastward. At about the same time another westbound formation was twice sighted, but not attacked in order to save all forces for the attacks on PQ 15.* During the evening several torpedo bombers were sent out against the ships of the Soviet-bound formation. Three ships were sunk and several others damaged by Luftwaffe flyers, although heavy antiaircraft fire was thrown up. The results were especially good considering the unfavorable conditions for a bombing mission, including a very low cloud ceiling. Contact was maintained with the convoy, although further attacks could not be made owing to snow flurries and generally bad weather, which prevented naval strikes as well. On 4 May the ceiling closed down almost completely, obscuring the convoy for the rest of its journey.† It was assumed that the Allied contingent would reach port by the following day.

On the basis of experiences gained from the counter-convoy operations, orders were issued on 8 May to Air Command North (East) to make increased use of both single- and twin-engine fighters in fighter-bomber attacks on Allied ships. During anticonvoy operations, only one fighter, a tactical and a strategic reconnaissance, and a dive-bomber squadron were used for ground support missions, but during the next few days principal emphasis again shifted to direct support of the Army by commitment of the entire dive-bomber group.

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*QP 11's ships which had managed to get through previous attacks and passed PQ 15. See Roskill, Vol. II, p. 129.

†Editor's Note: The weather was a mixed blessing. During the poor visibility the Allied destroyer Punjabi was accidentally rammed and sunk by the battleship King George V. See Roskill, Vol. II, p. 130. See Figure 10.

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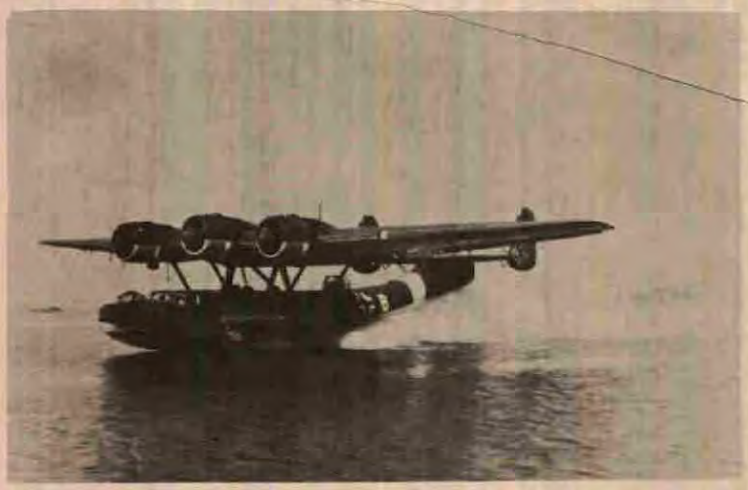

Figure 9
Do-24 air-sea rescue plane of the
Luftwaffe making a landing

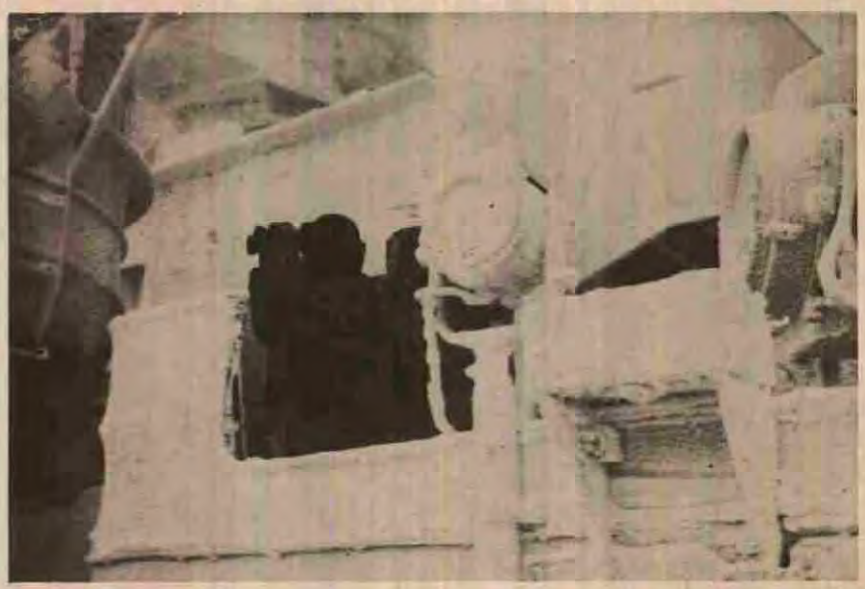

Figure 10
Signal bridge of Britsh escort vessel snowed
up en route to Murmansk, 1942
(Courtesy of the Imperial War Museum, London)

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On 14 May orders were issued to German commanders in the Far North to the effect that in future combined air-naval operations against convoys first attack priority was to be for aircraft carriers, followed by transport ships and freighters.

Attacks against vessels in Kola Bay were continued with good results, but better results could undoubtedly have been achieved if more air units had been available for that purpose. The commitment of an entire dive-bomber group for army support operations had a decidedly unfavorable influence upon the available air strength. 23

Operations Against PQ 16. On 20 May 1942 Air Command North (East) received orders to continue aerial reconnaissance from the northern coastal waters of Norway to the ice line, with main emphasis upon the area around Barents Island, in order to discover the whereabouts of convoy PQ 16, presumed to be already at sea.*

In response to orders, reconnaissance and combat units of the command assembled on the morning of the 25th for action against the new convoy, which was sighted at 0654 hours about 120 miles east of Jan Mayen Island, steaming east. Approximately 60 ships were in the group, but during the day the convoy divided. For unknown reasons a group of faster vessels separated from the main body of the convoy and steamed northeast for nine hours, southwest for nine hours, then northeast again for nine hours, when they finally rejoined the main convoy. The main body of PQ 16 consisted of 35 merchant vessels, with an estimated total of 200,000 gross register tons, escorted by 1 cruiser, 5 destroyers, and 8 patrol boats. This group was observed at 0823 hours steaming northeastward in grid square 17 West 1247 at 7 nautical miles per hour. German flyers also noted a reinforcement of the covering force during the course of the day. /

Attacks on the convoy began on 25 May, but the first success was scored by a U-boat on the 26th. On 27 May the Fifth Air Fleet advised its units that the Fuehrer considered an invasion of Norway to be imminent and that it was therefore of utmost importance "to sink as many ships as possible of the detected convoy, because this would foil any

*Editor's Note: PQ 16 put to sea on 21 May, the same day a returning convoy QP 12, with 15 ships, set sail for home. See Roskill, Vol. II, p. 131.

/Editor's Note: The cruisers Nigeria, Norfolk, Kent, and Liverpool were added to the security forces of the convoy on 25 May. See Roskill, Vol. II, p. 131.

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planned amphibious operations during the preparatory stage."[24] That day PQ 16 was taken under heavy aerial attack when a force of 101 Ju-88 bombers and dive-bombers, and 7 He-111 aircraft used as torpedo-bombers, struck the convoy southeast of Barents Island. Four merchantmen were sunk and two others received heavy damage, while three German aircraft were lost. The convoy was again heavily attacked on the 28th and during the night of the 29th.

As a result of these attacks only 25 of the more than 50 ships in the convoy reached Kola Bay by the evening of the 30th, and that night these 25 ships fell under another heavy German air attack. During the German assault, a total of seven ships were sent to the bottom (more than 31,000 tons), 8,000 tons of which were sunk by submarine forces. There can be no doubt that the success achieved against this convoy caused serious damage to the enemy, but, nevertheless, failed to weaken him decisively.

German air commanders in the area recognized that combined aerial-torpedo and dive-bomber attacks, if properly conceived and executed, produced particularly good results with very minimal costs to one's own forces. Operations against PQ 16 were typical of this type of action.

A Fifth Air Fleet report of 8 June 1942 directed all units to take advantage "of the coming period, during which combat operations will probably be less frequent, in order to participate increasingly in training maneuvers in combined aerial-torpedo and dive-bomber attacks, exercising the closest possible cooperation with appropriate naval commands." Air torpedo squadrons (He-111) were not to be used for reconnaissance or self-defense missions, with the exception of those rare occasions when other aircraft, even those less suitable for the job, were not available because of bad weather or technical circumstances.[25]

Reichsmarschall Goering indicated on 10 June that the assignment of additional reconnaissance forces would not be possible in the Far North, and issued the following directive to the Fifth Air Fleet:

> Under no circumstances will combat aircraft be employed in specifically reconnaissance missions. Operations against PQ 16 prove clearly that the Luftwaffe is able to inflict exceedingly heavy losses on the enemy. This presupposes that the already weak combat forces of the Fifth Air Fleet will not be further weakened through the diversion of elements for other tasks.[26]

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To maintain the morale of units regularly committed in major operations against convoys at sea, it was essential to provide them with hope of rescue should they be downed in the icy northern waters. Since no additional air-sea rescue crews were to be assigned by the Commander in Chief of the Luftwaffe, Generaloberst Stumpff was compelled to take steps in this direction from his own resources. This self-help took the form of improvised measures by the Fifth Air Fleet to relieve the strain in its air-sea rescue units by using elements of coastal patrol squadrons to reinforce the available air-sea rescue details. The risk involved in weakening the coastal patrol organizations could be accepted since it would affect them only during combat operations when their reconnaissance activities could be curtailed.

The prevailing weather conditions and the generally heavy seas made the tasks of these detached crews exceedingly difficult. Every rescue was an act of valor and can safely bear comparison with any act of combat. Fifth Air Fleet Headquarters ordered all planes which were airborne during an operation to maintain contact with aircrews in distress at sea as long as fuel supplies permitted. If at all possible, seaplanes were to land and take the personnel in distress aboard. These measures not only enabled the Luftwaffe to rescue German aircrews but also large numbers of persons from attacked convoys.

According to war diary records no convoys were detected in June of 1942. Weather conditions were extremely unfavorable and air activities were therefore limited. However, attacks against port installations continued. Hostile air power increased at the same time, and it was July before large-scale counter-convoy operations could be resumed with any success.[27]

Operations Against PQ 17. In July the convoy designated PQ 17 was all but annihilated by the Luftwaffe. It had been reported as early as the beginning of June by secret service agents. The formation began to assemble in June, sheltered by the western coast of Iceland. When the group QP 13 was first detected in the evening of 30 June traveling westward about 180 nautical miles north of Nordkinn, it was only logical to assume, based on experiences such as the case of PQ 16, that PQ 17 must already be in the area west of Jan Mayen.*

Owing to weather conditions at the end of June and early July, reconnaissance over the Murmansk-Kola Bay area and over the waters

*See Map No. 7.

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between Iceland and Jan Mayen Island was not possible. Because of this, reconnaissance activities were increased in the vicinity of Jan Mayen. At 0104 on 2 July 1942, convoy PQ 17, made up of 38 merchant vessels and 10 cruisers, was observed traveling northward. For added protection, the enemy stationed a task force of 1 or 2 carriers, 2 or 3 battleships, 4 heavy cruisers, and 8 to 10 destroyers in the Iceland-Spitzbergen area between 1 and 6 July.* Until 10 July the convoy was kept under constant observation by the Luftwaffe, with the exception of a few brief interruptions due to weather conditions.

No combined aerial-torpedo and Ju-88 attacks could be launched from the bases in northern Norway because of the prevailing weather conditions. The two arms were thus compelled to strike separately. An early raid was made against PQ 17 in the evening of 2 July. However, the German air fleet command decided to launch its all-out attack against the convoy on 4 July, despite an expected absence of naval support by German units in Norwegian waters. The presence of heavy Allied naval vessels had prompted the German naval commander to decline an engagement until 8 July.

The air forces committed against convoy PQ 17 were as follows:

Reconnaissance Units:	1st Group, 40th Bomber Wing 1st Strategic Reconnaissance Squadron, 124th and 22nd Reconnaissance Groups 2nd and 3rd Squadrons, 406th Coastal Patrol Group 3rd Squadron, 906th Coastal Patrol Group 1st Squadron, 123rd Reconnaissance Group Weather Observation Squadron North
Bomber Units:	30th Bomber Wing 1st Group (Torpedo-bomber), 26th Bomber Wing 1st Squadron (Torpedo-bomber), 406th Bomber Wing 1st Squadron (Torpedo-bomber), 906th Bomber Wing

*Editor's Note: The cruisers London, Norfolk, Tuscaloosa, and Wichita and three destroyers were to provide protection to Bear Island. The distant covering force was made up of the carrier Victorious, the battleships Duke of York and Washington, the cruisers Nigeria and Cumberland, and 14 destroyers. See Roskill, Vol. II, p. 136.

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Air-Sea Rescue: Air-Sea Rescue Command IX, Kirkenes

All of these forces were controlled by Air Command North (East), Air Command Lofoten Islands, and Air Command North (West). The overall operation was directed by Fifth Air Fleet Headquarters from its command post at Kemi as well as from its headquarters in Oslo. Because communications across Sweden were highly vulnerable to interception, the subdivision of the headquarters staff to form two subsidiary staffs resulted in considerable difficulties. However, although time-consuming teletype discussions had to take the place of personal voice discussions, with signal communications extending over 900 miles, it was possible to control the three air commands. The air commands, in turn, succeeded in getting maximum operational performances from their units (if allowances are made for prevailing weather conditions).

The omen of things to come began with the sinking of an American merchant ship by a lone He-111 torpedo plane at about 1800 hours, 4 July. This was followed by heavier attacks, which sank at least two merchant ships. The initial attacks resulted in the withdrawal of the heavy Allied naval escort and in the dispersal of the convoy; according to statements of prisoners, the convoy commander ordered the ships to scatter after the aerial torpedo attack.* The performance of German air units was beyond praise. Particular valor was displayed by the 1st Group, 26th Bomber Wing in its successful attack against the closed convoy formation.

The four cruiser escorts and three destroyers steamed toward the West upon receipt of the order to "scatter," leaving the merchant vessels to make haste for whatever ports they could reach. On 5 July, despite heavy fog in certain areas, the 30th Bomber Wing's three groups struck the convoy, completing the wide dispersal of the ships. A brief excursion was made by the German ships Admiral Scheer and Admiral Hipper, seven destroyers, and some auxiliary vessels. The force, under the command of Admiral Otto Schniewind, steamed out of the Altafjord, west of North Cape, on the morning of the 5th, but returned to base on orders from the Commander in Chief of the German Navy at

*The order to scatter was actually given by the First Sea Lord, Sir A. Dudley P. R. Pound. The first order called for "dispersal" or breaking of the large formation, but the second order demanded an "immediate" scattering of the convoy. This facilitated the German operations. See Roskill, Vol. II, p. 140.

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about 2100 hours, when it had become clear that submarines and German aircraft were operating against the convoy almost without opposition.* Fourteen Allied ships were sunk that day.

On 6 July German reconnaissance aircraft reported sighting only individual ships and a small convoy of four merchant vessels. The fact that the enemy ships were now scattered over an area 36 by 180 miles helps to explain why the 1st Group, 26th Bomber Wing failed to make good on a second aerial torpedo mission. This effort, which was directed against the small convoy in the area off the northwest coast of Novaya Zemlya, was further hampered by bad weather, which made it even more difficult for the planes to find their targets.

Because of the fog which covered the area north of 72° latitude, no action could be taken against the last ships traveling in convoy from the evening of 7 July, when they were discovered near the northwest coast of Novaya Zemlya, until the 9th. Then, five merchant ships were sighted in grid square 47 East 1151. Two groups, totalling 38 aircraft, of the 30th Bomber Wing were dispatched to attack these vessels, and succeeded in sinking a U.S. freighter of 7,000 gross register tons and in seriously damaging another ship of 8,000 gross register tons. Because of bad weather conditions, with a fog suddenly closing in on Banak, the 1st Group, 30th Bomber Wing had to be directed to land at Petsamo. The 2nd Group, however, was able to land at the Banak base before the ceiling came down.

On 10 July another attack was launched, this time by 16 Ju-88's of the 30th Bomber Wing and the Experimental Squadron against two merchant ships and four patrol boat escorts north of Iokanga. One freighter of 8,000 gross register tons was badly crippled, while another vessel of 5,000 tons was sunk and the other ships were damaged. A German U-boat reported that the steamer El Capitan (5,210 gross register tons) and a patrol boat were sunk by the Luftwaffe. This destroyed the last remnants of the convoy which were attempting to reach Iokanga.

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*Editor's Note: The German Navy was reluctant to risk its capital ships in losing propositions, but, in this case, the U-boats and the Luftwaffe were doing very well without surface ship assistance. The mission was cancelled by Grossadmiral Raeder in Germany.

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In another mission 18 Ju-88 planes of the 2nd Group, 30th Bomber Wing, from Banak, again struck the 8,000-ton freighter and set a destroyer on fire. As the remnants of the convoy neared the Soviet mainland Allied Hurricane fighters and P-2 twin-engine, reconnaissance, dive-bomber, and "destroyer" aircraft were sent up to protect the ships from German attacks. Because of the strong fighter defenses the effects of Luftwaffe strikes on the freighter could not be determined. Northwest of Iokanga, meanwhile, air units of the Fifth Air Fleet sank an Allied cargo vessel of 6,000 tons which was not a part of convoy PQ 17.

The air forces committed against the convoy consisted of 130 Ju-88 aircraft, 43 He-111 aircraft, and 29 He-115's. Of these planes, 20 He-111's and 26 He-115's returned without attacking. A total of 467,500 pounds of explosives were expended during these operations, as well as 61 aerial torpedoes. Because of the shortage of aerial torpedoes and unfavorable weather, the westward moving convoy, QP 13, was not brought under a general attack.

In the attack on convoy PQ 17, 1 cruiser, 1 destroyer, 2 patrol boats (4,000 tons), and 22 merchant ships (139,216 tons) were sunk by the Luftwaffe, the cruiser and 44,000 tons of merchant shipping being sent to the bottom by He-111's and the remainder by Ju-88's. Ju-88 aircraft also damaged an additional 8 merchant ships, totalling 52,000 tons, while He-111 units scored hits on 9 cruisers (46,000 tons). One other merchant vessel was damaged (a ship of 6,000 gross register tons) by an He-115.*

German aircraft and personnel losses included a single Fw-200 with its crew, 1 BV-138 reconnaissance flying boat and crew, 2 He-111's with crews, 2 He-111's from which only 2 men were lost, and 1 He-115, whose crew was rescued.

The activities of German submarines also deserve special mention. In many instances ship sinkings by air attack could only be positively confirmed on the basis of reports from U-boats. In one particular case, reports by submarines were the only indications that a heavy U.S. cruiser had been sunk on 4 July, since the two attacking aircraft were lost with

*Editor's Note: This agrees substantially with British and American figures. Roskill declares that 99,316 tons of cargo were destroyed. Vol. II, p. 143.

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all hands aboard.* Frequently U-boats gave the coup de grâce to ships damaged by air attacks and thereby furnished valuable information, often giving precise names, tonnages, and cargoes of ships concerned.

Air-sea rescue planes of Air-Sea Rescue Command IX (Kirkenes) brought in 36 prisoners of war besides the crews of planes from the 1st Squadron, 906th Coastal Group, which had been downed in combat at sea. The interrogation of these prisoners furnished valuable information and confirmed the successful results of Fifth Air Fleet units' attacks on wharves and other port installations at Murmansk. Information was also obtained from this source that units of convoy PQ 17, originally destined for Murmansk, had been rerouted early to Arkhangelsk by a radio message, part of which read, "because of unserviceable facilities for unloading at Murmansk." This was proof of the good results achieved in an air attack on that port. One captured American Quartermaster Mate also described the sinking of the aforementioned U.S. heavy cruiser.†

Operations against PQ 17 ceased on 10 July since no more ships were available as targets. Results of reconnaissance operations ordered by the Fifth Air Fleet from 7 July onward, covering the entire area north of Murmansk and the Norwegian-Finnish-Soviet coast as far as 90 miles, and the western approaches as well, indicated that it was highly improbable that even a single ship reached a Russian port.[28]††

The following teletype report was forwarded to the Commander in Chief of the Luftwaffe on 12 July 1942 by the Commanding General,

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*Editor's Note: Figures showing American ship losses (both British and American listings) do not substantiate the sinking of a U.S. cruiser in those waters during 1942. The identification of the vessel by the U-boat was probably incorrect.

†See footnote above.

††Editor's Note: These assumptions were somewhat too optimistic. By 7 July five merchant vessels had arrived in Matochkin Strait, and three of them reached Arkhangelsk. Three ships, the Silver Sword, Ironclad (U.S.), and the Panamanian ship Troubadour were escorted more than 20 miles into the ice field east of Spitzbergen by H.M.S. Ayrshire. There they hid out for two days, meanwhile painting themselves white for concealment. All made port in Arkhangelsk. A total of 13 ships survived the German attacks, which were highly successful, although not to the extent indicated in the Luftwaffe report. See Juergen Rohwer (ed.), Marine Rundschau (Navy Review), Frankfurt: E.S. Mittler & Sohn, August 1962.

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Fifth Air Fleet:

Herr Reichsmarschall:

I report the destruction of the large convoy PQ 17! Reconnaissance carried out on 10 July 1942 in the White Sea, the navigable western waters, along the coast of the Kola Peninsula, and in the seas farther to the north, found no trace of any merchant ship. The interpretation of reconnaissance photos of Iokanga, the last port for which units of convoy PQ 17 were headed, show that not a single merchant ship from that convoy reached that port.* As a result of the operations of the Fifth Air Fleet, I report the following ships sunk:

1 cruiser
1 destroyer
2 patrol boats, with a total tonnage of 4,000 tons
22 merchant ships, with a total tonnage of 142,216 gross register tons[29]

Operations Against PQ 18. On 1 August 1942 an assembly of ships, consisting of 1 battleship, 1 heavy cruiser, 1 light cruiser, 7 destroyers, 41 loaded merchant ships (totalling 167,000 gross register tons), and 3 tankers (totalling 19,000 tons), was detected in Hval Fjord in southwestern Iceland, with an additional 14 cargo vessels (totalling 11,500 gross register tons) lying at anchor in the roadsteads of Reykjavik.

Reconnaissance carried out three days later, however, revealed none of these ships, and it was immediately assumed that the vessels sighted earlier were ships of convoy PQ 18, whose formation had been foretold by intelligence agents, and that the convoy had already put to sea. A report received on 6 August from a German submarine tended to strengthen this conviction.

Immediate air reconnaissance was initiated over Iceland-Jan Mayen-Spitzbergen-Hinterlopen Straits-Olga Straits, and the western approaches to these areas, with special attention given to the usual convoy routes (where PQ 18 was assumed to be moving at not more than 8

*Editor's Note: Several merchant vessels and a few escorts did reach Iokanga, but they remained there only briefly before moving onward to the White Sea.

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nautical miles per hour). By 15 August, however, no convoy had been sighted, despite coverage of the area in question by 140 aircraft, and a total of 1,603 hours of reconnaissance. The possibility that the convoy might have been missed during periods of inclement weather seemed very strong. Although the search centered primarily upon PQ 18, reconnaissance units were also alerted to watch for a returning (QP) convoy, the movements of which might be timed to coincide with those of the eastward-moving convoy as had been the case before. The unusually small amount of enemy radio traffic, the pattern of enemy air activities, the negative results of the intense reconnaissance operations, the absence of strong enemy naval forces, and negative reports from German U-boats all seemed to indicate that PQ 18 had not put to sea after all. The German Command therefore believed that the ships observed at Iceland had simply moved out of the general harbor area for the purpose of assembling.[30]

The only enemy carriers available to cover the convoy were sighted in the Mediterranean, indicating that the convoy was not ready to sail. German air and naval commanders believed that the Allies would not dispatch another convoy to the Soviet Union without carrier protection, considering the disaster which had befallen PQ 17 in the Barents Sea.

After 17 August reconnaissance was restricted to the observation of anchorages in Ireland and Scotland, the waters between Iceland and the Denmark Straits, Spitzbergen, both sides of the southern part of Novaya Zemlya, the coastal waters of the Kola Peninsula, and the western approaches to Arkhangelsk. Although it was assumed that the Western Allies would take steps to improve their PQ system, it seemed unlikely that they would abandon their system of convoy shipments which carried supplies considered vital to the Soviet war effort. New types of British aircraft were expected to make an appearance during the next convoy operation. Soviet attacks on German air bases were also expected to be made during the passage of PQ and QP formations. The Luftwaffe, aware of these possibilities, took immediate steps to prepare the Glockensund airfield on Spitzbergen for more effective operations against the convoy.[31] Reconnaissance efforts were also emphasized between Spitzbergen and the mouth of the White Sea.

From 5 to 21 September the Fifth Air Fleet was involved in more or less continuous reconnaissance and combat operations against PQ 18. The convoy was sighted at sea for the first time at 0315 on 13 September about 25 miles southwest of the southernmost tip of Spitzbergen, and was kept under surveillance until 1800 hours. Attacks against the convoy were carried out by strong air-torpedo and bomber forces, mainly

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directed against the accompanying convoy escort, especially the British aircraft carrier Avenger.* At least 7 merchant ships, a tanker, and a destroyer, with a total tonnage of 49,000 gross register tons, were sent to the bottom, but at a heavy cost in torpedo planes.† Reports that the carrier had been damaged were not confirmed.

On the following day attacks were shifted from the carrier to the merchant ships, since the fighters on the small carrier had interfered very little with actions against other vessels. It was assumed that the carrier would remain with the convoy to the east of Spitzbergen, or within range of Soviet twin-engine fighters (about 180 miles north of the western route), and then accompany QP 14 to the west. Bad weather had had a great effect upon the attacks of 13 September, which had been none too successful for the Luftwaffe. Now the Fifth Air Fleet hoped to strike the convoy QP 14 on the 15th and perhaps the PQ 18 ships as well.

On 15 September strong forces of the 30th Bomber Wing and torpedo units of the 26th Bomber Wing were sent into action against PQ 18, but achieved very poor results. The ships were concealed by a cloud bank during the attack and remained under this cover. Owing to atmospheric interference, the DF signals of the contact aircraft could not be picked up, so that some of the attacking planes failed to locate their targets. Two merchant ships were damaged, another seriously damaged so that it can be assumed to have sunk, while a patrol boat was sunk and another damaged.

Attacks could not be made on 16 September because of weather conditions. The convoy was barely within striking distance at the time, and most of the approach would have had to be flown under bad weather with heavy icing conditions, and at the target site barrage balloons had been sighted by the contact planes.

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*Editor's Note: The Avenger was built in the United States, transferred to Britain under Lend-Lease, and joined convoy PQ 18 off Iceland 7 September 1942 along with other reinforcements. This was the first escort carrier to be used as part of the immediate escort of any PQ or QP convoy, and was sunk by the U-155 on 14/15 November 1942. See Rear Admiral (Ret.) Samuel Morison, U.S. Naval Operations in World War II, Vol. I, Boston: Little, Brown, & Co., 1947, p. 360.

†See Figures 11 and 12.

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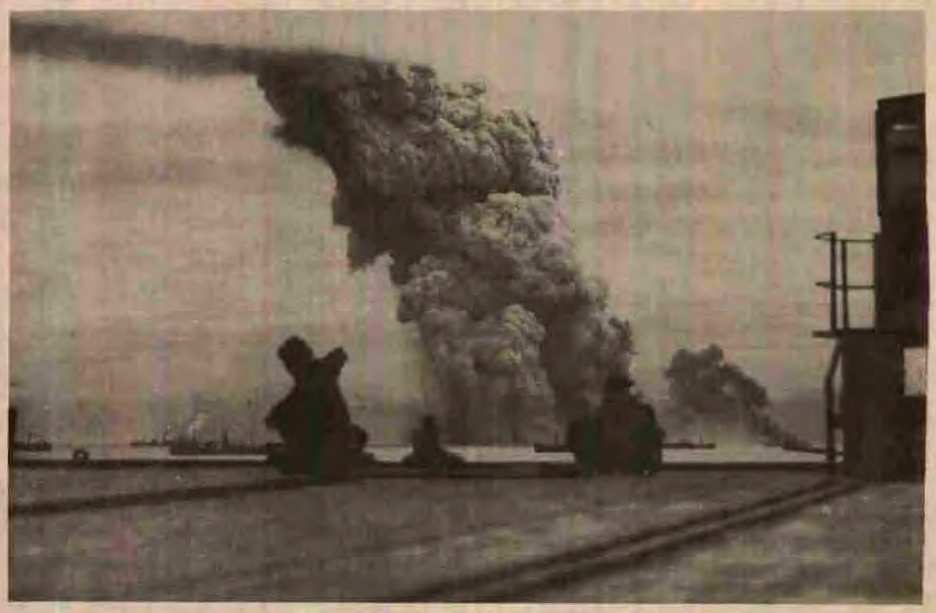

Figure 11
Merchant vessel in Convoy PQ-18 being bombed
by the Luftwaffe, September 1942
(Courtesy of the Imperial War Museum, London)

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Figure 12
General view of Convoy PQ-18 showing a near miss by German bombers. Destroyer H. M. S. Eskimo in foreground, September 1942
(Courtesy of Imperial War Museum, London)

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The attacks of 13 and 14 September had cost the 1st Group, 26th Bomber Wing 12 aircraft and 7 crews, while the 3rd Group, 26th Bomber Wing had lost 8 aircraft and 7 crews, a heavy cost for the results achieved!

On the 17th, Reichsmarschall Goering ordered "PQ 18 to be attacked with all available means until it entered port. Destruction of the ships in this convoy is of decisive importance."[32] On that day the convoy was sighted only once by a single reconnaissance plane equipped with Lichtenstein radar. After having the ships on his screen for five hours, the pilot finally caught a brief glimpse of them late in the afternoon. By this time the air-torpedo attack had been called off.

It was extremely difficult to determine the size of the convoy, partly because of the distances of the contact planes from the formation, and partly because the strength and positions of escort craft were continually changing. A U-boat reported that 28 merchantmen were traveling in the center of the convoy disguised as sub chasers. The carrier could no longer be found.*

The convoy was again contacted on 18 September 1942 at Mys Kanin Nos, and attacked by two groups of torpedo bombers and two groups of conventional bombers, despite unfavorable weather conditions. Many of the torpedoes used by one of the groups were duds, while the mists and lowering ceiling prevented another group from finding the target.

Altogether, the attacking units sank 6 merchant ships and 1 patrol boat, and damaged 7 merchant ships and a destroyer. Plans were made for another attack in the Gorlo Straits and in the White Sea by the rather weak air-torpedo forces still in operation, but worsening weather made further combat action impossible and enabled PQ 18 to reach Arkhangelsk, probably sometime on 19 September. The shallow water in Dvina Bay made it impossible to launch torpedo attacks upon the ships once they had reached the vicinity of Arkhangelsk. In the meantime, QP 14 departed unmolested.

Although the meager results achieved against PQ 18 were in part due to the hampering effects of inclement weather, the forces available for

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*The attack on the carrier was costly. British fighters were well able to fend off all German attacks on their ship and downed a large number of enemy aircraft in the same operations.

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the operation were in any case too weak to accomplish anything decisive under the prevailing conditions.

Entries in the war diary of the Fifth Air Fleet show that no convoys of any size were reported from October to December of 1942, and the assumption that the British would endeavor to move supplies to Russia in single ships, traveling alone, had proved to be correct. Reconnaissance was thus increased by the Fifth Air Fleet between Barents Island and Spitzbergen (8° - 42° East) to detect and attack individual merchant ships. On 15 December convoy JW-51-A departed from Loch Ewe, Scotland, protected by warships of the British Home Fleet.* This was not discovered by the Luftwaffe or by German naval units, and it arrived safely in Murmansk on Christmas Day of 1942.

Convoy JW-51-B, composed of 14 freighters, put to sea from Loch Ewe on or about 22 December, guarded by a light cruiser, 6 destroyers, 2 corvettes, a minesweeper, and four patrolling submarines. A distant shielding force of 1 battleship (Anson), 1 heavy cruiser, and 3 destroyers was provided by the British Home Fleet. On 24 December German air reconnaissance caught sight of the group, but bad weather soon hampered all attempts to keep the enemy formation under surveillance. A violent storm erupted on the 28th in the waters between Jan Mayen and Bear Island and separated a few convoy ships from the main body.

With the heavy artillery of the shielding force more than 100 sea miles away, another attempt was made by the German surface fleet to deal with an Allied convoy. On 30 December, a task force made up of the Admiral Hipper, the Luetzow, and 6 destroyers steamed out of the Altafjord to attack the convoy from astern, one wing under Hipper to strike from the north and the other under Luetzow to approach from the south.

On the following day the Hipper's force managed to draw off the convoy escorts and to sink the only radar vessel with the convoy, the minesweeper Bramble, while Luetzow closed to within two miles of the convoy from the south. German air units could not participate in the attack since the peculiar light conditions were such that a silvery glow was cast over all of the ships, making identification of friendly vessels extremely difficult. For this reason, Luetzow's commander, Capt.

*JW numbers were given to eastbound convoys and RA designations to westbound convoys after the arrival of PQ 18.

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Rudolf Stange, preferred to await a clearing of the atmosphere. This gave the defenders a chance to frustrate the attack completely in the south, and for destroyers and cruisers in the north to drive off Hipper, although the British destroyer Achates was put out of action and eventually sunk in the course of the battle. Hesitancy on the part of the German naval commanders, who were bound by further restrictions from Berlin, enabled a small force of two British cruisers and five destroyers to safeguard the entire convoy. A factor of no small consequence was the weather, which varied from fog to driving snow. In the course of the action, the Hipper sustained some hits, and the German destroyer Friedrich Eckoldt was sunk by the fire of the light cruiser Sheffield. The surface force retired to base to face the wrath of the Fuehrer, who announced early in 1943 his decision to decommission the heavy ships of the surface fleet. 33*

The plans of the Fifth Air Fleet to launch a sizeable torpedo attack against the remnants of the convoy were also frustrated by the unfavorable weather. The propitious operations of the mid-part of 1942, reaching its zenith with the attack on PQ 17, tapered off at the close of the year in a note of dismal failure for German air and sea commanders in the Far North, and in a sense of relief and satisfaction on the part of the Allies. 34

Critique of Luftwaffe Operations in the Far North

Mission

Although so far removed from other areas of military operations, the Far Northern Theater of Operations was of very special significance. The battle here had to be fought on two entirely separate fronts, and the attacks were made against equally varied targets, both on land and at sea. The front facing the Soviet Union ran roughly parallel to the Murmansk rail line and was therefore usually called the Murmansk Front or area. The very name describes the objective and mission of this front, the seizure of the Murmansk railroad.

The second front in the north was marked by the rugged contours of the Norwegian-Finnish northern coastline. Here again the designation

*Editor's Note: Grossadmiral Erich Raeder tendered his resignation on 6 January 1943 after a lengthy harangue by Hitler. Karl Doenitz, the German submarine exponent, was thereupon made Commander in Chief of the German Navy.

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of Arctic Front indicates the mission and objective of operations, the interdiction of Anglo-American and Soviet shipping in the Norwegian and Barents Seas, the White Sea, and the innumerable large bays and peninsulas in the area. In the overall conduct of the war the objective on the Arctic Front was specifically strategic, while that of the Murmansk Front was mainly tactical and local in nature.

An absolute closure of the Soviet Union's northern lifeline would only have been possible by an occupation of the entire northern coastal area as far as, and including, Arkhangelsk, and even in 1941 the Army and Luftwaffe forces in the Far North had been too weak to do this. They were even unable to reach the most important of the two southward leading rail routes in the area, the Murmansk railroad. Moreover, in 1942 the Lapland Army (XX Mountain Army) lacked the striking power to fight its way forward to positions which would have allowed it to seize at least a part of the Murmansk railroad.[35] Unfortunately for the Wehrmacht, the winter of 1941-42 was allowed to slip by without a decisive reinforcement of the ground forces in the Far North. Thus, it was possible for the Allies to pump enough supplies through this lifeline to keep alive the Soviet military body, which had been so drastically weakened from the operations of 1941, and to enable it to recuperate from the blow and counterattack.

In the Far North, as in other parts of the Eastern Front, the Luftwaffe again became the last hope to sever this supply route. It is in this light that the mission of the German Air Force in the Far North must be examined and assessed.

Over the Murmansk front the Luftwaffe was to render direct and indirect support to the Army. This tactical assignment, like those of the German air forces in other parts of the front, remained the primary task. However, independent operations, which were strictly strategic in character and were comparable only to Luftwaffe operations against British shipping in the West, were carried out against the vital Soviet supply artery on the Arctic Front. Thus the operations of German flying units in support of the Murmansk Front were local in character, while those in the Arctic were related to the overall conduct of the war.

The Main Effort

The shortest and most efficient of all supply routes to the Soviet combat areas was the sea line from Britain through the Norwegian, Barents, and White Seas. More than half of all imported supplies to the Soviet Union passed through northern waters. The remaining imports were about evenly distributed between ports in Iran and India, ports in

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the Far East such as Vladivostok and Nikolayevsk, and ports along the mouth of the Lena River.*

The importance of this northern sea route for the movement of supplies to Russia had already become evident during World War I. Therefore, operations to close this route, to hamper or prevent Allied shipping, and to destroy terminal points for Anglo-American deliveries in the Soviet Union were highly important and could even decide the issue in the East. Because of this fact it was considered sound military policy to maintain principal emphasis in the North on activities in the Arctic Front, an aim which found expression again and again in directives from both Goering and the Fifth Air Fleet.[36]

If crises developed on the Murmansk Front or if weather conditions prevented anticonvoy operations, air units were often assigned close support missions in an Army sector. In such instances, the Fifth Air Fleet always endeavored to determine the minimum number of aircraft needed to perform the mission successfully. Whenever any doubts existed concerning the proper use of air forces in support operations, the valuable and technically proficient aircrews of the coastal and anticonvoy units were allowed to rest rather than to be risked on the Army fronts. The possible loss of torpedo and mine-laying aircraft in conjunction with operations in direct support of the Army was another point of consideration in assigning missions.

Careful consideration was also given to air operations involving both land and sea action, since the dangers were multiplied thereby. Moreover, tremendous distances often had to be traversed in such flights, and the period of risk to the units was thus prolonged. The Fifth Air Fleet learned that when missions are manifold, such as was frequently the case in the Far North, the mission which would have the most decisive strategic effect on the war had to be given priority, even when acute problems of a tactical nature seemed to be urgent. Defeats in secondary areas had to be endured in some instances because Luftwaffe air strength could not handle all of the exigencies of the moment and carry out the vital long-range operation against Allied logistical support of the Soviet Union. Fifth Air Fleet units were normally employed in strict conformity to the principle of power concentration.

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The Command Organization

Although the cooperation between Army, Navy, and Luftwaffe in the Far North was generally good, the very nature of missions in this area called for an even more closely integrated command organization, such as a joint Wehrmacht command staff. All branches of the service had the mission of cutting either the supply route to Murmansk and Arkhangelsk or routes from these ports to the interior of the Soviet Union. Since this was a joint Wehrmacht mission, the execution of it should have been directed by a central command.

The only logical and effective method of severing these lines was to occupy the northern coastal areas as far as Arkhangelsk, but the German High Command lacked the resolution to move positively in this direction, and Wehrmacht forces available were unequal to the task. The specific mission of the German Army remained the protection of the coast by holding the Murmansk Front against all enemy attacks, and the Navy and Luftwaffe were drawn into the support of this mission, which was clearly secondary to the operations against Allied convoys. Yet, even for the task of holding the Murmansk Front, the most promising results would have come from directions by a joint command. In this connection, it is the opinion of the author that a better organizational structure could have been established and would have proven to be operationally efficacious in the Far North.* The following should have been required:

(1) A Joint Command Far North should have been established.

(2) Either a naval or Luftwaffe officer as chief of the command should have been appointed, selected on a merit basis, without inter-service jealousy.

(3) The staff should have been a purely operations staff, without being burdened down with troop service matters. Each Chief of Staff, Army, Navy, and Luftwaffe, should have been open-minded, with combat experience, and with dedication to the overall mission.

(4) All Wehrmacht forces committed for the execution of the mission should have been placed under the exclusive control of the Commanding General, Joint Command Far North.

(5) German flying units assigned for attack, reconnaissance, or defense tasks should have been consolidated under a single corps or division headquarters, as indicated.

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(6) While flying units were to be assigned by the air corps (or division) to the Murmansk or Arctic Front as an area of main effort, a responsible ground Air Commander, with a sound knowledge of the local tactical situation and of the climatic and geographical peculiarities of the area, should have been attached to the Lapland Army (XX Mountain Army) where he could call up air units assigned to him in times of crisis.

(7) All Flak forces should have been consolidated under a commanding officer of antiaircraft artillery or a divisional headquarters.

(8) For southern and central Norway, a separate, but unified, command should have been established for all branches of the Wehrmacht.

A joint command organization of this or similar type, which would not depend exclusively upon the good will and the voluntary collaboration of the services concerned, would have functioned better than the arrangement which was followed in the Far North, and with less friction and contention over the division of authority. Such a command would also have insured a sounder and more comprehensive grasp of the overall situation and the requirements of the time, a greater constancy in the development of power concentrations, a more flexible conduct of operations, and a speedier, more direct, and effective channeling of commands, as well as the advantage of advice for all agencies by competent specialists. 37*

Operations

Substantial air forces are essential for the destruction of large numbers of ships, but the flying units available to the Fifth Air Fleet were far too weak to deny the enemy the use of the sea route to Murmansk and Arkhangelsk or the land route from there to the Russian interior for any length of time. The Luftwaffe in the Far North was further hampered by periods of weather which precluded any sort of air missions, by the division of its forces between two separate fronts, and by the necessity to relieve serious crises facing the Lapland Army.

The Fifth Air Fleet wrought a considerable amount of damage upon Allied supply shipments, yet the total result of its attacks was never a permanent denial of the major supply route to the enemy. The general effect was to reduce the amount of supplies arriving in the Soviet Union from Britain and the United States, but not to curtail them. Even combat missions flown against supply depots, ports, electric power

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stations, and mining establishments were but partially successful. Operations against the Murmansk railroad might possibly have produced more satisfactory results if they had not been restricted to attacks upon installations along the open railroad lines and upon depots. Greater effectiveness would have resulted from missions against man-made structures along the rail route, especially those which could not be easily repaired. In this connection, it is of interest to note that German leaders studied the possibility of causing landslides by bombardment. According to an opinion received from the military geological advisors "particularly effective results" could be achieved in bombing if existing geological conditions were exploited.[38] It was also hoped that bombing attacks in marshy ground would cause destruction of the permanent railroad bed which would take considerable time to repair. Unfortunately, no records are extant to show the results of such operations.[39]

In order to launch successful attacks against sea targets, both single vessels and those in convoy, it was necessary to know the speed, course, formation, and composition of the ships or groups of ships and to work out a careful plan of operations. It was highly important to have a smoothly functioning ground service organization to assure punctual take-offs and assemblies of combat forces, but bad weather and unfavorable terrain at the airfields combined to prevent the regular achievement of this objective, and the mishaps were considerable.

German forces achieved the best results against convoys by combining aerial-torpedo and dive-bomber attacks, although in inclement weather torpedo attacks were the most successful. Because of the large number of Allied vessels which were sent to the bottom by German aircraft and submarines, convoys were eventually discontinued in favor of shipments by individual ships, which stood the best chance of escaping detection by air or U-boat reconnaissance, especially in periods of murky weather. The Fifth Air Fleet attempted to counter this move by introducing armed reconnaissance (bewaffnete Aufklaerung) tactics. Pairs or flights of aircraft carried weapons and explosives on reconnaissance missions so that they could immediately attack any observed merchant or war ship. The paucity of forces and the unfavorable weather limited the success of such operations.

Reconnaissance

Reconnaissance forces assigned to the Fifth Air Fleet were totally inadequate to cover effectively the vast area of the northern waters and coast lines. In the autumn and winter these units were impeded by frequent fogs, snow, and storms. Sometimes reconnaissance operations

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discontinued entirely, a fact which adversely affected all operations of combat units.

Weather reconnaissance was vital to German forces in the Far North, especially to give early warning of the sudden east-west weather changes which often struck the Arctic Front without notice. The constant threat of commando-type raids on the weather reporting stations at Spitzbergen and Barents Island forced the discontinuation of those centers, and the efforts to establish an automatically reporting radio weather station on Novaya Zemlya failed because of detection by Allied aircraft.

The so-called ice reconnaissance service was also important for operations against both convoys and single ships, and rendered invaluable service in noting the formation, thickness, and movements of ice bodies.

Ground Service Organization

Because of the long supply routes and the immense area to be reconnoitered, plans for the stockpiling of materials should have been worked out well in advance. Failure to do so caused periodic shortages of aviation fuel and forced the Fifth Air Fleet to reduce or completely curtail some of its reconnaissance, combat, and air transport operations.

The construction and maintenance of runways suitable for operations were exceptionally important in the Far North, but the Fifth Air Fleet lacked the means to develop a truly large-scale base of operations.

It was discovered that rolling snow flat in winter was quicker, required less labor, and was more favorable from the point of view of concealment than clearing runways and aprons. This experience was also confirmed in other parts of the Eastern Front.

Summary

Owing to the relative weakness of available forces, both numerically and with respect to types of units, fuel shortages, the immensity of the combat area, and changeable, often severe, weather conditions, only partial success could be achieved in military operations in the Far North.[40] The Luftwaffe was able to support the German Army in its defensive battles on the Murmansk Front, to damage and delay traffic on the Murmansk railroad line, and to sink and damage a large number of enemy ships, but efforts to achieve the strategically important objective for the overall conduct of the war, the severing of the logistical supply line to northern Russia, could not be fulfilled in 1942.

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Chapter 3

FIRST AIR FLEET OPERATIONS IN COMBAT ZONE NORTH

Military Situation in the North, Spring 1942

Soviet assaults broke forth in full fury in January 1942 all along the line held by the forces of Army Group North. Although these attacks were repulsed in the area around Leningrad, enemy shock armies succeeded in penetrating German lines at Ostashkov, Staraya Russa, and between Novgorod and Chudovo.[1] The situation was grave indeed. Because of clothing shortages, there were hundreds of German casualties from frostbite, and wounded personnel often froze to death during evacuation because of the lack of blankets. Soviet forces, on the other hand, were well prepared and equipped.

Army Group North eventually managed to halt this dangerous Soviet advance, but only by airlifting personnel from Germany, converting men from other arms and services to combat ground fighters, and by throwing in the last German reserves. Available personnel were hastily assembled from all services of the Luftwaffe and organized in Luftwaffe field battalions and field regiments, which were immediately armed and committed as ground forces to help close the numerous dangerous gaps along the Northern Front. The bulk of these units were soon consolidated into the first Luftwaffe Field Division,* which helped to defend the threatened Staraya Russa sector. On 9 January 1942 an infantry battalion was formed from staff personnel and units of the I Air Corps, and moved to the rear of the 126th Infantry Division for training by its new parent unit. Here it took over a security mission.

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*Editor's Note: These Luftwaffe field units operated under German Air Force officers as independent units attached to some ground force organization. This eventually proved to be an impractical arrangement, and although Luftwaffe officers had ground force training, it could not offset the difficulties presented by a lack of ground force experience in combat. Generaloberst Hans Friessner criticized these units as "a senseless waste of German blood on the battlefields." Generaloberst Hans Friessner (Ret.), Verratene Schlachten (Betrayed Battles), Hamburg: Holsten-Verlag, 1956, p. 228. The First Luftwaffe Field Division was commanded by Generalmajor Eugen Meindl.

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By mid-January 1942 the general situation in Combat Zone North had deteriorated considerably. Continually obliged to hold the lines with meager forces, Field Marshal Wilhelm Ritter von Leeb resigned his post as Commander of Army Group North and was replaced on 16 January by Generaloberst Georg von Kuechler.

Meanwhile Soviet assault forces had driven across the Volkhov River below Lake Ladoga, threatening to break the German grip upon Leningrad. German Army troops were fully occupied checking enemy incursions in this area as well as all along the Volkhov River, and, what was then even more crucial, they were confronted with Soviet inroads south of Lake Ilmen in the direction of Staraya Russa and a massive breakthrough at Ostashkov. The latter event ripped open the boundary between Army Group Center and Army Group North to a width of more than 100 miles (about from Kholm to Bely). Further exploitation of this breakthrough along the Dvina River southeast of Toropets would surely enable the Russians to flank Demyansk from the South, thereby encircling two German corps in this area. This Russian drive also appeared to be the northern wing of a giant double-envelopment operation aimed toward entrapping sizeable elements of Army Group Center around Vyazma.*

During this critical period, Hitler had to decide whether to attempt the withdrawal of endangered units or to follow his policy of creating "strongholds."/ In the case of the Demyansk-Kholm areas he decided to leave the units in place in hope that they would divert Soviet units which might otherwise have been used to better advantage against Army Group Center. Such was the situation in which the forces of Army Group North and its supporting First Air Fleet units found themselves by February of 1942.

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*The Third and Fourth Panzer Armies and parts of the Fourth and Ninth Armies of Army Group Center were threatened on their left by this breakthrough, and on their right by a major breakthrough south and west of Kaluga which thrust as far west as Sukhinichi. See Maps Nos. 4, 8, and 9.

/See Fuehrer Directive of 16 December 1941, Appendix I. See also p. 7.

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The I Air Corps in Winter and Spring Battles, 1941-42

During the Soviet winter counteroffensive which opened in 1941 and continued into 1942, the First Air Fleet (Generaloberst Alfred Keller) concentrated its efforts upon attacking Soviet forces in the Staraya Russa, Demyansk, and Kholm areas. It was in this period that Hitler commenced to declare certain towns or sectors as "strongholds" (festen Plaetze).* This resulted in a steadily increasing dependence upon the Luftwaffe for the air supply of such places, a responsibility which the First Air Fleet was required to assume in addition to its regular combat mission. The primary missions of the First Air Fleet thus became:

(1) The combat support and air transportation of supplies for the stronghold of Kholm.

(2) The combat support and air transport of supplies for the Demyansk stronghold area, generally known as the Demyansk fortress (Festung Demjansk).

(3) The combat support for perimeter defenses around the stronghold of Staraya Russa.

(4) The combat support for the German ground forces in the Volkhov penetration area.[2]

Flying units of the I Air Corps (General der Flieger Helmuth Foerster) continuously attacked the several areas of penetration, where they concentrated chiefly upon Soviet columns, settlements occupied by enemy forces, concentrations (especially armored concentrations), assembled troops, and artillery or antiaircraft artillery emplacements.[3]

In the Army Group North area Luftwaffe forces were employed almost exclusively in direct support of the German Army, which was then fighting desperately to check the Soviet counterattacks along the Volkhov

*Editor's Note: It should be pointed out that while holding out in "islands of resistance" could be justified in the case of Kholm and Demyansk because of the possibility of later threatening the Soviet position from this area, subsequent "holdout" positions were ineffective because they were not situated where they could threaten Soviet forces, and were, therefore, unable to induce large numbers of Soviet troops to remain in the area.

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and the serious breakthrough at Ostashkov. Because of these urgent situations, there was no opportunity in January 1942 for Luftwaffe interdiction missions against roads and railroad lines, with the exception of those along the Bologoye-Ostashkov route where successful attacks were made early in January.*

Of 66 trains attacked during these operations, 9 locomotives and 77 railroad cars were destroyed. German flyers also interdicted traffic at 17 places, seriously damaging the rails at 6 points, and heavily damaging railroad depots and surrounding track installations. Because of this preoccupation with support operations along critical sectors of the front, the First Air Fleet also had no chance to attack the Soviet supply columns crossing Lake Ladoga on the ice road.†

The Luftwaffe was called upon to airlift and air-drop supplies to a number of isolated ground force units. In the course of these operations it became clear that the available air forces were no longer sufficient to provide effective combat air support and simultaneously to air transport the requisite supplies for German ground forces all along the line. The I Air Corps was therefore reinforced on 17 January by the addition of the 1st Group of the 2nd Dive-Bomber Wing, and in mid-February by two Ju-87 groups, two He-111 groups, and one Ju-88 group.[4]

In February the I Air Corps' area of main effort was immediately to the south of Lake Ilmen, with some elements also participating in the battles around Volkhov, where the Russians hoped to score a breakthrough, and thereby open the way for an assault upon the ring around Leningrad.[5] The I Air Corps' targets were in the near vicinity of the front, which enabled the Corps on several occasions to strike Soviet troops during detrucking operations or en route to the front lines, inflicting heavy losses upon them. German commanders believed that the Russians would overextend themselves in carrying out their several offensives, but until the danger of Soviet attacks subsided, the tension was acute. Luftwaffe support therefore brought substantial and immediate relief to many of the hard-pressed German ground forces.[6]

By 20 February Army Group North had generally mastered the crises which lay before it, and the Wehrmacht had established a new

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*See Maps Nos. 8 and 9.

†A railroad was then in the process of construction by Soviet forces across the ice of Lake Ladoga.

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front in the Staraya Russa area from which a German counterattack could be launched. This was especially important because the fortress of Demyansk was now encircled by Soviet forces. As the month drew to a close the I Air Corps launched interdiction operations against the heavy Soviet rail traffic on the Bologoye-Toropets route, and caused serious disruption of communications over the Bologoye-Ostashkov line by destroying the railroad stations at Bologoye and Malaya Vishera.

German reconnaissance units secured valuable data for Luftwaffe missions against Kholm and the Staraya Russa and Demyansk areas, where initial Soviet operational movements had been detected. All roads and rail lines leading to the Soviet front lines and all Russian airfields in the area of Army Group North were kept under constant surveillance by the First Air Fleet. Reconnaissance reports showed an increase in the number of Russian units stationed at known airfields, which indicated that the Soviet High Command intended to pursue its winter offensive with increased vigor.

The First Air Fleet dispatched reconnaissance planes to secure photo-mosaics for the use of the Army in waging its counteroffensives south of Lake Ilmen, before Staraya Russa, and along the Volkhov River. Fighters, usually assigned to roving missions, were also employed as escorts for the attacking bombers and dive-bombers. Luftwaffe fighter units attacked Soviet troop concentrations and moving columns and assisted in the interdiction of rail lines by destroying locomotives.

Most of the flak batteries available to the First Air Fleet were employed for the defense of the various ground services and railroad installations in the Communications Zone. A number of units were committed with excellent results to ground-fire operations in support of the Army.

In mid-March the 1st Group, 77th Bomber Wing--the group then had a strength of only nine Ju-88 aircraft--was transferred to the First Air Fleet. At this time, support of the ground forces was still the principal concern of the First Air Fleet. Aircraft were therefore committed for the following operations:

Between 6 and 9 March 1942, a total of 935 First Air Fleet planes dropped 1,024 tons of bombs in order to relieve the German Army defenders at Kholm. From 13 to 19 March, the First Air Fleet supported operations of the I and XXXVIII Corps by helping to seal off the Volkhov penetration area; in these missions, 1,616 tons of bombs were dropped by 1,561 planes. During the last ten days of March the Luftwaffe

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mounted operations in support of Task Force von Seydlitz* (X Corps) which had been created for the purpose of reestablishing contact with the encircled II Corps at Demyansk. Here, 3,115 aircraft dropped 3,316 tons of bombs on enemy targets. In this way the Luftwaffe gave significant, if not decisive, support to German Army forces in the northern area.[7]

Reconnaissance missions in March revealed that the Russians had further reinforced their air forces in the vicinity of the front, especially by additional twin-engine aircraft, and that there was still substantially heavy enemy traffic operating over the Bologoye-Ostashkov-Toropets rail route which had to be interdicted. That month German fighters downed 359 Soviet aircraft north of Lake Ilmen, including 155 fighters and 42 bombers, and destroyed 128 fighters and 34 bombers in the area south of the lake.

The I Air Corps' operations in April centered upon direct support of the Army in its drive from the Staraya Russa area toward the encircled German forces at Demyansk.† Mud hampered the air operations as well as ground movements, but the Wehrmacht's counteroffensive went steadily forward. Bombers were used whenever possible to weaken Soviet positions in settled areas and fortified emplacements, as well as to sever Soviet supply routes. Small air units attacked enemy railroads with great success. At the railroad station at Volkhov very heavy damage was wrought by German flyers, a fact which was later confirmed by intercepted Russian radio communications. Soviet night fighter airfields were meanwhile attacked, which resulted in numerous barrack and aircraft fires.

Luftwaffe reconnaissance detected no material changes in the number or type of Soviet planes at the airfields in the northern sector of the front during April and May, and traffic on the ground appeared to be of the same intensity, except for enemy routes of communication immediately behind the front lines where increased activity was clearly discernible.[8]

During thawing or muddy periods Luftwaffe reconnaissance units kept the area behind the enemy front under constant surveillance in order to determine whether ice or other special conditions were present which might make the terrain stable enough for troop or supply movements. This service was invaluable to German intelligence officers who had to plan their operations in part on these assessments of enemy movement capabilities.

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*Organized under Generalleutnant Walter von Seydlitz-Kurzbach. See biographical section concerning the subsequent notoriety of Seydlitz.

†See Map No. 9.

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The Airlift for Kholm and Demyansk

Because of Hitler's decision to maintain certain key points and salients as "strongholds," the Luftwaffe was forced for the first time in World War II to carry out a large-scale airlift of personnel and materiel to various sized army units. In Combat Zone North two places figured prominently in this activity, Kholm and Demyansk.

Kholm

Since 21 January 1942 Kholm had been completely encircled by Soviet forces. The stronghold was defended by a force of about 3,500 men from various types of units and several arms and services, under the command of Generalmajor Theodor Scherer. This force had tenaciously and successfully defended its position against all Soviet attacks.

The battle area of Kholm was so small that transport aircraft could not make a landing, and the only existing airfield in the pocket was situated in the immediate vicinity of the main line of resistance, where it was constantly exposed to direct fire by all enemy arms. At the end of February 1942 an attempt was made to land on this field. This operation, ordered by the First Air Fleet Commander against the advice of the Chief of Air Transportation, resulted in the loss of five out of seven Ju-52 transports and part of the aircrews participating in the effort. The Luftwaffe therefore hazarded no further ventures of this sort, and all German commanders agreed that supplies could only be brought in to the Kholm area by air-drop.

The initial airlift operation to Kholm was strengthened by the use of DFS-230* cargo gliders (each with a one-ton capacity), which were towed by Ju-52 aircraft, arriving in the target area during the hours of

*Editor's Note: The DFS-230 is sometimes known as the LS-230. Designed by the Deutsches Forschungsinstitut fuer Segelflug (German Research Institute for Glider Flying) at Griesheim-Darmstadt, it was a pioneer towed glider type, test flown by the noted German aviatrix Hanna Reitsch. A top secret until 1940, when it appeared in combat in Belgium, the 230 was widely used. See Figures 13, 14, and 15. See Karlheinz Kens u. Heinz J. Nowarra, Die Deutschen Flugzeuge 1933-1945 (The German Airplanes 1933-1945), Muenchen: J. F. Lehmann Verlag, 1961, pp. 131-132. Cited hereafter as Kens and Nowarra.

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Figure 13
DFS-230 cargo-glider coming in for a landing at Kholm

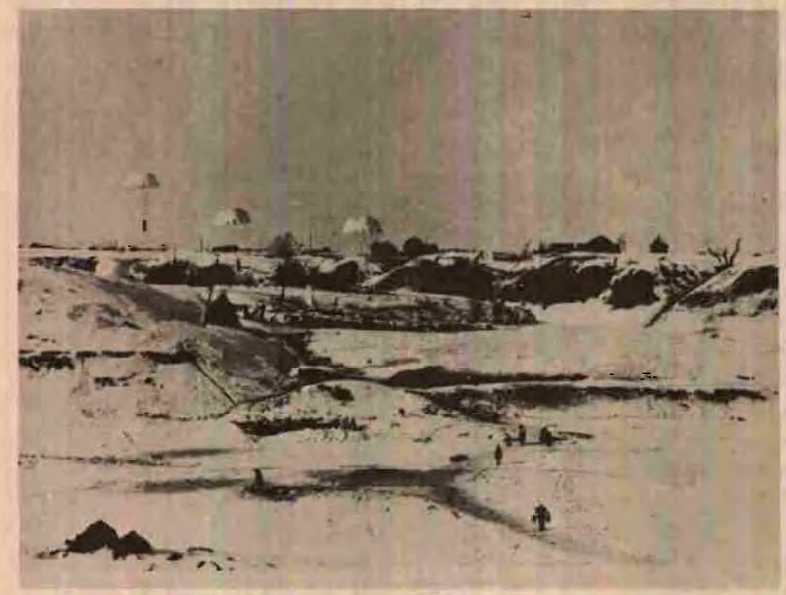

Figure 14
Supplies being dropped to the defenders of Kholm

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Figure 15
Defenders of Kholm unloading supply containers

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dusk and dawn. Larger gliders (Go-242's),* towed by He-111's of the 5th Special Purpose Bomber Group, were used for carrying very heavy items of equipment. The payload of Go-242's was about 2.5 tons.[9] Gliders landed on the airfield during the first stages of the operation, but very often both gliders and cargo were lost through hostile enemy action. Even when they landed without mishap, they had no means of taking off again, so the crews remained in the pocket to participate in the defense. As the German-held pocket became increasingly smaller in size, only DFS-230's were able to make landings, and then only on one street in the village. Eventually, even this was impossible.

Planes engaged in the air-drop missions took off from the airfield at Pskov-South. The supply containers for the drops were packed by an efficient supply organization and were delivered to the drop area by the squadrons of the 4th Bomber Wing, which were later reinforced by a special bomber group consisting of transport planes. Drops were generally made from an altitude of about 1,300 feet. The approach leg of the flights passed from the southwest over the wedge which had been driven ahead in the direction of Kholm by German troops. The remainder of the flight, however, was over Soviet-held territory, in which the enemy had quickly concentrated a large number of antiaircraft guns. The German transport planes had to fly extremely low to insure that their containers would land within the very narrow drop zones. In so doing, they were constantly exposed to fire from Soviet infantry weapons. Even if the planes succeeded in approaching unmolested, the drop run had to be made at altitudes which were ideal for ground defensive fire. Despite every possible precaution, including taking advantage of the concealment offered by the forested areas west of Kholm, considerable losses were unavoidable. Of course, any aircraft landing within sectors held by partisans had to be considered an outright loss.

Because of these factors, wing headquarters decided to reduce the total number of planes carrying containers on each mission to Kholm in order to include a number of armed combat planes which could neutralize Soviet ground defenses with bombs and weapons fire. Gliders used in the airlift mission were given similar protection.[10]

Immediately after the Russians had encircled Kholm the Wehrmacht launched an attack to relieve the besieged German garrison. This effort

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*Editor's Note: The Go (Gotha) 242 was first used in quantity in 1942, and was constructed to allow the inclusion of motors for independent flight. See Kens and Nowarra, pp. 244-245.

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soon came to naught. Another drive to reach the beleaguered units was made on 6 March 1942, and, after good initial progress, bogged down in the face of snow, ice, and large Soviet forces. On 31 March the attack was broken off. These efforts had only a temporary relief effect upon the enveloped forces, despite air support by two He-111 groups of the 4th Bomber Wing.

Later, about mid-April, units of this bomber wing carried supplies to Kholm at night with a fair measure of success. Operations of the 4th Bomber Wing against Soviet troops enveloping the Kholm area helped to relieve the defenders within the pocket and supported the drives by relief forces launched from the outside. In May success was finally achieved in the third major assault. An attack was launched on the 4th and at 0200 on the following day German Army forces drove in to Kholm from the West.[11]

For three and one-half months (103 days) General Scherer's courageous combat group held out against exceedingly heavy Soviet attacks, during which time it was ably supported by combat and air supply missions of the reinforced 4th Bomber Wing "General Wever."[12]*

Demyansk

Operating from the Kholm area, Soviet forces had advanced in mid-February 1942 along the Lovat River in the direction of Lake Ilmen, had breached the lines of the Sixteenth Army between Demyansk and Staraya Russa, and had enveloped the II Corps and part of the X Corps, comprising six divisions.[13] Thus, approximately 100,000 German troops were pocketed in the Demyansk area. The Luftwaffe, in addition to its mission of furnishing continuous air support to the Army, was again called upon to airlift vital supplies into the new stronghold area, an operation which had to be carried out simultaneously with the airlift to Kholm.

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*Named after Generalleutnant Walter Wever, the first Chief of the General Staff of the Luftwaffe (15 May 1933-3 May 1936), and one of the founders of the German Air Force, who believed strongly in the use of strategic air power. See Generalleutnant a. D. Andreas Nielsen, The German Air Force General Staff, USAF Historical Studies No. 173, Maxwell AFB, Alabama, USAF Historical Division, RSI, 1959, pp. 28-30.

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During the winter battles the First Air Fleet initially had only one air transport group, the 172nd Special Purpose Bomber Wing, stationed at Pskov-South. This group was at first employed exclusively for flying in urgently needed supplies or spare parts from the Zone of the Interior. Very soon, however, poor roads and rail routes made it necessary to airlift all sorts of supplies, including ammunition, fuel, and other items for army units. While the 4th Bomber Wing was able to handle the airlift and the combat support of Kholm, it could not carry the amounts of supplies needed within the considerably larger pocket of Demyansk.

At the time it was impossible to release additional bomber units from the First Air Fleet for this purpose, and despite the fact that the 4th Bomber Wing had barely sufficient strength to effectively accomplish its support mission, 4th Bomber Wing units were in even more critical demand at all threatened parts of the front.

Army Group North intended to counterattack as soon as possible in order to reestablish ground contact with the surrounded II Corps. It was impossible, however, to determine in advance when such a counterattack could be made or how much time would elapse before the attacking force could achieve its objective. It was therefore equally difficult to predict how long supplies would have to be airlifted to the 100,000 troops in the Demyansk pocket. On 13 February 1942, after lengthy telephone conversations with Hitler and with the Sixteenth Army Command, Generaloberst Franz Halder, Chief of the Army General Staff, called the Luftwaffe General Staff and the headquarters of Army Group North, and made the following comments concerning the situation of the Sixteenth Army at Demyansk:

> A patchwork solution [of the problem] favored by the Sixteenth Army will be opposed. The Fuehrer clearly shares my view that only a complete solution through an eastward attack from Staraya Russa can be considered, and all means available to the Army and the Luftwaffe must be brought together for this purpose. The attack is not to begin before the 17th, probably on 18 February.[14]

Hitler then promised a number of units for the impending operation, including five police battalions, the Norwegian Legion of 1,100 men,* and

*Editor's Note: Probably the SS Panzer-Grenadier Regiment "Norge," recruited from volunteers in Norway.

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one battalion of the SS Bodyguard Division (Leibstandarte Adolf Hitler).* In addition, and most vital to the air operation, the Fuehrer promised to make 337 transport planes available to the First Air Fleet by 18 February. These would be badly needed if the Demyansk pocket was to be logistically supported with 300 tons of food and materiel daily.[15]

The Chief of Air Transportation for the Luftwaffe,/ assigned to the VIII Air Corps in Combat Zone Center, received orders in early February 1942 to transfer the 9th Air Transport Group to the First Air Fleet, but after the envelopment of the II Corps of the Sixteenth Army in the Demyansk area he was ordered (18 February) to move with all of his units to the First Air Fleet area. Here he was assigned the task of transporting by air all necessary food and supplies into the Demyansk pocket, and evacuating casualties and other critical items from the enclosure. For these operations the air transportation chief was placed under the command of the First Air Fleet (then with its headquarters at Ostrov) and assigned the command post at Pskov-South airfield.

On 19 February seven air transport groups were available for the airlift, and by the end of the month four additional groups and elements of the 105th Special Purpose Group were brought in from the Fourth Air Fleet in the southern area. Five more transport groups arrived in early March from the schools for instrument and advanced aviation training.

The Supply and Administration Officer, Army Group North was responsible for the procurement of supplies for all Army units, including the encircled troops at Demyansk, in Combat Zone North, and for transporting supplies and equipment to the air transport units. The logistical operations in support of the Demyansk forces were directed by Staff "Toppe,"// to which the surrounded II Corps addressed its requisitions. Casualties flown out of the pocket were received and treated by the German Army Medical Service.**

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*Editor's Note: Hitler's SS Bodyguard Regiment was formed in 1934, and saw action in Poland and France as a motorized regiment, where it served with distinction. In the winter of 1940-41 it was expanded to divisional size as the 1st SS Panzer-Grenadier Division "Leibstandarte Adolf Hitler," and served in the Balkans and in southern Russia before the Demyansk commitment.

/Col. Fritz Morzik of the Luftwaffe, acting under the Commander in Chief of the Luftwaffe, Supply and Administration Branch.

//Named after its leader, Col. Alfred Toppe.

**See Figures 16 and 17.

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Supplies needed by the air transport units were procured from Luftwaffe Administrative Command I or through the Chief of Supply and Administration, First Air Fleet. By tacit agreement the Chief of Air Transportation was allowed to make use of his own administrative channels, through the Office of the Commander in Chief of the Luftwaffe, Chief of Supply and Administration (Branch 4) in Berlin, in order to assure the air shipment (by replacement aircraft or by aircraft returning from repair shops) to the transport unit of all necessary parts and equipment. These materials came either from air ordnance depots, from the Chief of Special Supplies and Procurement, or directly from the factories.

The Chief of Air Transportation assigned a liaison officer to the Supply and Administration Officer, First Air Fleet (Riga), and another one to the Supply and Administration Officer, Army Group North (Pskov). Luftwaffe Administrative Command I (Riga) also assigned a liaison officer to the headquarters of the Chief of Air Transportation.

The communications systems initially available to the Chief of Air Transportation were completely inadequate, and during the period of the airlift were only improved enough to meet the requirements of this rather sizeable operation.

No specific fighter units were assigned to escort the transport formations, but the 1st Bomber Wing was instructed to cooperate closely with the Chief of Air Transportation in matters of weather observation and armed reconnaissance.

Although cooperation was smooth between the First Air Fleet Supply and Administration Officer and the supply operation agencies of Luftwaffe Administrative Command I, considerable difficulties were at times encountered in dealing with Army supply agencies. This was due to a lack of experience on the part of the Army in air transportation of supplies and to the hampering effects of bureaucracy and poor organization, which at times resulted in late arrival of supplies or in the delivery of materiel to the wrong areas.

The Chief of Air Transportation took steps through the Supply and Administration Officer, Army Group North, to establish large stockpiles of all types of supplies at each of the airfields and to assign qualified personnel and adequate auxiliary personnel to insure proper loading of the planes, thus avoiding serious difficulties thereafter.

Transport planes landed at Demyansk and Peski (the only two airfields within the pocket), where ground conditions precluded transport

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operations except during the hours of daylight. The airfield at Demyansk, formerly a Soviet advanced tactical airfield, had a runway 50 yards wide and 880 yards long, but without any other installations. Peski was strictly an emergency airfield with a runway of rolled snow. It was placed in service early in March, but could only be used by the very best pilots.

Operations of the transport groups were facilitated by a well organized command system, which made it possible at times to handle up to 600 aircraft daily at the Demyansk airfield. The operation was further enhanced by combat seasoned Luftwaffe ground and aircrews, who had gained wide experience during their missions in Combat Zone Center in the winter of 1941-42 and were familiar with the difficulties imposed by Russian winters.

The Chief of Air Transportation and his units were inadequately informed by the First Air Fleet with respect to the German and Soviet air situations, especially during the initial stages of the operation. Thus, on one occasion Soviet airborne troops were able to land in the pocket and maintain a temporary foothold. The first information received by the Chief of Air Transportation concerning this development came from his own aircrews, which had come under fire from the ground and had sustained considerable damage to their planes while flying over the Soviet airhead. At first the German transport aircraft flew in pairs or in flights at low levels, but the steadily increasing Soviet antiaircraft fire (some of it from highly mobile self-propelled guns) soon forced them to fly in groups of 20 to 40 planes at altitudes ranging from 6,000 to 8,000 feet. Soviet fighters were not particularly aggressive, and rarely attacked German aircraft flying in formation if these units defended themselves with all their guns. Instead, they attacked almost exclusively single, unprotected Ju-52 planes. Losses due to Soviet fighter action were therefore quite small.

German fighters were usually assigned roving missions over the approach and return routes and over the landing areas in the pocket, since it was almost impossible to assign them as escorts because of the slow speed of Ju-52 aircraft.* There was also no possibility of stationing even a few fighters inside the pocket, since this would have seriously hampered the supply undertakings on these small airfields.

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*The Junkers Ju-52 transport was a tri-motored aircraft designed in 1930, with a top speed (loaded) of less than 180 m.p.h. See Figures 18 and 19.

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Figure 16
Evacuation from the Demyansk pocket, 13 March 1942

Figure 17
Wounded Wehrmacht men arriving at a Luftwaffe base from the Demyansk pocket

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Figure 18
Panje wagons unloading Ju-52 transports, Demyansk, 1942

Figure 19
Ju-52 transport aircraft en route to the Demyansk pocket, 1942

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Aircraft landings were seriously impaired by surprise Soviet air raids, chiefly low-level bombing and strafing attacks, which invariably resulted in German personnel and aircraft losses. Because of the reduced number of landings which could be made inside the pocket, supply operations were slowed appreciably. The Luftwaffe was able to proceed with landing, loading, and takeoff operations at the home bases of transport units, however, because the Russians seldom carried out attacks on these points. Without question, enemy attacks against these airfields could have jeopardized the entire supply movement to the Demyansk pocket. Even if such attacks would not have brought the German supply movements to a complete standstill, the airlift operation would have been so greatly diminished that it would have considerably reduced the defensive capabilities of the encircled II Corps.*

Meanwhile significant developments had come about in the ground situation. Realizing how difficult it would be for the air forces alone to carry out the full logistical support of such a large organization as the II Corps at Demyansk and the obvious necessity of reestablishing ground contact with the encircled forces, Army Group North had instructed the X Corps (situated south of Staraya Russa) to launch an immediate relief attack. This drive was preceded on 20 March by massive air attacks against the Soviet field positions.[16]

The weak forces committed in the attack made very slow progress against tenacious Soviet resistance, especially during the periods when air support had to be ruled out because of unfavorable weather conditions. After several interruptions in the operation, the spearhead units of the attack force fought their way through a 24-mile wide strip of hotly contested Soviet territory and reached the Lovat River at Ramusheva. On 20 April 1942 these forces met a II Corps combat team from the pocket which had been fighting its way westward since 14 April to reach the relief unit.[17]

The reunion of X and II Corps positions, however, did not end the tasks of those forces. The land corridor had to be materially strengthened and consolidated so that supply columns could move freely through the passageway.[18] On 1 May a ferry service was established across the Lovat River at Ramusheva, at the site where a bridge was later erected, and on the following day supplies to Demyansk again moved via the land route.

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*See Figure 20.

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Although a corduroy road was immediately constructed through the swampy terrain to the Lovat River, supplies still had to be airlifted to the II Corps on a considerable scale since the ground corridor was so narrow that sections of the only road through the area were under constant Soviet fire. Moreover, the land route, much of which consisted of corduroy sections, could not sustain enough traffic for the entire logistical support of units still in the Demyansk pocket. Consequently, a large part of the supplies which were carried forward by rail as far as Tuleblya were airlifted from there to Demyansk by low-flying aircraft. After about 20 May the bulk of the air transport units were sent to other combat areas or to the Zone of the Interior. Three groups remained behind, however, until October to continue the air movement of supplies to the II Corps.

On the whole, the airlift operation to Demyansk can be considered to have been almost a complete success. For a period of several months approximately 100,000 troops received all their supplies by air, and from then on until the area was evacuated in the winter of 1942-43, large forces in the Demyansk area remained almost exclusively dependent upon airborne supplies.

Throughout the entire operation, Luftwaffe planes flew 32,427 missions carrying supplies of all kinds, and 659 missions carrying replacement personnel. Ingoing planes flew 64,844 tons of material and 30,500 troops into the pocket, while 35,400 persons (a few transfers, but mainly casualties) were evacuated on the return flights. During the entire period, 18 February to 19 May 1942, an average of 302 tons of goods were airlifted daily to Demyansk, fulfilling the assigned objective of delivering 300 tons of supplies per day. In performing these missions German transports consumed 42,155 tons of fuel and 3,242 tons of lubricants.[19]

Battles Along the Volkhov River and in the Leningrad Area

Ground Situation

Between 10 and 13 January 1942 the Soviet Second Assault Army, led by Gen. Andrei Andreevich Vlasov, broke through German positions across the Volkhov River between Novgorod and Chudovo, severing road and rail connections between those communities and throwing back the German Eighteenth Army along a 20-mile front. This penetration was expanded during the latter half of the month to a depth of 36 miles, thereby threatening the rear of the Eighteenth Army, and indirectly the ring

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Figure 20
German aircraft at Demyansk destroyed
by a Soviet air attack, 1942

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around Leningrad.* In order to stem the tide, German commanders made all sorts of improvisations. Service forces and limited-service personnel, as well as Luftwaffe troops, were employed in the line with combat ground forces.†

The broad Soviet advance was prevented from developing into a rout by German pockets of resistance all along the front. These units, with the help of the I Air Corps, were later of substantial value in cutting off one Russian force and in assisting other German units to establish a strong interior front.

On 9 March the Soviet Fifty-fourth Army, possessing 12 divisions and a force of 200 T-34 tanks,†† launched a massive assault in the swampy region south of Lake Ladoga, forcing back the German line nearly 12 miles. This 90,000-man attack force was eventually slowed, and after three weeks of hard fighting brought to a standstill by a smaller, but determined, Wehrmacht organization.[20] A drive begun on 15 March by the SS Police Division and the I Corps cut off the Soviet assault force's supply line and established contact with the XXVIII Corps from the south.

German counterattacks in April gradually forced the Soviets back in the area north of Novgorod. By 13 May German troops reestablished the old main line of resistance and Russian forces were obliged to withdraw. One week later German units began their pursuit of the retreating Soviet forces. Between 2 and 26 June the Soviet Fifty-ninth Army attempted to recover the lost position, but after losing 60,000 men the project was abandoned.**

The Luftwaffe

January and February of 1942 were especially critical for the Luftwaffe as well as for the German Army. The Russians had made huge gains and threatened to envelop large parts of Army Groups North and Center. Some units of Army Group North were already in serious danger. The I

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*See Maps Nos. 8 and 9.

†See p. 68.

††Editor's Note: The T-34 was highly regarded by both Soviet and German personnel. Its wide tracks permitted easy mobility in the snow, and its low silhouette made it a difficult target. It was also the proper width for transport over Soviet railroad bridges.

**See Map No. 10.

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Air Corps was instrumental in halting the advance of Soviet forces on the left wing of Army Group North, so that a defensive line could be reestablished.

Generaloberst von Kuechler, commanding Army Group North, and his army leaders laid plans for a counterattack to begin between 7 and 14 March 1942, an attack to be supported by heavy air support from both the northern and southern side of the Soviet penetration area. The plan was to pinch off the Russian salient and envelop and destroy those forces west of Volkhov. Hitler ordered a thorough air preparation of several days before the opening of the attack. Luftwaffe bombers were to damage or destroy Soviet forest encampments in the area. To avoid heavy losses in the swampy terrain, German units were to seal off Russian troops in the marshes and starve them out.[21]

The entire operation was postponed a number of times, beginning with 9 March, because adverse weather precluded a full implementation of the air attacks.[22] Such delays were displeasing to the Commander of Army Group North, but the Fuehrer insisted on waiting until unrestricted air operations could be made.[23] After another postponement on the 13th, the Volkhov River assault began on 15 March. Only slight initial gains were made with the southern wing, but in the north greater successes were achieved.[24] By 30 and 31 May the counterattacking Wehrmacht troops succeeded in sealing off the Soviet penetration, and in enveloping the invading Russian organization. This pocket was then gradually reduced and destroyed.

The Volkhov River battle ended on 29 June with the annihilation of the Soviet breakthrough force, which had failed to achieve its objective of relieving Leningrad. Red Army losses were heavy, and among the important Soviet prisoners taken was General Vlasov,* who later commanded a Russian volunteer unit organized by the Wehrmacht.

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*Editor's Note: Besides Vlasov's Russian auxiliaries, a band of irregulars was formed to support Wehrmacht forces near Bryansk in late 1942. This group was commanded by the ruthless Bronislav Vladislavovich Kaminsky, a Russianized Pole, whose actions were so brutal and excessive that they shocked the SS and German Police units. See Alexander Dallin, The Kaminsky Brigade: 1941-1944 - A Case Study of German Military Exploitation of Soviet Disaffection, Technical Research Report No. 7, Maxwell AFB, Alabama: Human Resources Research Institute, Air University, 1952. See biographical section. See also p. 86.

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The I Air Corps played a prominent part in this major victory by supporting the Army during the envelopment operations and by making direct attacks upon the encircled Soviet forces in the pocket. Other forces of the First Air Fleet, which were not committed at the points of main effort at Kholm and Demyansk and, for a time, in the aforementioned operation, went into action to seal off a Soviet penetration at Pogostye, about 21 miles south of Lake Ladoga.[25] Again and again units of the I Air Corps had to be employed in this area in support of the ground forces.

Besides its main mission of supporting the Army, the air fleet also had the concurrent assignment of attacking heavy units of the Soviet Baltic Fleet in their ports at Leningrad and Kronstadt. Owing to the need for continuous support of the ground actions, especially around Demyansk, units of the First Air Fleet could attack naval vessels on a few days only. For example, in the period between 4 and 30 April the Soviet Baltic Fleet was attacked on only six days.

Concentrated German air attacks seriously damaged heavy vessels of the Soviet Navy while in port at Leningrad. These raids, although infrequent, were carried out by 228 bombers and dive bombers, which dropped 228.8 tons of bombs. During these missions, the following results were achieved: the battleship October Revolution sustained three direct hits, the heavy cruiser Kirov was set afire by at least one direct hit, the heavy cruiser Maxim Gorki received two direct hits, a destroyer of the Storoshevoy class was struck by one direct hit, and an unidentified heavy cruiser capsized and sank after being bombed. In addition, the training ship Svir was heavily damaged and took on a critical list. Numerous other hits were made upon shipyards and port installations.[26]

In the summer the First Air Fleet was still needed to support the ground forces at various points along the front. On 19 July 1942 the I Air Corps Headquarters was withdrawn and transferred to the Fourth Air Fleet, where it was reorganized as Air Command Don.[27] Flying units previously controlled by the I Air Corps were then, for a time, placed under the direct command of the First Air Fleet.

As early as 5 April* Hitler had announced his intention of capturing Leningrad in the autumn. It was, in fact, an old dream of his. The Eleventh Army of Army Group South, commanded by Field Marshal Erich von Manstein, was originally ordered to cross the Straits of Kerch, but

*Fuehrer Directive No. 41 of 5 April 1942. See Appendix II.

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was soon earmarked to move 1,000 miles to the north for the attack against Leningrad. The assault artillery used against Sevastopol was to be employed to further strengthen the operation. Plans called for exceptionally heavy air support such as that used to bring about the fall of the fortress of Sevastopol. The VIII Air Corps was selected for this mission. The operation called for strong tactical air power--fighter bombers and dive bombers--to be concentrated for the initial attack, and a special Air Command Staff to be established under the command of Lt. Col. Torsten Christ with headquarters in the Siverskaya area. This latter organization was to handle all preparations for aerial undertakings.[28]

While the Eleventh Army made ready for the Leningrad offensive, an increasing number of reports from air reconnaissance and radio monitoring services indicated that the Russians were preparing to renew their attack against the Eighteenth Army on a large scale. This impression was further strengthened by the admissions of Soviet deserters, who declared that the Soviet command planned an attack for 17 August south of Lake Ladoga. By 25 August substantial enemy rail movements were observed in the direction of the German front, while Soviet headquarters appeared to be transferring toward the Volkhov River line.[29]

On 27 August the Red Army opened its attack against the part of the German Eighteenth Army which faced east. At first these assaults were beaten off, but by the following day a considerable penetration had been made south of Lake Ladoga.[30] Thus, instead of carrying out the planned offensive against Leningrad, the Wehrmacht was forced to accept battle south of Lake Ladoga, where the Eleventh Army was needed at once to stop the enemy advance.* With the help of the First Air Fleet, German counterattacking forces striking against the Soviet salient from the north and the south were soon able to sever the enemy advance force at its base. Operations to annihilate this force then began. Soviet attempts to relieve the encircled unit by a breakthrough from outside the pocket (from the east) were soon frustrated by German troops. A similar attack, launched by eight divisions from Leningrad across the Neva River and from the line south of Leningrad, suffered the same fate.

Russian troops in the pocket between Mga and Gaytolovo adamantly refused to surrender and, although their situation was hopeless, fought on in desperation, attempting again and again to break out. Since the Russians were confined to a heavily forested area, German infantry assaults upon

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*Editor's Note: Von Manstein commanded the Eleventh Army until 21 November 1942, when he became Commander of Army Group Don.

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their positions would have produced too many Wehrmacht casualties, so siege artillery and bomber aircraft came into play. A Soviet officer's diary later confirmed how terrible the incessant German shelling and bombardment must have been. In a few days the forest was reduced to a giant field of craters interspersed with stumps and splinters. Yet Russian soldiers, powerfully influenced by threats from Soviet Commissars, remained fighting to the last. Finally, on 2 October, the firing ceased.

Of the 16 Soviet infantry divisions, 9 infantry and 5 tank brigades which began the attack against the German line, 7 infantry divisions, and 6 infantry and 4 tank brigades were annihilated in the encirclement and subsequent reduction of the pocket. Thousands of Russians were killed and 12,000 taken prisoner, while about 244 tanks, 300 guns, and 500 mortars were captured or destroyed.[31]

The necessity of committing many units originally intended for the seizure of Leningrad in the fighting south of Lake Ladoga, and the lack of available troop units for the assault on the city at the termination of operations in early October, forced the German High Command to put off the Leningrad venture for an indefinite period. Organizations such as the VIII Air Corps were then committed increasingly in support of more important battles in Combat Zone South. The air command staff which had been originally established for the purpose of conducting air operations in the assault on Leningrad remained in existence, but its new mission was to support the defensive battles as well as the modest offensives of Army Group North. The air staff, which now located its command post at Ruopti, south of Luga (where I Air Corps Headquarters was previously situated), directed the operations of the few remaining units controlled by the First Air Fleet.[32]

As September drew to a close, the main emphasis of the German air effort again shifted to the area of Demyansk. Here, in operations lasting until mid-October, the Luftwaffe helped to widen the corridor which had been established in the summer between Staraya Russa and Demyansk, so that all supplies for the II Corps could be advanced overland. Primary attention was focused on Soviet artillery positions, which were virtually neutralized by German air attacks. The First Air Fleet thus rendered decisive support to attacking Wehrmacht ground forces.

During the autumn months bomber units flew repeated interdiction missions against railroad routes in Soviet rear areas, while other flying organizations repeatedly attacked Soviet shipping in the Gulf of Finland and on Lake Ladoga. Frequently, single planes carried out attacks against industrial targets in Leningrad and Gorki.

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One of the most interesting and unique activities of the Luftwaffe was its operation of "Siebel" ferries* on Lake Ladoga between August and October of 1942. Because of the superior strength of the Soviet Lake Ladoga Fleet, the Finnish command had requested reinforcements for its coastal defenses along the lake. At the same time the German command intended to cut the more or less steady flow of supplies which moved across Lake Ladoga from Novaya Ladoga, at the mouth of the Volkhov River, to Morye, on Morye Bay, and from there to Leningrad.

In response to the Finnish request, the German Navy brought to Lake Ladoga four German coastal mine layers and four Italian torpedo boats, the latter manned by Italian crews. The Commander in Chief of the Luftwaffe initially (probably because of inter-service rivalry) refused to make Siebel ferries available to the Navy for operations on Lake Ladoga. These specially designed, floating gun platforms, built in 1940 for the then projected "Operation SEA LION," thus remained under Luftwaffe control. Goering soon ordered 20 of the ferries (heavy and light) to be transported to Lake Ladoga for combat use. Here a special Ferry Operations Staff East (Einsatzstab Faehre Ost) was established, headed by the designer of the craft, Col. Fritz Siebel, and assisted by a number of officers, mostly from Luftwaffe Flak units. Since this staff took its orders from the First Air Fleet, it was clear that the Luftwaffe had taken over the primarily naval mission against Soviet forces and was presumed to have the means to accomplish this task.

Each heavy ferry was armed with three 88 mm. and two 20 mm. antiaircraft guns, while each light ferry carried one 37 mm. and four 20 mm. guns. Fast Soviet torpedo and gun boats operating on Lake Ladoga were armed with 100 and 130 mm. guns, making both light and heavy Siebel ferries inferior to Russian vessels.

Siebel ferries had a number of other negative aspects. Considerable sea training was constantly required of ferry crews in addition to the regular antiaircraft and direct-fire exercises. The craft was powered by rather sensitive engines which could propel them no faster than about six nautical miles per hour. This was bad enough, but they were also clumsy and hard to maneuver. In armor and armament they were likewise deficient. It was therefore not surprising that the results accomplished by Siebel ferries were meager when compared with the great efforts expended to transport them

*See Figure 21.

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Figure 21
A Luftwaffe failure, the Siebel ferry

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to the sites and keep them in operation. The entire ferry undertaking on Lake Ladoga came to an end in the last part of October, and the special operations staff ceased to exist.

Generally speaking, the entire operation was a farce. If the Commander in Chief of the Luftwaffe had made the Siebel ferries available to the Navy in the beginning, the Luftwaffe would have been spared a considerable amount of ridicule, even though the promise of success with these craft would not have been materially improved.

In November 1942 the striking force of the First Air Fleet was considerably reduced by the transfer of the 53rd Bomber Wing to Luftwaffe Command East, operating in Combat Zone Center. The units still available to the First Air Fleet continued support operations for the defensive ground units on either side of the Demyansk corridor.[33] Until the end of the year it also continued operations with single planes against railroad targets immediately behind the Soviet front, against shipping on Lake Ladoga, and against industrial targets in Leningrad, Yaroslavl, and Gorki. Missions could be made on only a few days, however, especially during the month of December, because of more or less continuous bad weather.

Review of First Air Fleet Operations, 1942

Mission

In accordance with Fuehrer Directive 41, Army Group North had the tasks of consolidating the Wehrmacht's position in the northern area, and of bringing about the fall of Leningrad after establishing contact with Finnish forces.[34] However, German forces in this sector were regularly committed to relieve encircled forces and to fend off dangerous Soviet assaults and breakthroughs.

In the Leningrad area, an offensive was planned for the Eleventh Army, which was to restore the initiative to Army Group North. But again the Soviet command anticipated the German action by launching their own large-scale offensive. German forces intended for the assault on Leningrad were thereby tied down in heavy defensive battles, which, although ultimately resulting in a tactical victory for the Wehrmacht, prevented the capture of Leningrad, which was the principal mission assigned to Army Group North.

Soviet counterattacks tied down the flying units of the First Air Fleet as well as the ground forces of Army Group North. As was

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generally true over the whole of the Eastern Front, the Army was weak in artillery, especially antitank guns, and required almost constant support by the Luftwaffe. Frequent critical situations in which German ground forces found themselves made them increasingly dependent upon air power. Because of this, the Luftwaffe became operationally linked to almost every ground undertaking at the front, which prevented it from carrying out strategic operations, except for a few missions against Leningrad, Kronstadt, and vessels in the Gulf of Finland and against industrial targets in Yaroslavl and Gorki. Lacking tactical support aircraft to fulfill all of the Army's demands, the Luftwaffe was forced to commit bombers in close support actions. It was thus only natural that heavy losses occurred in bomber aircraft, particularly in the northern sector of the Eastern Front, an area which was relatively devoid of ground-attack units.

In this phase of the war the effects of inadequate planning, designing, and development and production of suitable tactical support planes became clear. Dive-bombers, fighter-bombers, and other tactical aircraft were critically needed, despite the fact that it had become obvious in 1940, and even more clear in Russia in 1941, that the Army could only achieve real ground successes with the help of the strongest air support. A sober and dispassionate examination of the probable losses during close support operations shows how illogical it was to use bombers for such purposes. Each bomber lost was a double loss in men and equipment, since it meant the loss of two engines, two sets of instrument panels, and a crew of four or five men. In comparison, the loss of a tactical support aircraft, such as a fighter-bomber or dive-bomber, meant the loss of only one engine, a relatively smaller loss of panel instruments, and a loss of only one or two men.

Another consideration is that the smaller, more maneuverable, and faster tactical support planes were not as vulnerable to defensive fire, so that fewer of these planes would have been lost. Furthermore, less time was required to train tactical support crews and to construct tactical aircraft than was needed to train bomber crews and to build bombers. Although calculations of this sort may seem harsh and unfeeling, they are, nevertheless, an urgent necessity in planning armament and arms production programs. In fact, their impact upon the course of a war may be highly significant, and even decisive.

Although relatively few bombers were lost, the high daily incidence of damage to bombers by shell fire during close support operations and the long time required to repair such damage, especially if electrical equipment was involved, resulted in a serious reduction of the operational strength of bomber units.

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It must be affirmed with respect to the few random missions flown by the Luftwaffe against strategic objectives (ordinarily the industrial targets of Yaroslavl and Gorki) that, since none of these attacks resulted in the actual destruction of a source of enemy power, it would have been far more advisable to have committed these few planes in support of the Army. Because these unsystematic attacks made no tactical impact whatever at the front, they were literally senseless and could be considered a typical example of inefficiency and waste in military operations. Such endeavors remind one of the apprentice who might announce to the entire neighborhood, and especially to his master: "Look here, I know what I have to do. I have learned it all and I haven't forgotten. I just don't have the time and the right tools to become a master craftsman, so I continue to work at something else."

The Concentration of Air Power by the First Air Fleet

The First Air Fleet and the I Air Corps always endeavored to concentrate their forces at the current point of main effort. However, the simultaneous development of crises in different areas frequently forced them to divert part of their forces to other sectors of the front besides the area of main effort. Such diversion of air power from the point of principal emphasis should always remain the exception.

In times of crisis it is most important to have the closest cooperation between the highest army and air commands in a given sector. The command posts and other command installations of the two services should be located as close together as the tactical situation permits. All requests for air support, even frequently exaggerated demands arising from a temporary local crisis, must be examined and considered against other demands in order to establish proper priorities. This appraisal must be carried out by the two commands in an atmosphere of mutual confidence. The smaller the number of supporting air units available, the more thorough must be the evaluation, and the greater must be the care in avoiding even the slightest dissipation of forces. Extreme firmness will often be required in denying support, but annihilating results can only be obtained by mass commitment, which alone can produce a successful decision on the field of battle.

Logistical Support by Air Transport Forces

In the areas of Kholm and Demyansk sizeable forces were compelled for the first time in history to depend for a considerable period of time exclusively upon air transportation for their logistical support. Airlifting supplies to these two sectors required the commitment of air transport units on a hitherto unprecedented scale.

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Initially only a few air transport groups had been formed, and these were intended merely for air transport missions in connection with parachute or other airborne operations, and for the movement of ground service personnel and equipment for the air forces. During the early winter of 1941, however, air transport organizations had been considerably increased as a result of constant and far-flung crises in which normal surface supply mediums could not function properly or were unable to fulfill their logistical support missions. Therefore, ammunition, rations, fuel, and other items were airlifted to ground units. Sometimes this was done because of the necessity to make speedy reinforcements at some critical point.

As late as April 1944, the Commander in Chief of the Luftwaffe still insisted that supplies could be moved by air only in case of emergencies, the purpose of such operations being to move personnel and materiel to combat troops who, because of technical or tactical reasons, or because of time limitations, could not otherwise be supplied.

By 1942, air supply operations had become much more than temporary expedients for emergency support of ground units. The critical conditions brought on by the Russian winter, inadequate surface transportation facilities, and tactical exigencies made the airlifting of supplies to large army units--enveloped or otherwise cut off from surface supply routes--a compelling necessity, and, often, the only feasible solution.

The adverse effects of the German failure to organize during peacetime an adequate air transport fleet to serve the entire Wehrmacht, to include air transportation in armed forces logistical planning, and to make corresponding arrangements in aircraft production had become painfully evident.

The first measure which had to be taken was to substantially increase the number of aircraft initially assigned for the airlift operation. It was then necessary to maintain established capabilities by supplying replacements for aircraft lost and destroyed through normal wear and tear, as well as through enemy action. Normal aircraft production and aircraft and personnel replacement capacities were less than the demands for men and planes, a situation which required immediate corrective measures. The 4th Bomber Wing was already committed in the airlift to Kholm, and it was impossible for the First Air Fleet to commit additional bombers for such purposes. Being deprived of much of its combat strength, the air fleet thus had to maintain its combat efficiency at the highest possible level in order to continue its support of the defensive front of Army Group North.

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The only remaining solution to the dilemma was to withdraw crews and aircraft from the Luftwaffe training establishment. The supposition of the Luftwaffe High Command at that time was that training schools would be only temporarily deprived of their personnel and aircraft, and that this would be a one-time expedient. But, once they had been transferred, neither planes nor aircrews could be returned to their home stations, since they were increasingly in demand for airlift operations in the East, as well as in Africa.

Other factors also played a role in the air operations in the northern area in 1942. Time, climate, weather, and ground organization should also be examined in relation to German air supply undertakings, since all of these influenced the execution of these operations, especially those around Kholm and Demyansk, which were subsequently adopted by Hitler and the highest military leaders as the guiding examples for the future.

Adverse weather had a considerable effect upon the quality and speed of work accomplished by ground service personnel, and reduced their operational performances to about one-third of the normal capability. The already overworked technical service personnel and air base unit complements were unable to sustain the high maintenance levels achieved in the servicing of tactical support aircraft once their work load had been multiplied by the arrival of large numbers of transport aircraft. This problem was especially acute because air transport units had no indigenous maintenance and service organization. This problem was further aggravated by a time lag, since before base technical personnel had managed to accommodate fully to their new tasks and heavier work loads, the demands for air support and supply operations had again grown enormously, thus materially increasing the already sizeable work loads at each base. It became clear that necessary technical services must be insured prior to the commencement of such operations, since failures and omissions in this area can only be rectified with great difficulty, if at all, while an air transport operation is in progress.[35]

It must be admitted that the decision to commit substantial air transport units was made imperative by the dire extremity of the ground situation, so that there was no time for lengthy preparations. It is certain, however, that the unrestricted employment of all available labor forces (including civilians and prisoners of war) untrammeled by the habitual schematism and conventional bureaucracy could have speeded up the development of new airfields in the vicinity of supply roads and rail routes. The Soviet forces offered the best examples of this practice in action. German air reconnaissance showed again and again that the Russians were able to construct a number of airfields simultaneously within a remarkably short space of time, often within a few days.

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The supply organization (closely allied to the ground service organization) also had serious flaws, particularly where Army channels were concerned. Although it must be admitted that the Army had little or no experience in the field of air transportation of supplies, the chief obstacles to Army-Luftwaffe cooperation were the decidedly formalistic thought processes and a certain awkwardness and inflexibility on the part of officers in the various Army supply services. These problems could be surmounted only very slowly, generally through the impact of the exigencies of the moment. Thus, from the beginning of the airlift the Luftwaffe was required to use its own air transport and supply services to move the necessary supplies to the appropriate airfields. At first these Luftwaffe units were also obliged to handle the entire loading of the aircraft. For these reasons it is important, and absolutely essential, that Army personnel should be given theoretical and practical instruction in the air movement of supplies.

Practical experience also revealed the need to appoint a Chief of Air Supply Operations (Einsatzfuehrer fuer Luftversorgung) at each airfield, to be assisted by an Army officer from the Army supply services, for such operations. Chiefs of Air Supply Operations should also be given authority to make local decisions on their own responsibility in matters such as mission sequences and loading, and should issue direct orders to all local agencies concerning these things.

The assignment of sufficient serviceable motor vehicles and an adequate number of horse-drawn sleds for winter operations, as well as substantial loading crews, are as important for fast, smooth air transport missions as the availability of electrically heated tools and equipment for repair and maintenance work. Likewise, the timely procurement of small, simple, winterproof, prefabricated billets and workshops for ground personnel will materially improve operations under winter conditions. Such structures must be readily transportable or collapsible so that they can be quickly moved to new job sites.

Improved equipment and facilities and the availability of many airfields go hand in hand to assure the accomplishment of air logistical operations. When any of these are found wanting, the mission cannot generally be accomplished.

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Chapter 4

OPERATIONS IN COMBAT ZONE CENTER, 1942

Events at the Turn of 1942

The Ground Situation

In the closing days of November and early December 1941, the great German offensive in the East began to bog down. The arrival of an unusually early and bitter winter, with temperatures dropping to -50° Fahrenheit, helped the Soviets to stem the tide of battle, first in front of Army Group Center, and then along the entire Eastern Front. The Wehrmacht's failure to take Moscow prompted Hitler, on 8 December, to order a consolidation of lines and a switch to the defensive. Heavy Russian counterattacks all along the front, however, threw back the worn-out German troops, preventing a stabilization of the front, and threatening to create a strategic reversal of the first order. In the course of the next three weeks Army Group Center was able to prevent the envelopment of its armies by throwing in all its reserves and by airlifting units from the Reich to fill the breaches. It was able to shorten its lines, permitting the release of some local reserves to help close, at least superficially, the newly created gaps in the front.*

During this time Hitler viewed with increasing alarm and dissatisfaction the unexpected early withdrawal of certain Army units/ and the resulting loss of large amounts of heavy equipment and guns, but he knew that Army Group Center, with communication routes open only over the most important roads, stripped to the bone of reserves, and without adequate winter equipment, could not halt the Soviet advance at all sectors of its front. On 16 December the Fuehrer issued an order

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*See Maps Nos. 3 and 4. See also Appendix I.

/Editor's Note: Generaloberst Heinz Guderian was relieved of his command 22 December 1941 for withdrawing his Second Panzer Army without informing the army group, and Field Marshal Fedor von Bock, commanding Army Group Center, resigned, ostensibly for reasons of poor health, on 18 December.

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requiring all units to stand fast along the front lines at all costs, without retreating an inch, and admonished his field commanders in the East "to compel the troops to display fanatical resistance in their positions."[1*] In such adverse circumstances this was probably the only valid maxim which could have been applied to prevent a complete breakdown of the front.[2]

The German soldier at the front was subjected to tremendous physical and mental stresses. Forced to fight for his life in the most severe season of the year, he was exposed to temperatures ranging from -38° to -49° Fahrenheit, and, dressed in ordinary continental uniform (sometimes with only his field blouse as an outer garment), he had to endure heavy sleet and snowstorms. For long periods of time supply routes to the front were closed to traffic, forcing Wehrmacht troops on the line to subsist on reduced rations. When adequate food was available to them, it was almost invariably frozen solid.

Foxholes and other defensive positions could not be dug because the frozen ground was as hard as stone. Even pickaxes made little impression upon it. So each hole had to be individually blasted, a thankless task when, as all too often happened, the positions had to be evacuated in short order. Combat troops were also plagued by constant infestations of lice and other parasites, which seemed to abound in the East. Occasional delousing operations were only of temporary benefit, and most men upon returning to the front found that they were again assailed by these pests.

Care had to be exercised in handling weapons and other equipment in the extreme cold, since skin stuck to anything made of metal. Men engaged in repair and maintenance operations were thus especially prone to receive injuries to their faces and hands.

No sector of the Eastern Front suffered greater numbers of casualties from frostbite than did that of Army Group Center. The conduct of troops in this part of the front was, in fact, astonishingly good, considering the heavy attrition of experienced regular officers and noncommissioned officers, the shortages of supply, and the lack of winter clothing.

See Appendix I.

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The enemy in front was not the only danger, however. Partisan activity in German rear areas became increasingly intense as the winter progressed, and Wehrmacht foraging parties were obliged to go out in force to avoid severe losses from these Soviet irregulars. Scattered elements of Russian units caught in the encirclement around Bryansk (2-18 October 1941) concealed themselves and formed strong partisan organizations in the densely wooded areas north and south of Bryansk, deep in the rear of the Second Panzer Army and the Second Army of Army Group Center. Being regularly supplied and reinforced by air, these groups posed a constant threat to the ground forces at the front and their communications routes, as well as to rearward installations of the Luftwaffe.[3] Because of this, strong Luftwaffe and Army forces had to be committed at all times against the partisans, thinning even more the already meager German defense lines.*

Facing these grave dangers and a host of conditions for which they were unprepared or to which they were unaccustomed, German commanders viewed the situation with increasing pessimism, and along the entire front of Army Group Center the Wehrmacht seemed to be standing under the ominous shadow of Napoleon I.

Two particularly critical areas had developed in the central sector as a result of the Soviet offensive, one in the southern area and the other in the northern part. A giant double envelopment was taking shape which threatened to compress large parts of Army Group Center into the Vyazma area.† By Christmas of 1941 a heavy Soviet assault toward Rzhev, in the northeast corner of Combat Zone Center, was having a telling effect. The front of the Ninth Army (Generaloberst Adolf Strauss) of Army Group Center began to crumble under these blows, and German commanders at many parts of the front feared that the Ninth Army and the Third Panzer Army (Generaloberst Hermann Hoth) might soon be enveloped.[4]‡‡

Meanwhile, another Russian attack out of the area west of Moscow, aimed in a southwesterly direction, threatened to flank the Second Panzer Army, situated just right of the middle of Combat Zone Center. In mid-December, without informing the army group, Generaloberst Heinz

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*See Map No. 11. See also pp. 109, 110, and 111.

†See Maps Nos. 1 and 3. Units threatened were the Fourth and Ninth Armies, and Third and Fourth Panzer Armies of Army Group Center.

‡‡Editor's Note: Strauss resigned on 15 December for reasons of health, and was replaced by General der Panzertruppe Walter Model.

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Guderian pulled back the Second Panzer Army to the Oka-Susha line.[5*] Russian forces driving from the area east of Maloyaroslavets and Kaluga forced an immense wedge between the Second Panzer Army (since 22 December under General der Panzertruppe Rudolf Schmidt)[/] and the Fourth Army of Army Group Center (Generaloberst Ludwig Kuebler).

By the end of December powerful enemy assaults north and south of Kaluga forced the Wehrmacht to abandon not only Kaluga, but the threatened salient west of Moscow as well. As the Soviet offensive toward Sukhinichi advanced, the danger to the Bolshevist capital subsided. By the turn of the year 1942 the last real threat to Moscow had been removed.[6]

The pressures under which German combat troops struggled on the Eastern front were immense, and it is difficult to do justice to the problems which they faced. Their situation was all the worse against an enemy who seemed to have unlimited human resources, artillery, ammunition, and other materiel, including Allied aircraft and newly arrived British tanks.

The Air Situation at the Turn of 1942

The icy winter adversely affected all German air operations on the Russian front. Airfield personnel were constantly employed in the central sector with snow-clearing and airfield-rolling operations.[//] Runways, taxi strips, and hardstands had to be kept free of drifts and holes, and physical objects nearby had to be removed to prevent snow from piling up around them in great drifts during the ensuing snowfalls or storms.

Aircraft engines which had been stopped overnight in the extreme cold were difficult, if not impossible, to start. Warming ovens and all sorts of expedients were devised in an effort to solve this problem. Planes designated for standby-alert duty were often placed with their noses in "alert boxes," heated shacks which kept the engines warm enough to start on short notice.** Liquid-cooled engines always presented starting problems, and air-cooled engines were recognized by German soldiers in the East as the more serviceable winter power units.[≠]

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*See Map No. 4.

/See footnote, p. 101.

//See Figure 22.

**See Figures 23 and 24.

≠Editor's Note: This was also one of the reasons why the military Volkswagen was so popular in the East.

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Figure 22
German airman clearing field of snow
with shovel and Panje sled

Figure 23
Ju-87 "Stuka" with its nose in an "alert box,"
Smolensk airfield, 1942

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Figure 24
Luftwaffe heater for aircraft engines and control surfaces, Smolensk, 1942

Figure 25
The main supply artery for Army Group Center (Rollbahn Mitte), Russia, 1942

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In order to prevent gumming and freezing, the viscosity of all lubricants had to be extremely low, and special hydraulic fluids had to be developed. Items made of rubber, including aircraft tires, were also matters of real concern in the frigid climate, for in temperatures of -30° to -40° Fahrenheit marked deterioration was noted in rubber items, the amount of damage depending upon how long they were exposed to these conditions.

Performances of ground personnel of the Luftwaffe diminished sharply in time and quality as a result of the cold when special heated work areas or shops were not available. Every tool had to be preheated before use and often had to be thawed out several times during the course of repair operations. There were so many adverse effects from the cold weather that no single improvisation or group of improvisations solved the problem satisfactorily.

In these perpetually critical situations, the VIII Air Corps (General der Flieger Wolfram Freiherr von Richthofen)* was required to support the ground forces of Army Group Center, often providing extremely close support at the burning points of the front. German air units thus became dependent upon the course of the ground action, and had to give the ground forces all possible assistance in order to prevent a collapse of the front. The VIII Air Corps support units operated from airfields at Vitebsk, Orsha, Smolensk, Roslavl, Krassilina, Vyazma, Gradina, Dugino, and Rzhev.

Besides their combat missions, Luftwaffe forces in the central sector were called upon with increasing frequency to airlift or air-drop supplies to isolated or encircled German ground units, such as those temporarily enveloped at Velizh and Demidov, and the Ninth Army in the area between Vyazma and Rzhev. Air transport units were utilized to the fullest possible extent during such operations. Sometimes they air-lifted entire companies or battalions almost to the main lines of resistance.

Like the Army, however, the Luftwaffe had other serious problems to face. In the central sector it was required more and more to help in the seemingly endless fight against active bands of Russian partisans. Regular Soviet troops, who had penetrated German lines, had been

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*Editor's Note: A cousin of the famous "Red Knight" of World War I fame, Baron Manfred Freiherr von Richthofen. See biographical section.

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air-dropped at night,* and isolated Red Army units cooperated with partisan organizations in harassing German forces and disrupting the Wehrmacht logistical network behind the front.† The vital Medyn-Yukhnov-Roslavl and Gzhatsk-Vyazma-Orsha main supply routes (Rollbahnen) were constantly threatened by Soviet partisans, who forced escort contingents or transport column personnel of German supply convoys to clear large sections of road in advance by hand-to-hand combat.††

The Battle on the Ground in the Central Sector

In the beginning of January 1942, massive Soviet breakthroughs were made in the weakly-held front of the left wing of Army Group Center. These attacks, launched from the area north of a line from Ostashkov to Kalinin, were aimed toward Toropets and hooked toward the south in the direction of Vyazma. This rapidly advancing arc threatened to envelop the Ninth Army of Army Group Center, and at the same time to split the northern (left) wing of the army group from the southern (right) wing of Army Group North. Upon the anxious entreaties of Field Marshal Guenther von Kluge,** Hitler decided to allow the Ninth Army to pull back to a less dangerous position. Meanwhile, to the south of the Ninth Army, Generaloberst Erich Hoeppner‡ withdrew his Fourth Panzer Army without informing the army group. When von Kluge complained about this to Hitler, the Fuehrer summarily dismissed Hoeppner from the Army, with loss of rank, all titles, honors, and retirement benefits.[7]

As the second week in January drew to a close, the Wehrmacht faced several serious crises on the northern end of Army Group Center. Increasingly frequent and greatly intensified Russian thrusts in the Ostashkov area widened the already existing breach and threatened the

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*Editor's Note: Soviet personnel were often dropped without parachutes into the deep snow from low-flying planes, sometimes with fatal results. See General der Flieger a. D. Karl Drum, Airpower and Russian Partisan Warfare, USAF Historical Studies No. 177, Maxwell AFB, Alabama: Historical Division, RSI, March 1962, pp. 19, 23, 31-32.

†Ibid., pp. 1-6.

††See Map No. 11. Transport personnel were usually not armed to fight partisan bands, and their mutilated bodies were often found later by combat personnel combing back areas. See also Figure 25.

**Commander, Army Group Center, 15 December 1941 to 12 October 1943. See Figure 26.

‡Editor's Note: Later involved in the 20 July 1944 plot against Hitler. See biographical section concerning von Kluge and Hoeppner.

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entire left flank of the army group. Front line units of the Ninth, Fourth, and Third Armies and the Fourth Panzer Army were then in grave danger of encirclement by strong Soviet elements which had wheeled around to the north of Rzhev and now began to attack the Ninth Army from the west.* The Smolensk-Vyazma-Rzhev-Olenino rail and supply route (Rollbahn Mitte) was immediately imperiled from the north and west, and, because it so frequently fell under Soviet artillery barrages, German supply columns often required tank escorts for security.†

Wehrmacht commanders feared that this offensive near Rzhev might link up with the northwesterly movements of the Red Army from the area of Maloyaroslavets. The gap from Belev to Kholm between the Fourth Army and Second Panzer Army and the Fourth Panzer Army north of them had widened to more than 100 miles, and the Fourth Army was barely able to withstand the exceptionally strong Russian blows from the south.††

Matters were further complicated by partisan forces which seized the Rzhev-Sychevka railroad line, cutting off the supply of the Ninth and the Third Panzer Armies. Under the pressure of this crisis, Field Marshal von Kluge again went to Hitler, imploring him to retrieve his front units before it was too late.** With considerable reluctance, the Fuehrer consented to the first general withdrawal in the sector, pulling back Army Group Center to a line just east of Kurk-Orel-Belev-Sukhinichi-Yukhnov-Gzhatsk to a point northeast of Rzhev. Medyn was abandoned.

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*See Maps Nos. 4 and 9.

†A consequence of this action was the urgent implementation of air transport missions to supply the two foremost armies (Fourth and Ninth).

††Partisans were another serious problem. They created a "front behind the front," which German troops soon found to be as dangerous as the real front. Combat Zone Center was the "hotbed" of partisan activity. See also pp. 103, 107, and 108.

**Editor's Note: Von Kluge was sometimes unable to act decisively and to exert his will effectively. During the 20 July 1944 plot he faltered and could not bring himself to act in a positive manner. See John W. Wheeler-Bennett, The Nemesis of Power: The German Army in Politics 1918-1945, London: McMillan & Co., 1964, pp. 663-673. See also Halder Diary comments.

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By 18 January Army Group Center faced a number of perilous situations.* Soviet pressures were felt all along its front, but they were of particular severity between Kaluga and Belev (in the middle of the army group front), in the Maloyaroslavets area immediately north of it, in the Rzhev sector (along the front of the left wing of the army group), and along the boundary between Army Groups North and Center.†

The Second and Second Panzer Armies,†† shielded by well-executed rear guard actions, were engaged in mid-January in trying to withdraw westward toward Sukhinichi from their endangered advance positions astride the Tula River. This retrograde movement was threatened by heavy enemy attacks against the Kaluga Front and by a Russian breakthrough of the Kaluga-Belev line, which penetrated in the direction of Smolensk as far as Dorogobuzh and separated these two German Armies from their neighboring unit (Fourth Army) to the north. This gap soon became a source of great anxiety for the German High Command, especially since the Fourth Army's own movements were hindered by heavy snowfalls and lowering temperatures.[8] North of the Fourth Army, surprising inroads were made by the First Guards Cavalry Corps of Soviet General Pavel Belov, aided by substantial airborne assistance.

Along the boundary between Army Groups North and Center, two Soviet forces, consisting of about 12 divisions, pushed toward Vitebsk and penetrated as far as Velikiye-Luki and the area just northeast of Ilino,[9] making Sukhinichi virtually untenable by 28 January. There was no real possibility of holding the town, and the Second Panzer Army proceeded to evacuate the place, despite the fact that the Army High Command had countermanded any such orders.[10]

Toward the end of the month, fresh Soviet forces, reinforced by escaped prisoners, local Russian citizens, partisans, and airborne personnel, were sent into the salient extending southward behind the

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*Editor's Note: Several shifts of key personnel had been made by this time. On 16 January 1942 Generaloberst Georg von Kuechler replaced Field Marshal Wilhelm Ritter von Leeb as Commander of Army Group North, General Model had replaced Generaloberst Strauss (see p. 103), Field Marshal Fedor von Bock was replaced 18 December 1941 as Commander of Army Group Center by Field Marshal von Kluge (see p. 108), and von Bock was recalled 17 January 1942 as Commander of Army Group South to replace Field Marshal von Reichenau, who had had a stroke.

†See Map No. 9.

††Editor's Note: The Second Army was commanded from 29 October 1939 to 14 July 1942 by Generaloberst Maximilian Freiherr von Weichs.

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Fourth and Ninth Armies of Army Group Center.* Many stragglers from Soviet units which had been surrounded earlier in the Vyazma-Bryansk pocket had concealed themselves in forests or villages, where they awaited just such a chance to return to the Red Army. None of these men were more effective, however, than the airborne troops who were landed in small units along a 39-mile-wide front south of Vyazma and in the Toropets area.[11] They were dropped from slow, low-flying aircraft, either with or without parachutes, into six-foot-deep snow.† Such troops were armed with automatic rifles, submachine guns, explosives, or mortars, outfitted with camouflaged blouses and, often, with skis. Under interrogation, numerous Soviet prisoners testified that they had then been flown to the target areas, where they were simply pushed or thrown without parachutes from the planes.

The 214th Soviet Airborne Brigade, made up of four battalions of infantry, an artillery battalion, and necessary service troops, was committed to action south and southwest of Vyazma. Another Russian unit, the 8th Airborne Brigade, was also landed in the area and served with the 214th as part of the IV Airborne Corps. This corps also controlled the 7th and 9th Airborne Brigades, the former of which was badly understrength and was used to fill vacancies in other units. The 9th Airborne Brigade, however, was brought in for action in the Yukhov area.[12]††

The Fourth Army and the Fourth Panzer Army finished their preparations by 2 February for an assault against the westward projecting Soviet salient in the vicinity of Medyn, and succeeded on the following day in eliminating the bulge in that area.** Other enemy forces then attacking the rear of the German units around Vyazma were sharply countered by determined units of the 5th Panzer Division. Along the entire front of Army Group Center the situation had deteriorated into a drawn-out slugging match which, despite heavy Russian frontal attacks on 7 February against the Fourth Panzer Army and Ninth Army around Rzhev, was resolving itself in favor of the Wehrmacht by the second week of February.[13]

By the end of the month Soviet offensives were gradually stalled along all sectors of the front of Army Group Center, and many of the

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*See Map No. 9.

†See Figure 27. See also pp. 103, 107, and 108.

††See Map No. 9.

**See Maps Nos. 4 and 9.

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Figure 26
The Commander in Chief of Army Group Center, Field Marshal Guenther von Kluge in conversation with the Commander of the V Air Corps, General der Flieger Robert Ritter von Greim

Figure 27
The "work horse" of the Soviet partisan forces, the U-2 aircraft

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serious crises seemed to subside. The Russian advance near Toropets had not been checked, but this position was not being reinforced, and hopes were growing that it might be contained. Behind the Fourth and Ninth Armies, Russian attacks were stopped, and the breakthrough around Sukhinichi in the Fourth and Second Panzer Army areas was eventually brought under control.[14]

The Russian offensives of January and February resulted in gigantic territorial gains, frustrating Germany's efforts to annihilate the Soviet Government, and removing all threats to Moscow. Nevertheless, the Soviet forces had destroyed no German armies (although they had increased German casualties by 175,000 during this period), nor had they permanently altered the strategic situation in their favor.

Army Group Center had managed to halt the Russian attacks, but not without sustaining heavy losses.* The Red Army finally bogged down along the line to which Field Marshal von Bock had wanted to withdraw in December of 1941. Had he been allowed to pull his army group back at that time he could have avoided costly losses and would have been in a strong position to continue to threaten the Soviet capital.[15]/

As early as 12 February the forces of Army Group Center began to make preparations for an attack from the Rzhev area with the objective of seizing Ostashkov. It was a logical plan, designed to close the large breakthrough area around Toropets, and then, in conjunction with forces of Army Group North, to annihilate the surrounded Soviet forces. Lines were to be shortened by the elimination of dangerous bulges and penetrations, and mechanized divisions, together with as many other units as possible, were to be rehabilitated. A complete rest and rehabilitation could be given only to units being shifted to Army Group South, while other divisions had to be refitted and given breathing spells near the front lines. The assault was to be carried out by the Ninth Army, preferably before the onset of the muddy period.[16] Other factors, however, altered this plan.

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*Editor's Note: From 22 June 1941 to 20 February 1942 the Wehrmacht lost 981,895 men (killed, wounded, and missing), or 30.68 percent of its Eastern Army of about 3,200,000 men. See Halder Diary, Vol. VII, commentaries of 24 February 1942.

/Editor's Note: When Army Group Center finally fell back, its losses from frostbite and combat, especially the former, were so severe that it was never again to attempt a real assault upon Moscow.

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Army Group Center was never able to muster sufficient troops to carry out the attack on 2 March, as planned, and heavy Soviet assaults against the pivot point of Rzhev forced the army group to postpone the offensive until the period of 12-16 March.[17] By 14 March, however, an extraordinarily heavy snowfall further complicated German preparations and served as a mask for several Russian attacks. Soviet forces tried desperately to throw back the Wehrmacht defenders before a thaw could set in.[18*]

Throughout March, units of Army Group Center were occupied in a continuation of heavy fighting along the perimeters of the salient extending down behind the Fourth and Ninth Army areas, where Soviet forces pressed hard to increase their gains.[/] They used every possible type of coercion against the sole major supply route of Army Group Center, the Smolensk-Vyazma-Rzhev rail line. The Vitebsk-Velikiye-Luki sector was also threatened by the Red Army. The German hope to establish a corridor linking Army Group Center with Army Group North gradually began to fade in the face of the aggressive enemy attacks, and von Kluge was soon obliged to consider a more conservative mode of action for reinforcing his positions.[19]

On 31 March, von Kluge and Model reported to the Fuehrer that their troops were presently too exhausted to undertake the originally planned drive upon Ostashkov. Hitler thereupon devised an alternate plan for Army Group Center. The Ninth Army in the Rzhev area was to restrict its actions to those operations necessary for the protection of Operation BRUECKENSCHLAG (Bridge Blow), scheduled to begin after the end of the muddy season. The smallest possible forces were to be used to seal the advance routes of the Soviet Twenty-Ninth and Thirty-Ninth Armies. Von Kluge suggested that plans for the Ostashkov offensive be continued, but these proposals were hastily rejected by the Fuehrer.[20]

The situation at this time might have been more serious for Army Group Center, except that the Russians had unwisely failed to concentrate their forces for a powerful attack in a given sector, and because of this wide dispersal of units could not press home their attack with finality.

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*By 10 March 1942 the Wehrmacht had 1,009,188 casualties in the East. See Halder Diary, 14 March 1942.

/See Map No. 9.

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The spring thaw added to the Soviet's problems by slowing their offensives, permitting Army Group Center to stabilize its front.*

On 5 April 1942, the Fuehrer announced a new directive, BLAU (Blue),/ a plan which completely revamped the original Directive No. 41. Under its provisions Army Group North was to take Leningrad and make contact with the Finnish Army. In the South, German units were to advance via Stalingrad into the Caucasus to seize the rich oil areas for the Reich. This movement was to be assisted by the addition of the Fourth Panzer Army, which was to be withdrawn from the central sector. Meanwhile, Army Group Center's mission would consist of holding its positions, consolidating its front, reorganizing its units, destroying bands of partisans in the rear areas,// and taking steps to establish a reserve pool. The transfer of forces to Army Group South, to the West, and to rest and rehabilitation areas so weakened Army Group Center that it had to permanently abandon any plans for assaults against Ostashkov and Toropets.

On Easter Sunday (5 April) a heavy Soviet attack was launched from a northerly direction against the Ninth Army and the XXXX Corps of the Fourth Army of Army Group Center.[21] Quickly marshalling their forces, the army groups were able to beat off the attacks, but the combat condition of both organizations prevented a settlement of the issue. By 10 April, reinforcements began to pour in to strengthen the Soviet areas for a renewal of the attack. Among them were two new divisions and large amounts of armored equipment, much of which was poised across from the XXXX Corps.[22]

On 13 and 16 April the Russians again attacked the Fourth and Ninth Armies of Army Group Center, but again they failed to accomplish

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*Editor's Note: By 31 March only 8 out of 162 combat divisions in the East were able to carry out full offensive or defensive missions, 47 could perform limited offensive tasks only, 73 had only defensive capabilities, and the rest were either severely limited in their capabilities or were totally unfit for combat. See U.S. Department of the Army, OCMH, The German Campaign in Russia: Planning and Operations 1940-1942, DA Pam. No. 20-261a, EUCOM Hist. Div., March 1955, p. 120.

/Drafted by Generaloberst Franz Halder and associates. See Appendix II.

//The term "bands" was discarded eventually, since it promoted an underestimation of partisan capabilities and strength. Some such units were of corps strength.

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their objectives. The effects of spring mud seriously impaired the operation of armored vehicles and helped the decimated German units to make a strong defensive stand. In the course of these battles the Soviet Thirty-third Army was virtually destroyed.[23] Thereafter, until the end of the month, Army Group Center was able to hold its own against a somewhat weakened and less aggressive enemy.

During the month of May, Army Group Center helped to deceive the Russians concerning German plans for a spring offensive (Plan BLAU) by building up certain front-line units, constructing airfields in the central sector (including dummy airfields which were designed to appear like bases intended for use in forthcoming operations), disseminating false information, and moving troops about to deceive the Russians into believing German reinforcements were arriving at many points. Meanwhile, Army Group South posted foreign Allied units in several places on its front* and shifted German divisions to the rear in order to give the impression that the Wehrmacht units had been permanently withdrawn for transfer to other sectors, and that Army Group South, being thereby weakened, could not carry out any offensives. Considerable risks were involved in all of these deceptive movements, especially for Army Group Center, which was well understrength.

The Reichs Labor Service (Reichsarbeitsdienst or RAD) cooperated with Luftwaffe construction troops at a number of airfields in the central sector, helping them to construct concrete runways (as at Dugino and Vyazma) or timber runways (as at Bobruysk and Bryansk), and to improve and expand repair and billeting facilities.† These measures helped to provide a more flexible air command and made it possible to assure quick and successful air support for tactical operations within Combat Zone Center.

At the end of May and during June Army Group Center's most dangerous adversary was the Soviet Cavalry Corps Belov,†† which, through regular airlift operations, had gradually amassed a strength of 20,000 men and threatened the rear of the Fourth Army, southeast of Smolensk and south of Vyazma. It had attained such size and striking power that in May two German corps, controlling several infantry

*Editor's Note: It was precisely in the sectors manned by these Allied units that the Russians made their later breakthrough which resulted in the Stalingrad disaster.

†See Figures 28 and 29.

††See p. 110.

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Figure 28
Men of the Reich's Labor Service (RAD)
at work at the Dugino Airfield, 1942

Figure 29
Luftwaffe construction troops erecting a hangar
at the airfield Vyazma-North, 1942

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divisions and a panzer division, had to be withdrawn from another part of the front in order to master the situation.[24] Soviet reinforcements continued to move into Belov's area, while long-range Russian artillery, situated outside of the immediate combat sector, harassed German forces.

By 24 May Army Group Center was heavily engaged against the enemy cavalry corps and within four days had split the unit and enveloped it, despite a lack of air and tank support because of bad weather.[25] The Wehrmacht's operations against Belov were not entirely satisfactory. A week after the cavalry corps had been surrounded the bulk of it and the Soviet 4th Airborne Brigade had made good their escapes to the south.[26] Belov's corps was again overtaken by Army Group Center, but on 16 June had once more broken out in the direction of Kirov (east of Roslavl), a cause of considerable embarrassment to the German command.[27]

However, by 18 June all of Cavalry Corps Belov, including the forces which had broken out of the encirclement as well as those which remained enveloped, had been split up into a number of isolated groups. Some elements sought their way out through the forested areas in the direction of Kirov, from which place the Soviet command attempted to support a breakout.[28] General Belov escaped but the greater part of his force was either destroyed or scattered, and, despite a month of bad flying weather, Luftwaffe Command East continued to harry the fleeing enemy units. During all of these operations, Combat Zone Center's losses were below those of the other two major sectors of the front. By the end of June or early July the more critical problems facing Army Group Center were virtually eliminated.

A number of Soviet armies, having a strength of about ten infantry divisions and four cavalry divisions, were still behind German lines, back of the Ninth Army, and were being regularly supplied through the gap of Bely.[29] To counter this group, an operation was soon planned (Operation SEYDLITZ),* which was designed to close the corridor and annihilate these Russian forces in the pocket to the south and east of Bely.[30] This envelopment movement did not get underway until 2 July, but, once underway, continued on to a successful conclusion. Difficult terrain and general weaknesses of the army group were the principal factors slowing the operation.[31]

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*Editor's Note: Probably selected as a name in honor of Friedrich Wilhelm von Seydlitz, Frederick the Great's most competent cavalry leader.

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While the SEYDLITZ offensive progressed, the Russians on 7 July struck the northern front of the Second Panzer Army from the area south of Belev, using 180 tanks in the operation. In the 18th Panzer Division sector 120 Soviet tanks took part in the assault. The Germans badly needed antitank forces, and the 19th Panzer and 52nd Divisions were quickly slated for transfer to the trouble spot.[32] About 25-30 Soviet units (Verbaende)* were pitted here against six-and-a-half German divisions. The Wehrmacht's sharp defensive action soon began to tell, and of more than 600 attacking tanks, as many as 289 were completely knocked out.[33] On the following morning (13 July) additional attacks were made against the front of the Second Panzer Army by Soviet forces armed with newly-produced British tanks. All of these assaults were successfully repulsed by Army Group Center.[34]/

Since 7 July the Bely pocket had been sealed off by the Wehrmacht, and within a week the defending Russian units began to melt away. Hundreds of Soviet prisoners straggled in daily, and by the end of the month 40,000 men had surrendered to German forces. The Soviet Thirty-ninth Army and the XI Cavalry Corps were completely destroyed, and parts of the Twenty-second and Forty-first Armies which had not withdrawn through Bely were also wiped out.[35]

Most of the crises facing Army Group Center in early July had been checked by the last part of the month. The threat to the rear of the Ninth Army had been mastered, at least for the time, by 20 July, and the Toropets front had been strengthened. Only along the front of the Second Panzer Army did some dangers still persist.//

Soviet forces launched new attacks against the Ninth Army around Rzhev by 30 July, making a penetration of German positions to a depth of three and one-half miles. A number of German artillery batteries were lost in the struggle.[36] By 4 August the Soviets had thrust to Zubtsov. The 1st Panzer, 2nd, 5th, and 102nd Divisions were committed under the XXXIX Corps to check the advance of seven enemy divisions and an armored brigade in this area.[37] The battle for Rzhev, marked with numerous crises, lasted throughout the months of August and September and well into October. Dangerous breakthroughs were avoided

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*Editor's Note: In German military usage, units below regimental strength were usually called Einheiten (units), while those above this strength were called Verbaende (bands or units). A Verband was usually a brigade or a division.

/See Figure 30.

//See Maps Nos. 10 and 12.

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only by the most desperate efforts on the part of defending Wehrmacht units.

In early August, Hitler ordered Army Group Center to launch Operation WIRBELWIND (Whirlwind), a pincers movement against the westward protruding Russian salient around Sukhinichi. The two panzer divisions (9th and 11th) of the Fourth Panzer Army, which had been withdrawn late in July from Army Group B* because of fuel shortages, were to take active part in the attack. Hitler ignored the protestations of von Kluge, who insisted that an operation to clear up the situation around Rzhev would be of more immediate value and could also be more easily accomplished. But, recognizing the futility of further argument, von Kluge declared that the responsibility for failure in the Sukhinichi assault would have to be borne by the Fuehrer.

The attack which opened on 11 August resulted only in minor initial successes, despite very effective air and antiaircraft artillery support. Soon thereafter, as von Kluge had predicted, the advance bogged down in the face of tenacious Soviet forces, who not only held their ground but by the end of the month were able to open a counteroffensive of their own. Operations along the front of Army Group Center, including the defensive battles of the Third Panzer Army near Gzhatsk, were by this time relegated to a secondary position in relation to the operations against Stalingrad.[38]

Partisan warfare in the central sector also began to assume a new form. For the sake of greater mobility and concealment large partisan units were breaking down into smaller components which could operate deep within German-held territory and could unleash their attacks, often against communications routes and supply centers, and vanish without a trace. This made the identification and location of partisans extremely difficult for German combat forces.

Warfare during the month of September was generally characterized by defensive fighting around Zubtsov and Rzhev. Wehrmacht units

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*Army Group South was divided on 15 July 1942 into two army groups, A and B. Army Group A, under the command of Generaloberst Hans von Greiffenberg, was made up of the First Panzer, Eleventh, and Seventeenth Armies, and the Third Rumanian Army. Army Group B, commanded by Generaloberst Georg von Sodenstern, was composed of the Second, Sixth, Fourth Panzer, Hungarian Second, Rumanian Fourth, and Italian Eighth Armies.

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Figure 30
Soviet tanks destroyed by German bombers
near Rzhev, 13 July 1942

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held their own against superior odds and were even able to make some slight improvements in the lines. The major trouble spots, however, remained to cause future difficulties.

The month of October was relatively quiet on all parts of the central front, but toward the end of that period Soviet pressures again began to mount, especially in the Rzhev area. The Soviets continued their offensive against Army Group Center in November in spite of the onset of winter, thereby tying down German forces and preventing the vital transfer of troops to other areas, such as Stalingrad. Lacking sufficient forces, the German command in the central sector had been unable to clean out the deep penetrations around Toropets during the summer season. With the approach of winter this area now presented the Russians with an especially favorable opportunity for a winter offensive.

Because of its lack of available forces Army Group Center was also compelled to abandon its plans to create a corridor extending from Rzhev toward Ostashkov. Incessant Soviet attacks prevented the army group from releasing troop units from any of its areas. At the end of November the Russians attacked from the Toropets sector in two thrusts, one directed southward at Bely and the other westward at Velikiye-Luki. The southern drive was halted by a fierce defensive battle in which the 7th Air Division and a large number of newly-created Luftwaffe field units participated.

Soviet forces striking westward were able to penetrate the German lines on either side of Velikiye-Luki, and were halted only after advancing some miles to the west of this ancient Russian fortress, which they then enveloped. Just as he had done at Stalingrad to the south, Hitler, as Commander in Chief of the Army, forbade the breakout of the 7,000-man combat force at Velikiye-Luki, an operation which might well have been successful within the first few days after envelopment. Like the Sixth Army at Stalingrad, this force was obliged to hold its ground and place its faith entirely upon logistical support by air and in a timely relief attack from the outside.*

By early December only German troops in the small citadel of the old fortress of Velikiye-Luki and a small group around the rail depot were still holding out, both being supplied by cargo gliders. As the month drew

*See Map No. 13.

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to an end, however, the Soviet ring had drawn so tightly around the badly outnumbered defenders that supply could only be attempted by air-drop.

On 29 December the Germans started a relief thrust designed to free both garrisons. With indescribable difficulty and suffering, including numerous casualties, two German divisions drove a wedge six miles deep and 2,500 yards wide into the Soviet holding front. Spearhead units of the force, completely exhausted and bled white, bogged down on 12 January 1943 within about two miles of the western outskirts of the town.[39] Meanwhile the Red Army had captured the larger part of the enveloped area, leaving only a small German force still holding out in the citadel on the western bank of the Lovat River, and a larger group, now tightly compressed, in an extremely small area in the eastern part of the town.

On the night of 15-16 January 1943, 100 of the survivors from the citadel fought their way through to the German lines. With heavy hearts they had been compelled to leave behind some 200 of their comrades who were unable to march. An additional 80 stragglers eventually found their way through to the German lines.

The group in the eastern part of the town, which for nearly two months had kept up the resistance while suffering the most terrible privations and the greatest physical and mental strain, always in the hope of ultimate liberation, finally surrendered to their eastern adversaries after expending their last ammunition.[40]

Thus, in Combat Zone Center the year 1942 also closed with an event which, by the senseless sacrifice of irreplaceable lives and equipment, was a typical and tragic example of the arbitrary system adopted by Hitler and his presumption that he was capable of directing the German Wehrmacht.

Air Support, the Mainstay of Army Group Center

The Chief of Staff,* V Air Corps, and elements of the V Air Corps headquarters staff arrived from the Western Theater at VIII Air Corps Headquarters in Smolensk in February 1942, where they made preparations for the V Air Corps' assumption of command over all air activities

*Editor's Note: Col. Hermann Plocher, author of this study.

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in Combat Zone Center. During his orientation, the Chief of Staff heard what had become a commonplace in the East: "One side envelops the other, and the survivors envelop themselves." General Halder characterized the conflict as a drawn-out affair which is "deteriorating into a cat and dog fight, developing along lines completely foreign to all hitherto recognized forms of warfare."[41]

The difficulties encountered by the Luftwaffe are practically indescribable. Aircrews flying over the monotonous, snow-covered terrain, which lacked features such as lakes, roads, or paths which could be used for visual orientation, found it exceptionally difficult to search out the attacking Russians in the confused, and often quickly changing, ground situation. Because of this, bombing missions were frequent and it was practically impossible to avoid occasional attacks on friendly troops and troop positions.[42*] Such occurrences, in turn, had a detrimental effect upon the otherwise fine cooperation between the Army and the Luftwaffe.

Most Soviet air operations were restricted to the areas near the front and were designed exclusively for the support of army operations, just as were (with but few exceptions) the operations of the German VIII Air Corps. Russian air activities, moreover, were primarily directed against German positions and billets within, or in the immediate rear of, the main line of resistance. No signs of a systematic concentration of Soviet airpower were discernible during these battles, which could probably be explained by the particular organizational structure of the Soviet air forces, the bulk of their units being consolidated in air divisions and air corps and assigned as such to the various armies at the front. These air forces were naturally employed in accordance with the armies' own tactical plans. The Russians made some isolated attacks against German supply bases, but without doing any great amount of damage. Small-scale attacks near front areas also failed to produce significant results.

One field in which the Soviet air forces were extremely active was air transportation. Entire units were specifically trained to supply

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*Editor's Note: Soviet troops sometimes dressed in German uniforms, used German identification signals, and waved to German planes, all of which confused matters further. See Generalleutnant a. D. Klaus Uebe, Russian Reactions to German Airpower in World War II, USAF Historical Studies No. 176, Maxwell AFB, Alabama: Historical Division, ASI, July 1964, pp. 58-59.

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Russian ground forces with the necessary weapons, food, ammunition, and technical equipment. These operations were especially vital in the support of ground forces isolated in the German rear areas.

During 1942 the Wehrmacht had to launch counterattack after counterattack, backed by powerful air support, to seal off Soviet penetrations, straighten out the lines, or to halt, envelop, and destroy Russian elements which had already achieved breakthroughs. German night fighters were used to intercept Soviet night air transports which were so often effective in supplying advance Russian units.

The Luftwaffe was the ultimate and only effective supporting arm for the German ground forces in their crucial defensive battles in the East. Air attacks remained the best method for halting and scattering strong Soviet troop columns, and type D-2* bombs were a potent factor in such operations, particularly against concentrations of troops.[43] Unfortunately for the Wehrmacht, fog and severe cold often complicated air operations in the Eastern Theater.

Throughout January and February the Luftwaffe endeavored to support the Army, especially by defending German ground forces against dangerous Soviet incursions toward Yukhnov in the critical boundary area between the Fourth Army and the Fourth Panzer Army.[44/] Air support was also a crucial factor in slowing the massive Russian breakthrough toward Rzhev between Ostashkov and Kalinin.

Rzhev and the boundary area between Army Groups North and Center were major sources of concern for the Wehrmacht throughout 1942. Soviet thrusts in this sector on 6 March were beaten off by heavy German air attacks, and, although a certain stabilization of this front was achieved by mid-month, enemy attacks began again on 20 March and continued to be a serious menace. Meanwhile, around Yukhnov, to the south, Luftwaffe dive bombers cleared Russian airborne and auxiliary forces from the main supply route (Rollbahn Mitte) of Army Group Center.[45] German troops in strongpoints deep in the rear of the penetration areas were able, by regular air support and by their own tenacious resistance, to halt Soviet offensives and, in some cases, even to seize more favorable defensive positions by counterattack.

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*SD-2 bombs. Small, fragmentation bombs, dropped in large numbers, usually by use of larger containers.

/See Maps Nos. 4 and 9.

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Little documentary evidence is available concerning the results of Luftwaffe operations in Combat Zone Center during this period, except for those of the II Flak Corps. The Commanding General of this organization, Generaloberst Otto Dessloch, was also Chief of the Tactical Air Support Command North, operating under the direction of the VIII Air Corps. He thus had the responsibility of supporting operations of the Fourth and Ninth Armies and the Fourth Panzer Army.[46] From 6 January to 21 March 1942 air units under Dessloch's command flew 5,087 missions on 56 days, destroying 82 aircraft in the air and 76 on the ground, as well as 838 motor vehicles, 1,231 other types of vehicles, 44 tanks, 73 guns, and a bridge.[47]

The II Flak Corps was highly successful in support of the Ninth Army and the Fourth Panzer Army. Its heavy (8.8 cm.) flak batteries were employed with good effect in air defense actions, in halting Soviet ground penetrations, particularly those by armor, and in supporting German counterattacks. Light flak (2 cm. standard)* batteries moved into positions in the foremost lines in order to repel low-level Soviet "Stormovik" IL-2 aircraft,/ which invariably confined their attacks to the most forward German positions. In most of the ground actions both light and heavy flak furnished artillery fire for the infantry. In fact, flak units became the "hard core" of German ground defenses.

Owing to the increasing frequency of Soviet air attacks upon German supply routes and bases, Luftwaffe flak units were forced to shift their main emphasis to the defense of the highways (Rollbahnen) and avenues of retreat, as well as to antiaircraft actions against Russian troop and cargo aircraft passing over the German lines toward the west.

Toward the end of March, the Army needed increasing amounts of air and antiaircraft support, especially in the Velikiye-Luki and Rzhev areas where dangerous enemy penetrations had been made. Flak units provided direct-fire ground support against Soviet armor, while flying units were forced to dissipate their striking power by discontinuing their plans for attacks upon major Russian railroads in order to come to the aid of the Second and Fourth Panzer Armies and the Fourth and Ninth Armies.[48]

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*Generally the 2 cm. flak artillery is meant. This soon appeared with dual, and later with multiple, barrels. The 3.7 cm. flak gun, although normally classified as medium flak, was for a time called "light" flak.

/See Figures 31 and 32.

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Figure 31
German 8.8-cm. flak gun in action against ground targets, Combat Zone Center, 1942

Figure 32
Self-propelled 2-cm. flak in action against Russian ground-attack planes, Combat Zone Center, 1942

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In the early part of April a number of major organizational changes were made in the Luftwaffe in the central sector of the Eastern Front. The headquarters staff of the VIII Air Corps, together with corps troops and the majority of the corps' tactical support units, were withdrawn for transfer to Combat Zone South after undergoing a brief rest and rehabilitation.

The expanded headquarters staff of the V Air Corps was redesignated on 10 April as Luftwaffe Command East (Luftwaffenkommando Ost) and given authority over all German air forces committed in Combat Zone Center. This staff was headed by General der Flieger Robert Ritter von Greim.[49*]

On this same day the II Flak Corps was reorganized and redesignated as the 18th Flak Division under the command of Generalmajor Richard Reimann. This division, a part of Luftwaffe Command East, was immediately committed in the area between Vyazma and Rzhev.[50]

Luftwaffe Command East

Since the Army always demanded strong air support and since this air command, like the VIII Air Corps before it, was obliged to cooperate closely with the army group, the operations of Luftwaffe Command East soon became entirely dependent upon the tactical planning of Army Group Center.

It was to be assumed that Soviet forces would endeavor, through incessant attacks, to expand the penetrations they had made during the winter. Severe defensive battles were thus expected, as before, in the areas north of Orel, especially around Rzhev.[/] Luftwaffe Command East further assumed that its coming mission would be to provide support for the ground defenses, but the employment of available Luftwaffe units over such a widely extended front as that of Combat Zone Center offered prospects for success only if these forces could be committed in concentration at a specific time and place.

Luftwaffe Command East therefore placed special emphasis upon the development of its ground service organization; the storage of adequate

*Editor's Note: Colonel Plocher was von Greim's Chief of Staff.
/See Maps Nos. 9 and 10 and p. 113.

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supplies, particularly ammunition and fuel, at the various airfields; and the establishment of a secure and smoothly-functioning command communications network. The headquarters staff set up advance command posts to insure a flexible conduct of operations, and these were outfitted with an appropriate communications system in the sector close behind the probable focal point of combat, such as Bryansk, Orel, and in the area east of Sychevka and south of Rzhev. The Commander in Chief of the Luftwaffe later assigned a command railway train as a mobile command post.

In April Luftwaffe Command East's main emphasis was on the interdiction of railroad lines in the Kalinin-Bologoye-Toropets area, over which the Soviets advanced all of the supplies for their armies situated in front of the left flank of Army Group Center, as well as for those forces threatening the rear of the Ninth Army.* Commencing with Easter of 1942, the left wing of Army Group Center was again menaced by powerful Russian attacks.

From mid-April to early May, when the First Air Fleet was prevented by bad weather from airlifting supplies to the beleaguered defenders of Kholm,† the operation was carried out by cargo gliders of Luftwaffe Command East, escorted by Ju-88's which neutralized Soviet artillery and antiaircraft guns on the approach route of the gliders. The Ju-88's made the difference which allowed the gliders to reach their objectives and complete the mission.††

Toward the end of May and in June, the principal air mission in Combat Zone Center consisted of supporting the operations against the Soviet Guards Cavalry Corps of General Belov, a force which had made dangerous inroads behind the Fourth Army southeast of Smolensk and south of Vyazma.[51]** German night fighters, operating from the airfield Smolensk-North, were employed initially as an emergency measure to intercept Soviet airborne troops landing in the area of Belov's corps.

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*See Map No. 9.

†See Maps Nos. 9 and 10.

††The Ju-88 was a twin-engine bomber and dive-bomber and general utility aircraft capable of speeds up to 310 miles per hour. Powered by two 12-cylinder, liquid-cooled, in-line engines, it had a range of about 1500 miles, and was used extensively until the end of World War II.

**See Map No. 11. See also p. 116.

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Despite outstanding service by these fighters, they were unable to completely stop the Soviet airlifts.

Through the interrogation of Russian deserters and the reports of German aerial observers, Soviet landing signals soon became known and it was thereby occasionally possible to trap individual Russian planes by directing them to the wrong landing areas. The usual signals consisted of lights placed according to a prearranged pattern. Since Soviet courier and liaison pilots (usually flying U-2 aircraft)* were unaware of the daily changes in the tactical situation on the ground, they had to rely almost exclusively upon these signals. As a result, they were repeatedly deceived by lights arranged for them by special German detachments operating in the vicinity of the isolated Soviet Guards Cavalry Corps (whose perimeters kept slowly shifting toward the southeast).[/]

Many of the Russian aircraft trapped in this way carried either a courier or, at least, courier mail, so that many valuable documents were captured containing data on the strength and plans of Soviet forces both in front of and behind the German lines. One interesting discovery in these Russian planes was that they carried quantities of rations intended for General Belov, which were far superior to the standard Soviet field ration.

Early in July when Soviet ground forces, with the support of powerful armored units, attacked the northern flank of the German Second Panzer Army, Luftwaffe air units took a leading part in halting the enemy action. The magnitude of the attacks and the success of German ground and air defenses can be seen from the fact that of the some 600 enemy tanks engaged in the offensive nearly half were destroyed by the Wehrmacht short of their objectives, and the rest were turned away.[52//]

Luftwaffe Command East helped the Ninth Army of Army Group Center to check the dangerous inroads of Soviet forces behind its rear

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*Editor's Note: A single-engine biplane, widely used by the Russians as a liaison, transport, and general service aircraft, especially by the partisans. With a top speed of about 115 miles per hour, it was extremely maneuverable and serviceable and could land almost anywhere. See Figure 27.

/See Map No. 11. See also pp. 116 and 118.

//See Map No. 12. See also pp. 119 and 120.

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Figure 33
Ju-87 "Stuka" unit returning from a mission,
Rzhev area, 17 August 1942

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Figure 34
Advance command post of the 1st Air Division
near Rzhev, autumn 1942

Figure 35
Air-ground situation conference with Second Panzer Army
in Orel: (left) Generaloberst Rudolf Schmidt,
(center) General der Flieger Ritter von Greim

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area. This situation appeared to have been settled by 20 July, but broke out anew by the end of the month, requiring substantial air support to stem the tide. Heavy enemy attacks were also beaten off with Luftwaffe support in the Sukhinichi bulge area. The Soviet points of main effort changed almost daily, requiring units of Luftwaffe Command East to transfer from one airfield to another along the entire front. The great time and effort expended by the Luftwaffe in preparing a good communications network and in supplying a number of bases and command posts proved to be well worth while, as subsequent operations showed.

Insofar as weather permitted, it was almost always possible to provide effective air support for ground operations, both offensive and defensive, and in every sector of Army Group Center. This was most essential by the end of July when Russian pressures upon Rzhev began to mount.* When the Soviet forces advanced to the outskirts of the city of Rzhev, Luftwaffe field units† were sent into action to defend the airfield. Dive-bombers of the 1st Air Division took off in close succession to bomb the threatening Soviet units and succeeded in inflicting large numbers of casualties, despite the fact that the German airfield was at times under heavy Russian artillery fire. Conventional bombers, meanwhile, struck Soviet artillery positions, tank concentrations, and supply columns close to the front lines.

The 51st Fighter Wing "Moelders,"†† under the command of a most courageous leader, Lt. Col. Karl-Gottfried Nordmann, swept the skies above the Ninth Army free of Soviet aircraft, freeing the German ground forces for defensive operations which lasted well into October.**

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*See Figures 33, 34, and 35.

†Editor's Note: Luftwaffe Field Battalions (Feld-Bataillone), first organized in the winter of 1941-42. They were consolidated and enlarged by Hitler's order of 15 October 1942 into 20 Luftwaffe field divisions (Feld-Divisionen)--2 more were added later--and all saw action as infantry. Some of these units performed meritoriously, others with less satisfaction, but, because of the high quality of the personnel, all losses made a heavy impact upon the Wehrmacht, and losses in these units were often heavy.

††Named after Col. Werner Moelders, Germany's greatest fighter ace at the time of his accidental death at Breslau on 22 November 1941. He was then Inspector of Fighters and Commander of the 51st Fighter Wing.

**See Map No. 13. See also p. 119.

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In one particularly effective mission, 27 German planes attacked and almost completely destroyed a large enemy supply and replacement depot east of Rzhev. The flames and smoke clouds from burning and exploding ammunition and other stores rose to a height of several thousand feet and remained visible for a long time.[53] Again and again German bombers attacked Soviet supply traffic on roads and rail lines in this area, concentrating especially upon rail junctions and supply centers in the Kalinin-Bologoye-Toropets sector.* Soviet airfields near the front which were reported to be operational were also repeatedly attacked by Luftwaffe bomber and dive-bomber squadrons. The left (northern) wing of Army Group Center remained a particularly troublesome sector throughout August and September, when air support was substantial, yet German ground forces were unable to reverse the Soviet gains.

In the autumn of 1942 German night fighter units were organized to combat the enemy night transport of men and materiel to regular and partisan units behind the German lines. Generalleutnant Adolph Galland, Inspector of the Fighter Arm in 1942, made the following observations after World War II about these units:

> General Jeschonnek† had what must be regarded strictly as an improvised night fighter service, organized for the Eastern Theater in the autumn and winter of 1942. Bomber, reconnaissance, and twin-engine fighter units released volunteer crews, together with their aircraft, for the purpose. These night fighters operated against Soviet aircraft, which were illuminated by searchlights and, in the northern areas, by the light nights. Their primary mission was to prevent the air movement of supplies and replacements to partisans during the night.
>
> It is interesting that their task was complicated by the slowness of the Soviet aircraft, which had cruising speeds of 72 to 96 miles per hour. The night fighters were too fast in approaching their slow targets. This complicated sighting and aiming and seriously reduced the length of time the target could be kept under fire. Later these improvised night fighter units were replaced by regular

*See Figures 36 and 37.

†Chief of the General Staff of the Luftwaffe. See Biographical Section.

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Figure 36
Ammunition dump burning, Rzhev,
26 September 1942

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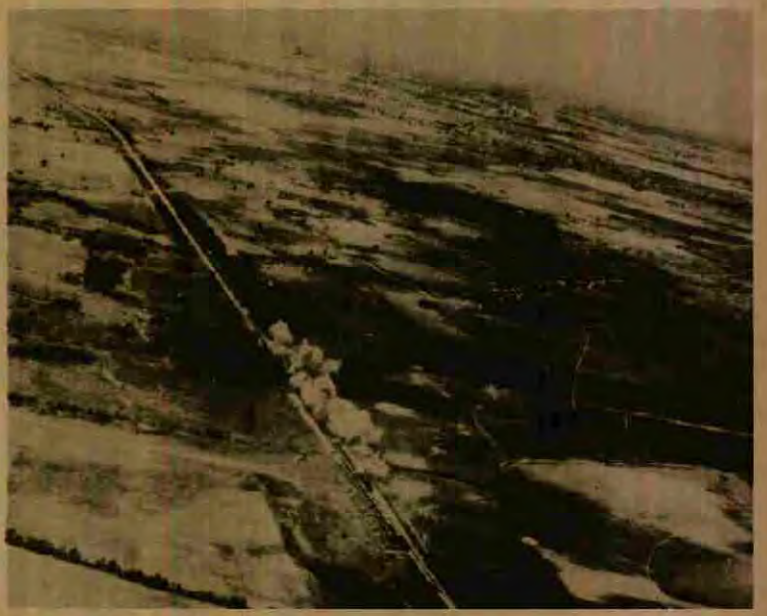

Figure 37
Russian supply route in Combat Zone Center
attacked by Luftwaffe bombers, 1942

Figure 38
View of German airfield at Vyazma-
Gradina, U.S.S.R., 1942

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night fighter crews with standard night fighter aircraft organized as the 6th Night Fighter Wing. The operations of the wing were directed by rail-transported radar and fighter-control teams.[54]

The planes mentioned by Galland as having "slow cruising speeds" were Soviet harassing aircraft, which appeared, usually one or two at a time, to attack German billets, headquarters, and rail and supply depots, especially those along the Vyazma-Smolensk rail line as far as Minsk. These harassing raids, which commenced in Combat Zone Center during the autumn of 1942, were carried out near the front lines by obsolete Russian training aircraft (normally flying below 3,000 feet). These planes attacked German troops with small-caliber fragmentation bombs, some of which were dropped by hand. The actual damage wrought by these attacks was generally slight, but they were sufficiently frequent to prevent German ground troops from getting their nightly rest.

Luftwaffe Command East took immediate action against these disturbing aircraft, which appeared at different times and in ever-changing sectors. The most effective instrument against these aircraft was the so-called "Flak Circus," one or two flak batteries having between 12 and 24 3.7-cm. guns and a number of searchlight platoons arranged in two circles or ellipses, an inner and outer ring. The batteries remained fully concealed during daylight and moved forward immediately after dark into a sector over which Soviet harassing aircraft had appeared on the previous night.

After moving into position these units were ordered to hold their fire for a time to decoy the enemy planes into effective range of the "circus." If the harassing aircraft (generally known to the Wehrmacht as "sewing machines" [Naehmaschinen] because of the peculiar sound of their engines) flew into the firing range of a "Flak Circus," they were spotted and held in the beams of 600-mm. and 1,500-mm. searchlights, and were usually shot down within a few minutes, often in less than a minute, by the combined fire of the two batteries. On the following night the same procedure was followed in a different area. Of course, these flak organizations occasionally spent a night, or even a number of nights, without going into action, but these disappointments were offset by the results achieved on other nights. Such units were dubbed "Flak Circuses" because they were constantly on the move up and down the entire line within the Ninth Army sector, very much like a traveling circus.

The Soviet use of older types of aircraft, including training planes, as night nuisance raiders no doubt provided the pattern for the German

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establishment of similar units. Early in October 1942, the first German nuisance bomber squadron was formed in Luftwaffe Command East. This squadron became in 1943 the nucleus of the 2nd Night Bomber Group.

The nuisance squadron was equipped with Fw-58, Fi-156, and Ar-66* aircraft and operated from the Gradina airfield (north of Vyazma) as far as 36 miles into the Soviet rear area against enemy troop concentrations, artillery positions, and supply and rail depots.† The fine achievements of this squadron were given general recognition, and immediately stimulated plans for additional units of this type.[55]

Luftwaffe Command East detected and attacked in mid-October a large concentration of enemy forces between Toropets and Kalinin. Although the German Air Force seriously hampered and delayed the operations of these Soviet units on several occasions, Army Group Center was unable to muster sufficient forces to do more than hold back the Russians. The deep bulge in the German lines thus continued to be a source of great anxiety for the left wing of Combat Zone Center and for the southern flank of Army Group North.[56]

In November Luftwaffe Command East was employed primarily against Russian supply bases and in the systematic destruction of Soviet billets and shelters, factors of much importance in winter warfare. During the second half of the month, however, air operations were seriously hampered by adverse weather. It was at this time that the Soviet ground forces launched a bold attack from Toropets, forking on the south toward Bely and on the north toward Velikiye-Luki.†† In spite of bad weather,

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*Editor's Note: The Focke-Wulf (Fw) 58 was a 1934 model multipurpose aircraft, which proved to be a fine training plane. It was a twin-engine, low-wing monoplane, with a top speed of 155 miles per hour, armed with two machine guns, and carried a crew of four. The Fieseler (Fi) "Storch" (Stork) was an amazing liaison and close reconnaissance plane, a single-engine, high-wing plane which could maintain flying speed at 30 miles per hour, take off in 165 feet, and land at 25 miles per hour. It carried a crew of two or three persons and was highly maneuverable. The Arado (Ar) 66 was a 1933 design, single-engine biplane, widely used for pilot training. It could carry two persons and had a top speed of 130 miles per hour. See Kens and Nowarra.

†See Figure 38.

††See Map No. 13. See also pp. 122 and 123.

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Luftwaffe Command East, operating under the direction of a small tactical staff on a train commuting between Vitebsk and Nevel, committed all of its available forces to prevent an expansion of the breakthrough. These units materially helped in the defense of the German garrison at Velikiye-Luki, and supported these troops by delivering heavy weapons, ammunition, rations, and other supplies to the narrowly restricted stronghold by gliders and by air-drops. Until late in December German glider pilots fearlessly dived into the enveloped areas, heedless of Soviet antiaircraft fire. The landing field after early December consisted of the small courtyard of the citadel, which, however, was large enough to permit the delivery of even flame throwers and antitank guns. Perhaps these landings could not have been made at all without the neutralization of Soviet ground and antiaircraft artillery by the flying units of Luftwaffe Command East.

Insofar as weather conditions permitted, the Luftwaffe supported the drive begun from the west on 29 December to free the encircled German troops at Velikiye-Luki. On the ground, flak batteries were incorporated within the spearhead units of the assault forces and were able to achieve very good results. Snow, ice, and winter storms complicated all of these efforts and reduced the effectiveness of German units by causing breakdowns in the logistical network. Generally speaking, however, Luftwaffe Command East provided sufficient support to prevent a real Soviet exploitation of its earlier breakthroughs until the end of the year.

Luftwaffe Field Units

In the severe time of crisis during the winter of 1941-42 the Luftwaffe in the Eastern Theater was forced to utilize its own personnel to defend the various airfields and Luftwaffe signal and command installations. At first such troops were used only for missions directly affecting the German Luftwaffe, and the High Command of the Luftwaffe did not envision a broadening of the spectrum of employment. These units were organized on the spot in the various areas and initially differed greatly from one another with respect to organization, strength, command, equipment, and even employment. Everything was improvised, their equipment was faulty, and their training wholly inadequate.

The usual policy was to organize all available air signal and flak troops as quickly as possible into companies or battalions for immediate combat commitment. Ground service personnel, second reserve guard units, and so-called general office personnel from staff and supply units

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were also included in the manpower pool from which these combat units were formed. Most of these organizations were named after their commanders and displayed excellent morale and combat behavior.

The first instance where such troops were committed in battalion strength was at the focal point of the Ninth Army's defensive battles at Rzhev in January 1942. Airfields within the sector were defended by Luftwaffe field units. Later, about March, the same organizations were transported by air to Krassilina airfield, south of Spas Demensk, which was endangered by a major Soviet penetration at Sukhinichi. Here, the units were consolidated to form a brigade under the command of General-major Alfred Schlemm. Reinforced by flak batteries, Luftwaffe Brigade Schlemm's mission was to assault the enemy forces around the perimeters of the airfield and expand the area of German control sufficiently to permit unhampered operation of the airlift without danger of casualties from Soviet small arms fire. With the support of flying units from the VIII Air Corps of Luftwaffe Command East the Schlemm brigade accomplished its task with complete satisfaction. [57*]

A ground combat organization was also set up by the Luftwaffe Administrative Command Moscow (headquarters at Smolensk) to protect its ground service installations. Established in regimental strength, it was employed with success primarily in the areas along the Smolensk-Roslavl rail and road routes. Here, sizeable partisan groups had on previous occasions more or less systematically attacked German supply columns, and had destroyed large sections of wire communications and demolished sections of railroad tracks. [58] The most serious aspect of these attacks was that the partisans interfered with the movement of vital fuel supplies to the two airfields at Shatalovka and the other bases located in the rear of the south flank of Army Group Center. The regiment described above must therefore be considered as a unit employed specifically in a Luftwaffe mission. [58]

It can be said of Luftwaffe field units in general that they displayed superb courage in attack, counterattack, and in defensive operations, that on the whole their morale was excellent, and that they successfully accomplished their assigned missions. After the activation of the Luftwaffe field divisions (Luftwaffen Feldd~~ivisionen~~), a highly controversial problem which lies outside the scope of this study, all

*See Figures 39 and 40.

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Figure 39
Mortar team of Luftwaffe Brigade
"Schlemm" in action, 1942

Figure 40
Machine gun team of Luftwaffe Brigade
"Schlemm" in action, 1942

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Luftwaffe ground combat units were integrated into divisional size units, which were only under the tactical control of local Army headquarters.*

By the end of 1942 in Combat Zone Center the II Luftwaffe Field Corps (Luftwaffen-Feldkorps), consisting of the 3rd, 4th, and 6th Luftwaffe Field Divisions, was engaged in a successful defensive battle in the Witebsk-Nevel sector.

A Critical Review of Luftwaffe Operations in Combat Zone Center in 1942

The Mission of the Luftwaffe

Owing to the shortages of adequate ground force units, particularly antitank and conventional artillery units, Luftwaffe support had become an indispensable factor for the success of all Army operations. Since the primary mission of the Luftwaffe was to render all necessary support to the Army, few strategic missions were carried out, and these were generally performed by single planes. The complete dependence of Luftwaffe activities upon ground force operations was most clearly evident in the area of Combat Zone Center of the Eastern Front. Here, there were no long-range plans requiring strategic air power, and attention was devoted primarily to local offensive operations of a tactical nature designed to stabilize the main line of resistance of the central sector and to eradicate Soviet penetrations.[60]

Apart from the restrictions imposed by the activities of the German ground forces, the targets and timing of Luftwaffe operations in Combat Zone Center were heavily influenced by continuous Soviet attacks and the necessity to repel them. The conduct of aerial operations in this area was therefore always dependent upon local tactical developments.

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*Army commanders were critical of Luftwaffe field units because, although they helped materially to bolster weak defensive positions, Luftwaffe personnel could not be transferred to the Army and, in combat, could only be tactically controlled by the local Army commander. After 1943 Luftwaffe personnel needed for ground combat were transferred to complete Army jurisdiction. Luftwaffe leaders then claimed that these men were being used by the Army as "cannon fodder." See also pp. 133 and 139.

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Power Concentrations

It should be emphasized at the outset that no precise or complete records are presently available concerning the strengths and dispositions of Luftwaffe forces in Combat Zone Center.* Some information of importance has been derived, however, from captions on numerous photographs in the possession of the author./

A highly flexible command system was essential in order to insure immediate air support of Wehrmacht operations for the entire front of Army Group Center. Once the winter crisis of 1941-42 had been surmounted and the various army fronts had become relatively stabilized, it was possible to organize a satisfactory flexible command system by taking the following measures:

(1) The timely establishment of a number of advanced command posts for the tactical echelon of Luftwaffe Command East.//

(2) The control of tactical units by the 1st and 2nd Air Divisions, which were familiar with the situation, the areas, and local army commands, and had had experience in cooperative undertakings with those commands against Soviet forces.

(3) The timely preparation of a well-developed communications network, including radio and telephone installations, staffed by experienced personnel who were acquainted with the several Luftwaffe and German Army headquarters staffs and tactical units.

Figure 41 illustrates the command organizational structure of the Luftwaffe as it existed in the central sector of the Eastern Front in 1942.[61]

Frequent transfers of tactical organizations from one headquarters to another were naturally unavoidable in making these organizational changes, but the advantages accruing from this flexible command system far outweighed its disadvantages. A decline in the operational readiness of many of the units might have come about because of personnel shifts, but this

*Editor's Note: It is expected that the materials may eventually come to light as the German documents deposited in several places are classified and made available.

/Editor's Note: As noted earlier, the author was Chief of Staff, Luftwaffe Command East in 1942.

//See Figure 42.

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LUFTWAFFE COMMAND EAST

Generaloberst Robert Ritter von Greim, Commanding

1st Air Division	18th Flak Division	Air Administrative Command Moscow	Air Administrative II Posen - Warsaw
Hq at Dugino Generalmajor Alfred Buelowius, Commanding	Hq near Dugino Generalmajor Richard Reimann, Commanding	Hq at Smolensk	

Forces in the Rzhev-Vyazma Area

12th Flak Division	2nd Air Division
Generalmajor Ernst Buffa, Commanding	Generalmajor Stefan Froehlich, Commanding

Forces in Area South of Vyazma-Orel

Air Units Available to the Commander of Army Group Center in Early 1942:

51st Fighter Wing, Lt. Col. Karl-Gottfried Nordmann, Commanding, with Groups I-IV
1st Dive-Bomber Wing, Col. Walter Hagen, Commanding, primarily in Rzhev area
2nd Group, 54th Bomber Wing, at Bryansk
4th Bomber Wing, Groups I and II, at Shatalovka East and West
2nd Tactical Reconnaissance Group at Gradino
7th Squadron, 13th Tactical Reconnaissance Group, at Roslavl
2nd Squadron, 23rd Tactical Reconnaissance Group, at Kamariy
4th Squadron, 14th Strategic Reconnaissance Group, at Smolensk-North
4th Squadron, 121st Strategic Reconnaissance Group, at Smolensk-North

Forces Committed to Action in the Area of Luftwaffe Command East on 17 August 1942

11 bomber groups	3 dive-bomber groups	1 ground-attack squadron
5 1/3 fighter groups	1 antitank squadron	

Forces Available to Luftwaffe Command East on 29 November 1942

7 bomber groups	3 dive-bomber groups	4 1/3 fighter groups

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was greatly offset by smoothly-functioning maintenance services which restored affected units to full operational status in a short time.

Another necessary condition for the successful employment of available Luftwaffe organizations in accordance with the principles of power concentration was the presence of an adequate ground services arrangement. Initially, the VIII Air Corps, and later Luftwaffe Command East, met this requirement to the fullest possible extent commensurate with the manpower and materiel available. Timely and careful planning, taking into account all eventualities related to future operations, enabled the Luftwaffe in Combat Zone Center to develop a sound and well-stocked ground service organization. Because of this, available air units could quickly concentrate behind any sector of the army group front and ready themselves for commitment as required.

The aircraft and motor maintenance and repair services were well organized and extended through every command level into the rear areas. These units were staffed with the necessary skilled personnel and stocked with appropriate materials. It was thus possible to achieve and maintain a high operational level, which in turn resulted in the accomplishment of a large number of missions by German air units and far greater mobility for flak batteries. This far-sighted and valuable establishment was repeatedly acknowledged by the various Army commands.

Measures Taken To Improve Striking Power

In 1942 Luftwaffe Command East established a night fighter arm, at first only with improvised means, as the first unit of its kind in the Eastern Theater of Operations. The nightly Soviet flights carrying troops and supplies, and the growing frequency of night bombing and harassment raids* had become more and more disturbing to the Wehrmacht. These operations endangered the Moscow-Smolensk-Minsk main highway (Rollbahn Mitte) and were considered especially serious because this highway and the parallel-running railroad line were the most important supply routes for Army Group Center and Luftwaffe Command East.† While the actual damage wrought by these enemy night attacks was

*These flights were usually initiated from Russian peacetime bases in the vicinity of Moscow, which were out of range for attacks by anything but long-range German aircraft.

†See Figure 43.

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Figure 42
General der Flieger Ritter von Greim visiting a German Army regimental observation post, 2 September 1942. To his left, Lt. Col. Radowski, the regimental commander.

Figure 43
Alarm! Camouflage is dropped from an 8.8-cm. gun guarding the main supply route in Combat Zone Center (Rollbahn Mitte), 1942.

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generally minimal, they interfered with the entire German command and supply traffic. Quite apart from this disturbing influence upon logistical operations themselves, and the frequent disruption of technical installations of the railroad service, it had to be borne in mind that the most important supply dumps, trans-shipping stations, and other supply installations were located along this highway and rail line. Thus, besides the increased necessity of flak forces to defend these vital points, it had also become urgently necessary to organize night fighter defenses to forestall from the outset some really serious developments.

The newly organized German nuisance bomber squadron soon proved its worth in turning the tables on the Russians. These were exceptionally economical from the point of view of losses incurred compared with the results achieved.*

In most instances, the 4th group of each German air wing was set up as a replacement organization in which new replacements arriving directly from service schools could receive familiarization training in front-line aircraft. These 4th groups were often stationed in the Zone of the Interior or in occupied western territories. Luftwaffe Command East had requested and received permission from the Commander in Chief of the Luftwaffe to transfer the replacement groups of its air wings to the Communications Zone of Army Group Center, where they could be employed. Here, young aircrews received their combat familiarization training in actual operations against partisans in the far rear areas, in close cooperation with the various German police and other Communications Zone divisions. This method of combat training produced excellent results, particularly in the case of units based at Bobruysk, and further reduced the enemy pressure on German front-line units, which hitherto had often been forced to carry out their own antipartisan operations in the rear areas.

It can be said in retrospect that it would have been a sound and advantageous policy from the spring of 1942 to transfer even more replacement units and training schools to the Communications Zones of the Eastern Theater of Operations, where replacements would have been trained under conditions of terrain, climate, and living comparable to those at the front. In this way, replacement aircrews could have received combat training with little or no losses against hostile forces possessing poor or no antiaircraft weapons. Such operations, moreover, would have served a valuable purpose by neutralizing or eliminating active partisan groups.

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*See p. 138.

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