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278 287  
17 JUNE 1940

This day was a day of major battle for the Second Air Fleet in the extreme west of the French theater, a day on which the air fleet committed all of its units in attacks against shore and seaborne targets at and off the Atlantic coast.

It has been mentioned previously that farther east the Third Air Fleet was engaged with "steadily decreasing intensity."

Actually, it is not possible from the situation report by the Commander in Chief of the Air Force to retrace with certainty the operations of the Third Air Fleet on this day.

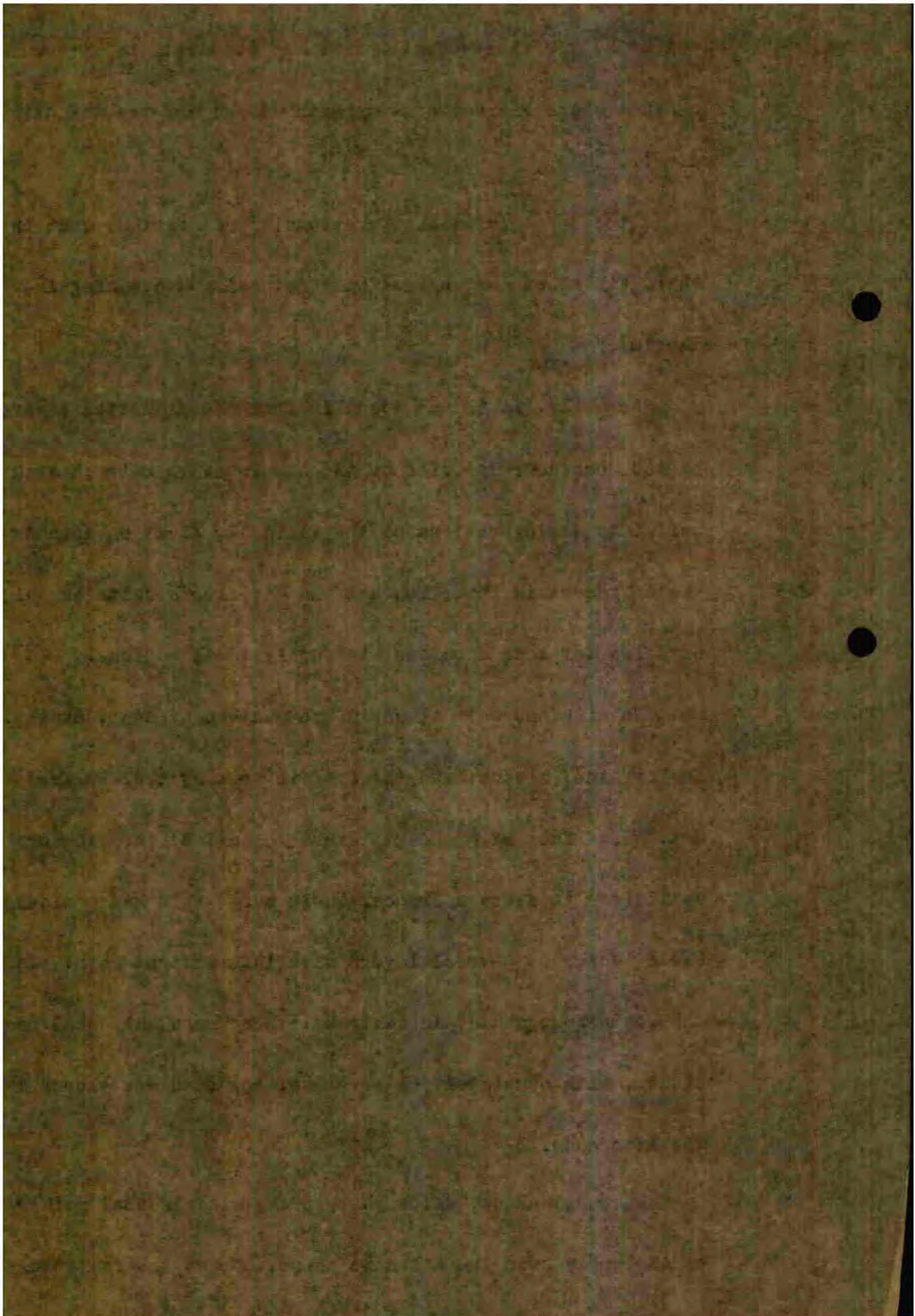
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The only certain thing is that the air fleet's units on this day flew far less missions in purely local actions.

No missions were flown in the eastern segment, namely, in Lorraine, Alsace, and the traffic area of the Belfort Gap. This fact might be explained in part by the weather conditions in eastern France, where many parts had a closed cloud cover of several layers with intermittent rain. In the western segments, in contrast, there were only scattered clouds, with completely clear areas, and cumulous clouds in the afternoon.

Reconnaissance, which on this day was directed mainly at the areas over the Atlantic coast, showed the following







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picture in the former zone of the Third Air Fleet:

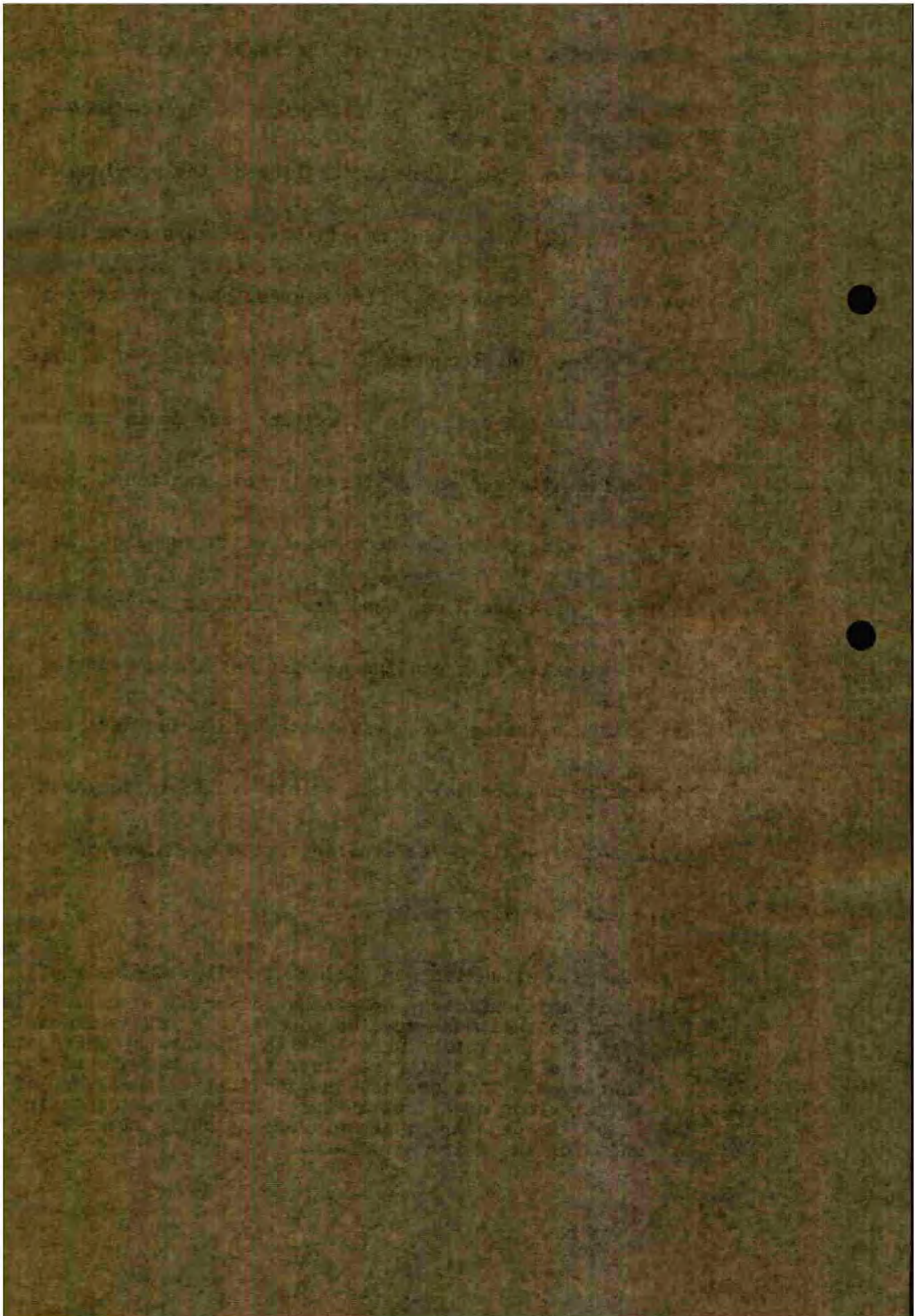
(1) The enemy retrograde movements of the previous day were even more pronounced on this day in the eastern segments, in particular on the route Chagny (9 miles NORTHWEST OF Chalons s. Saone)-Chalons s. Saone-Macon-Lyon, and thus beyond the interdiction line of the previous day;

(2) Large traffic congestions were reported on the road from Nevers (36 miles eastsoutheast of Bourges) in the direction of Roanne (36 miles northwest of Lyons).

The records available at writing give no indications that units attacked any of these targets mentioned above. The only thing which can be assumed with certainty is that in the major Loire River bend area south of Orleans Third Air Fleet units flew continuous missions throughout the day attacking enemy march movements, achieving devastating results in some cases. Focal points evolve in the area Orleans-Blois-Salles-Vierzon, and units again bombed the Loire and Cher River bridges.<sup>24</sup>

The air situation was easing steadily. The bulk of <sup>24.</sup> It is not considered necessary to include a map. It is possible that more precise sources not yet available might in the future show that the attacks by Third Air Fleet units in the Loire River bend extended even farther west. This creates the possibility that some of the missions of attack included under the Second Air Fleet in Chapter 3, above, were actually flown by units of the Third Air Fleet.







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265 The bulk of the German fighter forces were committed in combined escort-roving fighter missions. Contact with the enemy occurred only rarely, since the enemy air forces were withholding action. No reports mention any encounter with defending enemy fighters. Enemy AA fire was considerably weaker in all areas than on the past few days.

German AAA forces continued committed in action against ground targets, effectively supporting the Army operations in Lorraine, Alsace, and in the Burgundy area.

The Situation on the Ground. In the major Loire River bend the foremost German forward elements reached Orléans, Chateauf, Cosne, Pouilly, La Charité and Nevers, and taken possession of all of these points. From this line the advance southwest continued almost without combat.

The right flank units of the tank forces had driven forward to Burgundy and occupied the line Dijon-Chalons s. Saone as well as the French armament center of Le Creusot, 18 miles west of Chalons s. Saone. The left flank units were at the Belfort fortress, advancing on Epinal from Vesoul.

In Upper Alsace the German attack had reached the eastern foothills of the Vosges Mountain range.

In Lorraine the German advance continued. Metz had been taken in a drive from the east; the First Army was



267 also still advancing, encountering stiff resistance in some parts.

From the above very broad outline of the situation on the ground on the evening of 17 June it becomes evident why the Third Air Fleet found no more opportunities for attack action throughout the eastern segment--operations on the ground were moving fluidly and no longer required air support.

Furthermore, the front lines on the ground, within the scope of the enveloping maneuver on both sides of the Vosges Mountains and even more so in the case of the rapidly moving and deeply penetrating drives by the armor forces into the Burgundy area and north of Lyons, had become so confusing that any attack action by the air units could only have endangered the German troops.

The ground situation in the eastern segment is thus the principal cause explaining the inactivity of the Third Air Fleet in those areas.

268 In order to place the resounding victories which were shaping up both on the ground and in the air in the Western Theater in proper perspective within <sup>the</sup> larger pattern of the overall conduct of the war, it appears necessary at this point to discuss the concurrent activities of the



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268 the Royal Air Force bomber forces engaged in bombing industrial and traffic targets within Germany.

That purpose will be served adequately by quoting a realization and a finding stated more unequivocally than ever before in the Situation Report by the Commander in Chief of the Air Force on 18 June 1940:

According to the resultant damage, the greatest attack results hitherto were achieved.

18 JUNE 1940. On this day again, main emphasis in Second Air Fleet operations was at the Atlantic coast.<sup>25</sup>

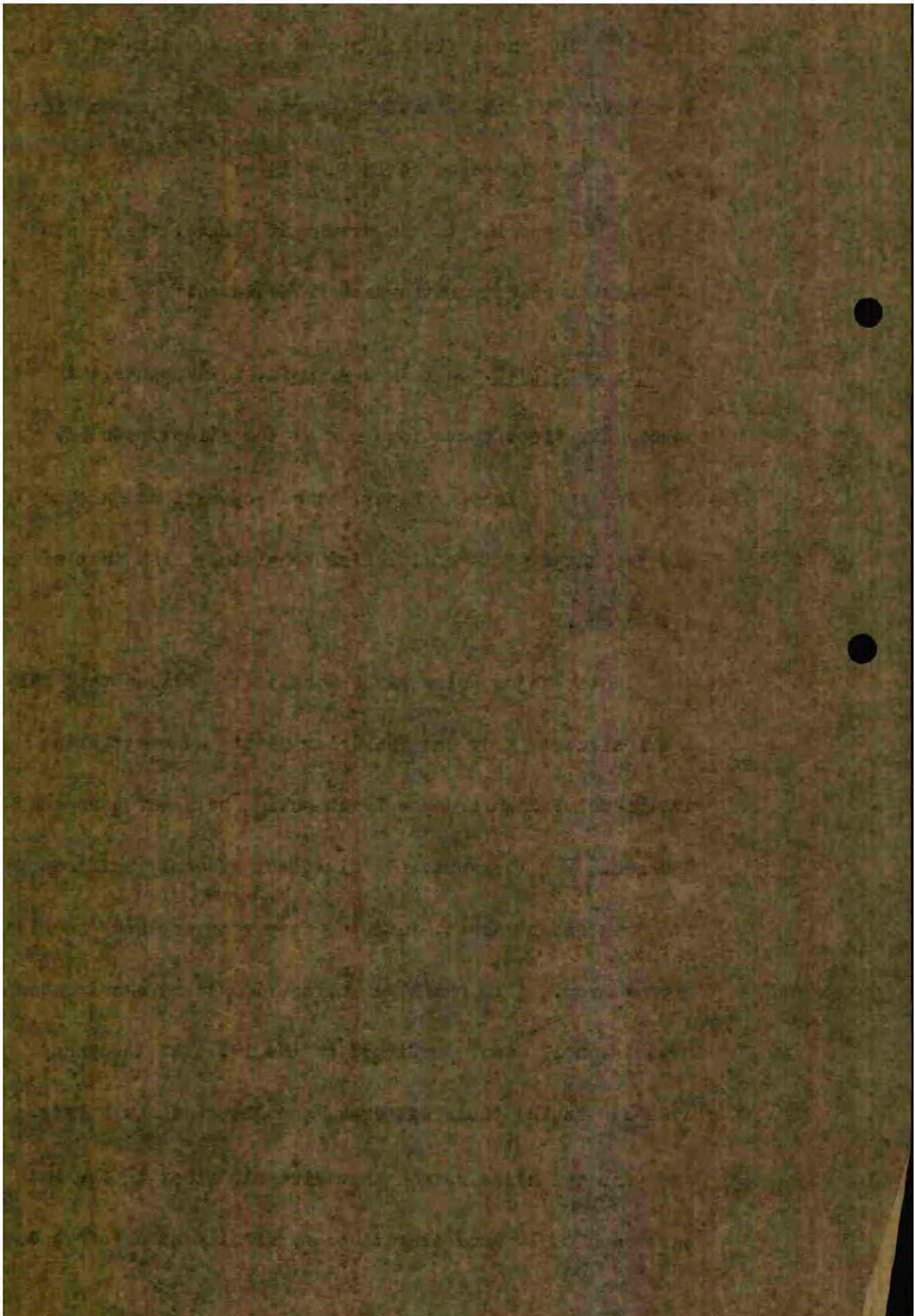
For the Third Air Fleet, attack operations on this day present a picture differing completely from that of the day before.

In the major Loire River bend it is obvious that only small elements from the Third Air Fleet were attacking individual French troop columns moving between Cosne and Bourges. For the rest, the air fleet suddenly shifted its main effort south, into the deep rear of enemy territory around Lyon. This shift was a reaction to reconnaissance reports on 17 June, confirmed on the 18, that the enemy were continuing their withdrawal southward through Lyon.

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For the above reason the Third Air Fleet in the late afternoon on 18 June dispatched apparently strong forces







269 to attack road and rail targets in the area of Lyon-Villefranche-Roanne-Montbrison-Firminy-Annonay-Vienne-Lyon.<sup>26</sup>

Contrary to the previous day, the Lorrain area on this forenoon again became a target area for attack. Here the renewed air action was again in support of the Army forces attacking the Toul-Zabern line of resistance. In the Nancy-Toul-Epinal-St. Dié-Lunéville-Nancy area air units attacked fortification works, infantry and artillery positions, and troop concentrations, with good results. In addition ~~like~~ to the Air Force AAA units supporting the Seventh Army, air units also again supported that army in action west of Kolmar.

The weather had improved meanwhile over eastern France, and the situation on the ground had also been clarified, and these two factors made the resumption of air action supporting the ground forces possible.

The outline map included with Appendix 101 to this present chapter shows the missions flown by Third Air Fleet units in the south and west of its zone of operations on 18 June. For cartographical reasons the concurrent areas

25. Chapter 5, C., above.

26. This was the first and last attack by Third Air Fleet units in this most southerly area of operations on both sides of the Rhone River. All other missions in the south were flown exclusively by units of the VIII Air Corps supporting Panzergruppe von Kleist. See Chapter 4, above, for more detailed information.



270 of operations in the eastern segment have not been included  
 in the map. They <sup>are</sup> adequately explained in the text.

19 JUNE 1945. On this day units of the Third Air Fleet  
 flew their last large-scale and long-range mission of the  
 campaign in the west.

In discussing Second Air Fleet operations it has been  
 mentioned previously<sup>27</sup> that the large bulk of all long-range  
 bomber forces of both air fleets were on one more occasion  
 consolidated for a day of major battle to smash particularly  
 profitable targets in the form of troops moving by vehicle  
 and on foot in the west towards the Atlantic coast.<sup>28</sup>

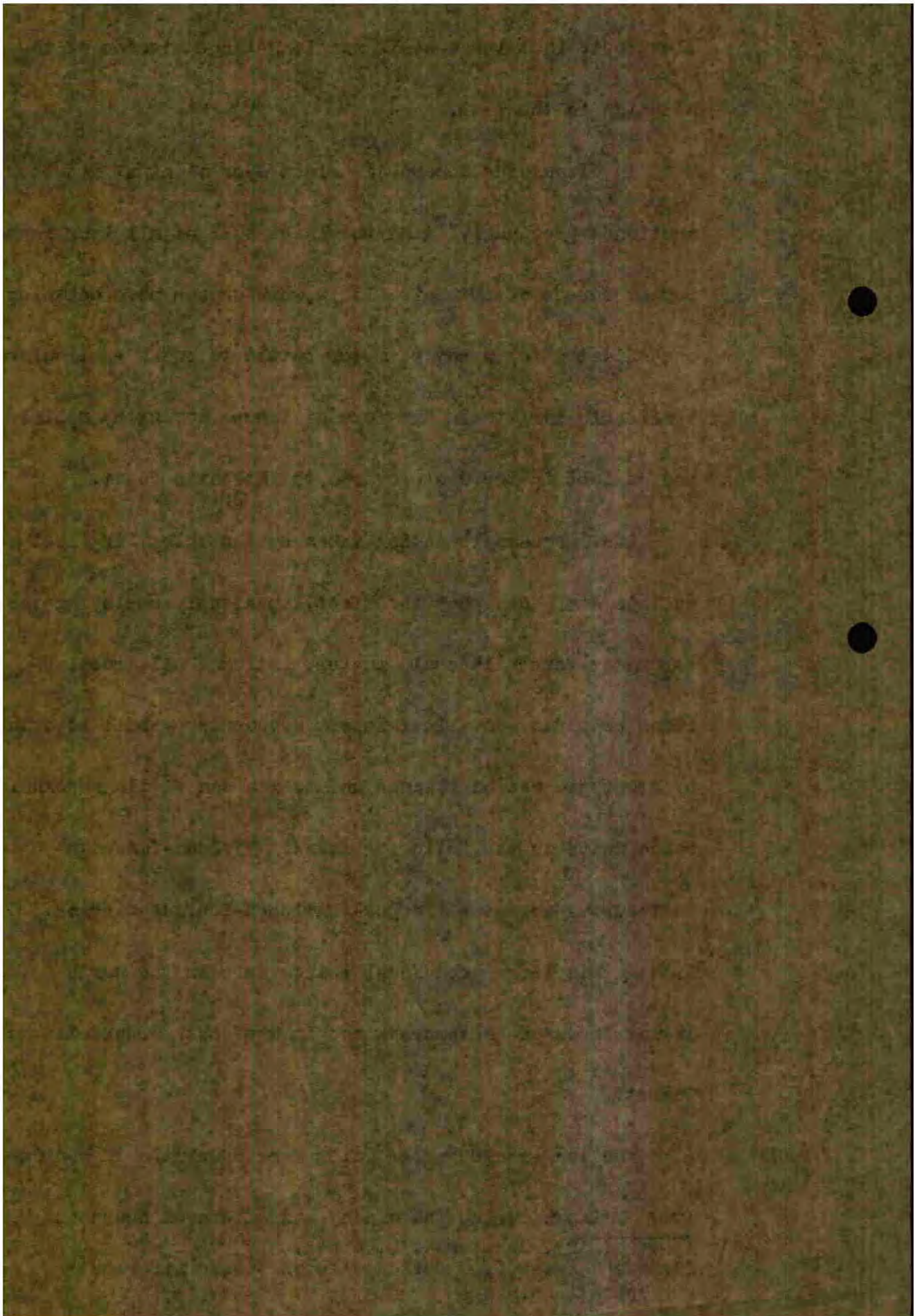
The large-scale action taken by the Third Air Fleet  
 on this day shows that the fleet, apparently employing the  
 strongest forces it could muster, attacked all troop co-  
 lumns on roads and all transport movements by rail reported  
 by strategic reconnaissance and by its own battle reconnais-  
 sance units in the following areas: Vierzon-Issoudun-  
 Chateauroux-Argentan-Limoges-Montlucon-Bourges-Vierzon.  
 Within this large area focal points were in the north  
 around Issoudun-Chateauroux and in the south around Limoges-  
 Guéret.

271 The long-range bomber units were committed in contin-  
 uous attacks during the midday and afternoon hours and

<sup>27</sup>. Chapter 3, C, above.

<sup>28</sup>. See Chapter 3, C for details on Second Air Fleet  
 operations.







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27L inflicted heavy losses in personnel and materiel.

However, units of the Second Air Fleet also on this day attacked targets in the above area, particularly in the communications lines from Bourges through Issoudun and Chateauroux to Limoges.

The consolidated pattern of operations by both air fleets thus reveals a duplicate of effort, meaning that the Commander in Chief of the Air Force had not made very precise allocations of targets or had made no specific allocations at all between the two air fleets. The impression is that the units of both air fleets sought out their own targets and attacked them wherever they happened to find them. Liaison at the top levels had apparently failed.

The outline map in Appendix 102 clearly shows the combat areas, and the areas where operations overlapped, on this day.

At the same time as the above, the Third Air Fleet also participated in action in the Lorraine area, which in the meanwhile had in all respects become a secondary zone of operations.<sup>29</sup> Strong units, particularly dive-bomber units, from the air fleet attacked targets around Epinal and in front of the First Army north of Strassbourg.

<sup>29</sup> The purely local tactical missions executed in the eastern segment of Third Air Fleet zone are not entered in the outline map.



271 particularly at Weissenburg, where the French were still tenaciously defending permanent type positions. The air attacks at these points enabled the ground forces to break through here.

272 The main feature in the air situation on this day was that no enemy fighters were observed in action throughout the entire theater.

It would be pointless to endeavor to trace the ground situation in the circumstances existing at the time. The only place where direct contact still existed between the Air Force and the Army was in Lorraine and Alsace, where dive-bomber forces were serving as a substitute for long-range artillery.



273 D. THE END OF THE CAMPAIGN IN THE WEST--AIR POWER AGAIN  
A SUBSTITUTE FOR ARTILLERY, 20-25 JUNE 1940.

During this final phase of Operation "Rot", which was now drawing to a close, the Second Air Fleet was engaged in almost ceaseless operations against ports and seaborne targets at and off the Atlantic coast, action still connected with the campaign against France. At the same time, however, it was already shifting towards the conduct of air warfare against England.<sup>30</sup>

The Second Air Fleet with its units was thus engaged day and night in practically ceaseless attack action, while the mission of the Third Air Fleet at the same time was in direct contrast.

The major operation on 19 June had been the last commitment for the majority of the Third Air Fleet's aggressive units, which then were placed in rest status.

The only missions still executed by the air fleet's units during the next few days were by bomber and primarily dive-bomber units supporting the ground forces. These units repeatedly attacked bunker positions of the Maginot Line in the Lorraine-Alsace area, with main emphasis on the region north of Strassbourg, where French garrisons were  
30. XXXXX Chapter 3, 6, above.



274 still resisting in parts.

In this locally confined combat area air power had once again become a substitute for artillery.

In detail, elements of the Third Air Fleet were committed as follows:

June 20. Units attacked ten bunker or fortified field positions north of Strassbourg,<sup>31</sup> and, strangely enough carried out one long-range attack against a rail depot northeast of Limoges, which had been the scene of action on 19 June.

21. Again <sup>dive-bomber</sup> units attacked fortifications (individual bunkers and groups of bunkers north of Strassbourg)<sup>32</sup>

22. Following a pattern the same as on the previous day, units neutralized fortified installations around Weissenburg and in the Mutzig area, west of Strassbourg.

23-25. No air activity.

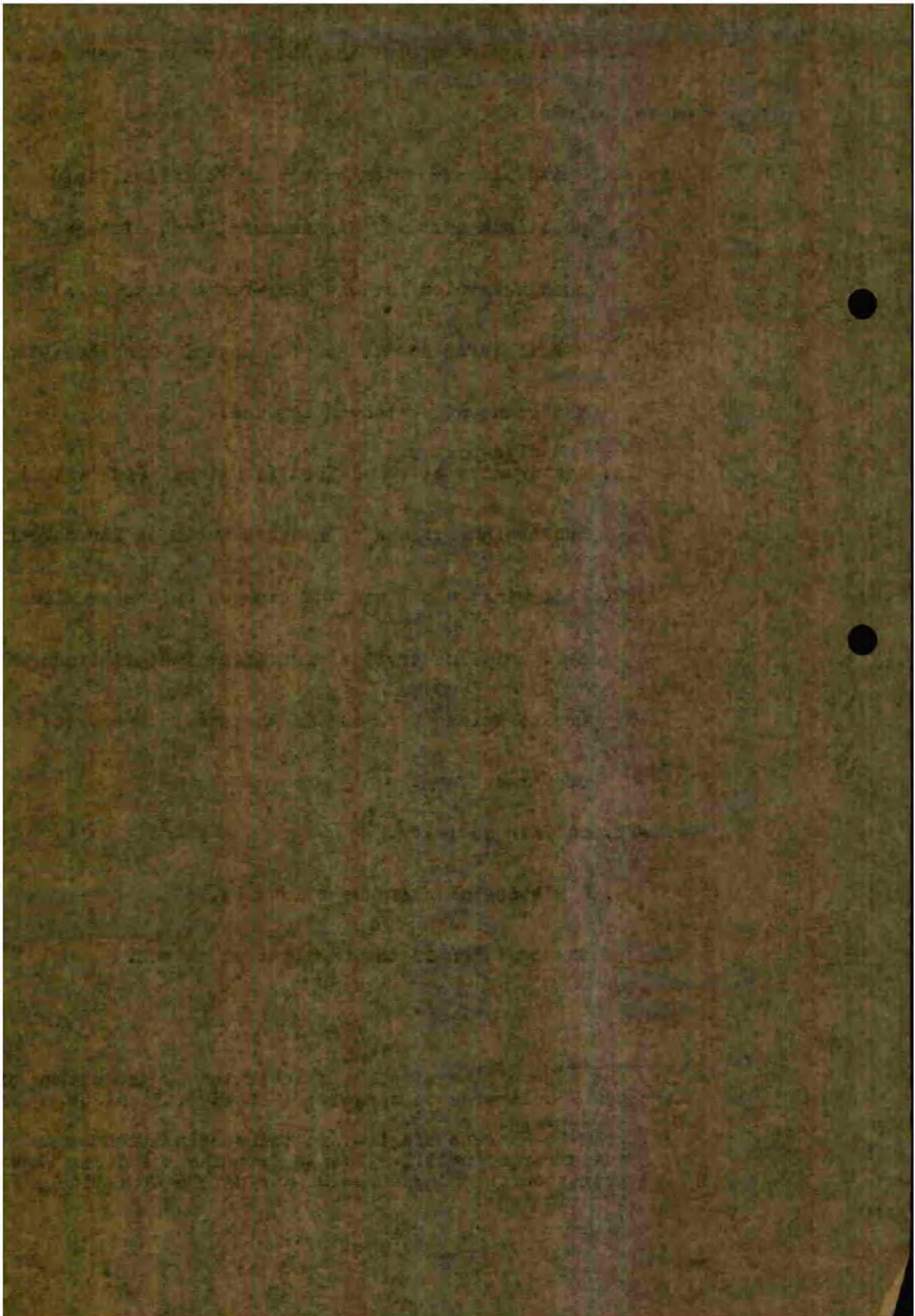
25. Armistice with France effective.

The campaign in the West was at an end.

31. The size of the attacks is indicated by the number of bombs delivered on targets: 47 SC-500, 3 SC-250, 22 SC-50, 98 SD-50.

32. From 23-25 June single- and twin-engine fighter and antiaircraft artillery units from the Third Air Fleet protected the Compiègne FOREST during the armistice negotiations.







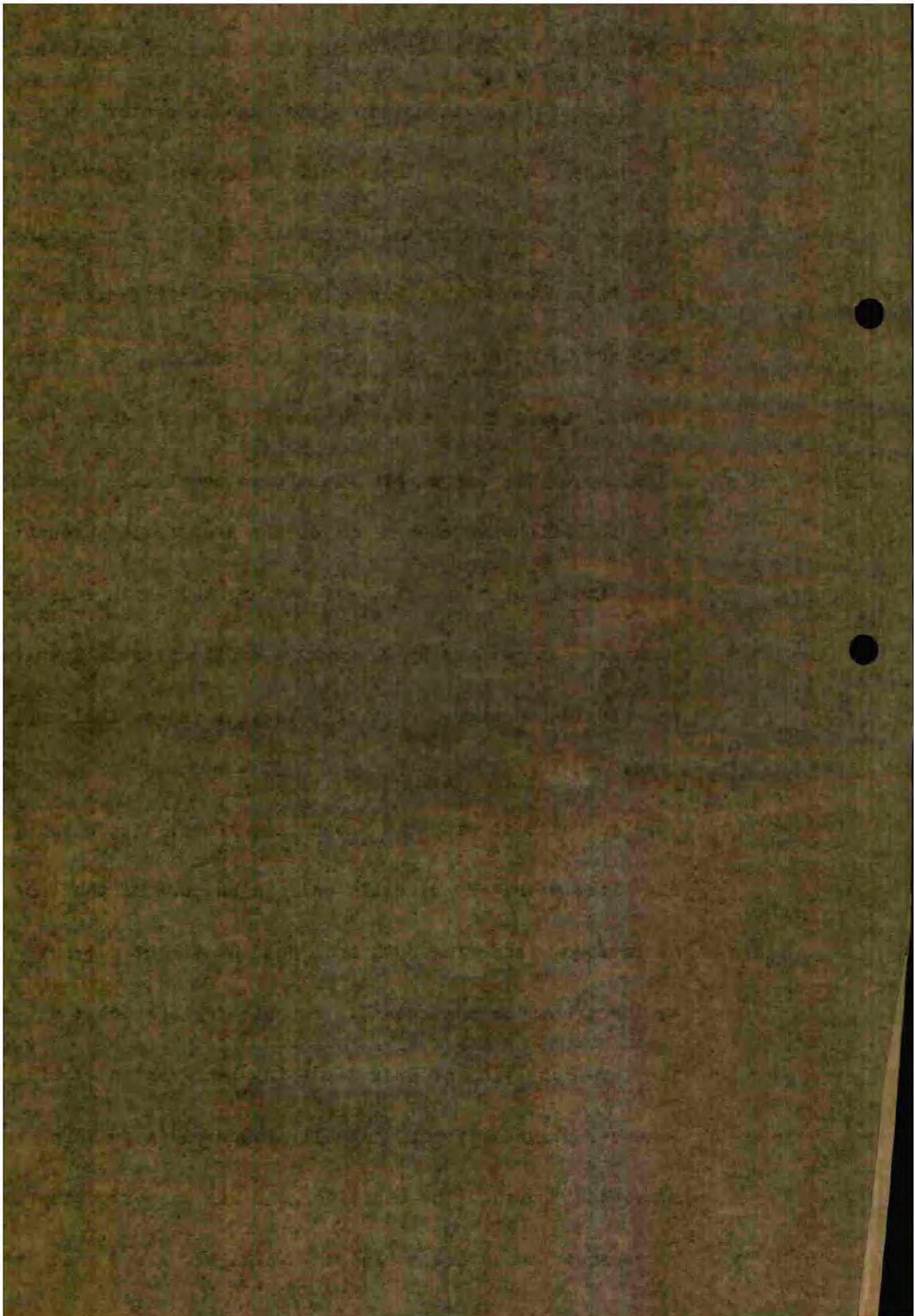
## SUMMARY OF CHAPTER 5

In the second and final phase of Operation "Rot" the Third Air Fleet was allocated the bulk of all aggressive units of the entire German Air Force and committed in the decisively important parts, in the center and in the eastern segment, of the entire theater of operations.

At the same time the Second Air Fleet was operating in a "secondary zone", where it had more difficult and more costly missions to execute with considerably weaker forces. Apart from action on the first three days, the missions of the Second Air Fleet were completely separate from the offensive operations of the Army on the ground: operational, or strategic, air warfare had again come into prominence here, and by the nature of the targets involved the missions assigned were of a varying and entirely new type.

In contrast with the Second Air Fleet, the Third Air Fleet operated primarily only in support of the Army operations, rendering both indirect and direct support to the troops on the ground. The strategic concept of the far-flung plan of operations involving an enveloping maneuver planned for and actually executed in eastern France had provided the basis for the air support operation. Throughout the entire period the Third Air Fleet remained







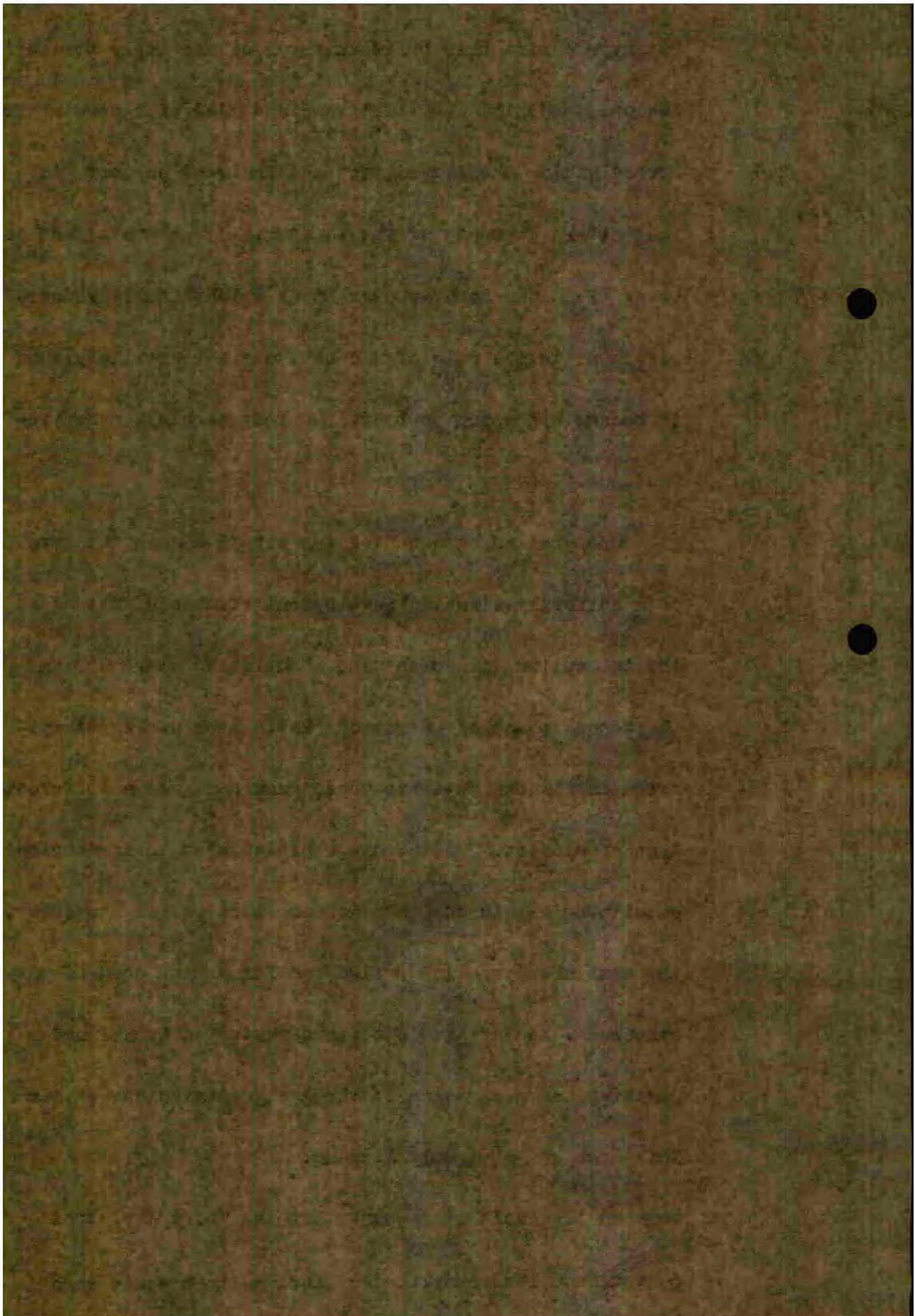
275 tied to the ground operations of the Army forces, even though it did on one occasion direct attacks against targets far inside enemy territory in the west and south. But even during this brief interval of seemingly strategic action, the Third Air Fleet remained tied with some of its

276 forces giving the Army direct and indirect support in the eastern segments of the theater. It was this fact of being tied down to army operations which finally reduced air power to the role of a substitute for artillery when it became necessary to break the last senseless enemy resistance.

Cooperation between the two air fleets in the form of a uniformly directed development of main effort areas for the entire Air Force came about at no stage during the second phase of Operation "Rot." Each air Fleet operated in its own separate zone, each assigned a different type of mission. On the one occasion when their combined commitment within one and the same area became necessary, the combined operation failed, so far as the command was concerned, because it is obvious that clearly defined division and separation of the assigned missions within that area was ~~obviously~~ lacking.

On the whole it appears that the Third Air Fleet command had less complicated missions to execute than







276 the Second Air Fleet. However, genuine flexibility of operations is also evident in the conduct of operations by the Third Air Fleet which, in quick changes of emphasis always massed its units where the current tactical or operational situation called for a concentrated effort.

A comparison of the eight tactical situation maps included as Appendixes 94-96 and 98-102 gives a clear picture of this flexibility in operations. However, with such strong forces as the Third Air Fleet had available a flexible development of main effort areas, even when some units have to remain tied up in certain missions, will always be easier than when only small forces are available, as in the case of the Second Air Fleet.

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In yet another sense matters were easier for the Third than for the Second Air Fleet, namely, that of responsibility for combat operations at the front and concurrently for home defense. However, for the Third Air Fleet, this ~~XXXXXXXX~~ problem of directing operations in two directions was not nearly as complicated as for the Second Air Fleet. Its lines of supply and communications were far shorter and the areas involved, in southern Germany were not nearly as acutely threatened as those of the Second Air Fleet, for example, the Ruhr Region.

Another factor which simplified matters for the

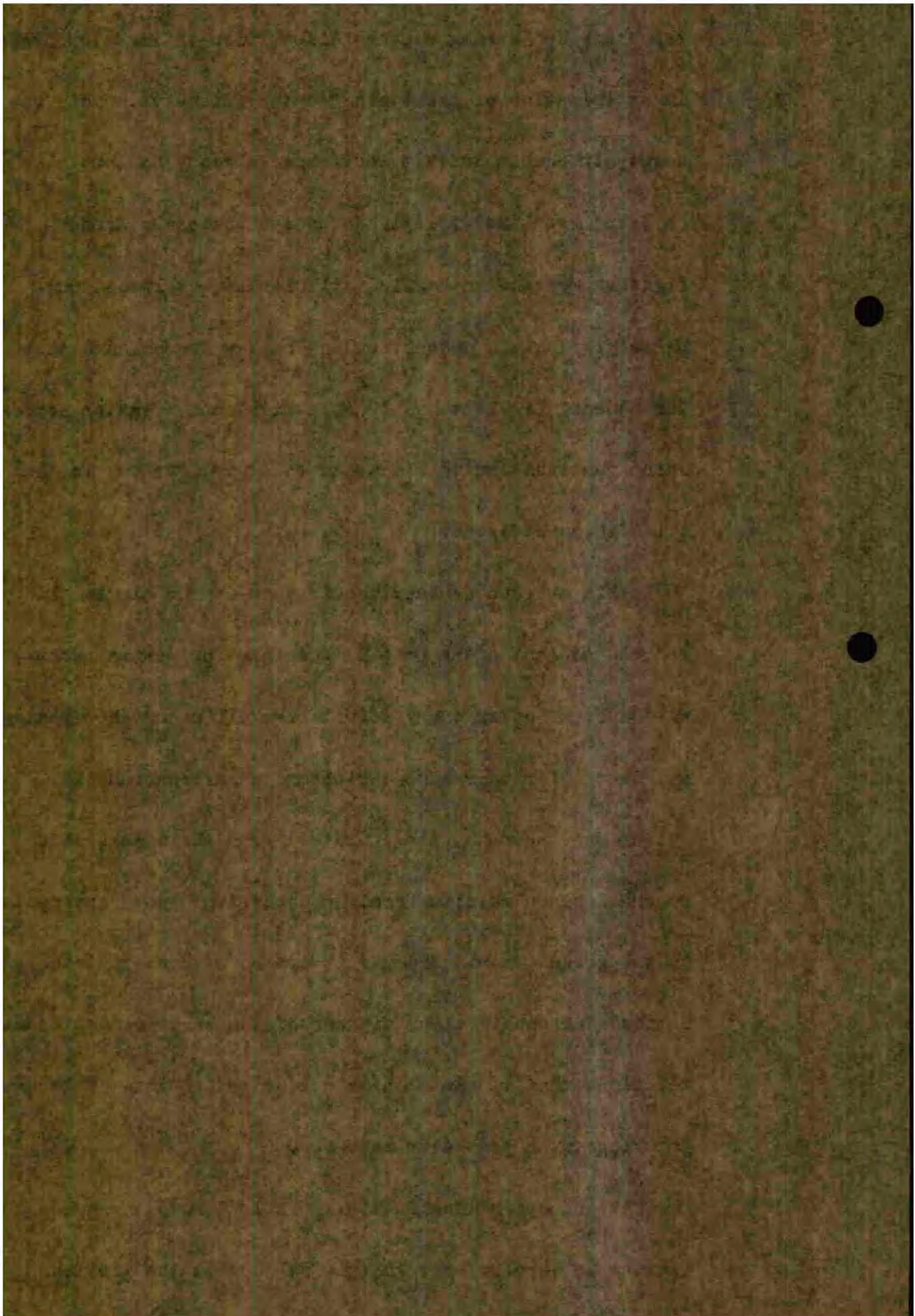


277 Third Air Fleet was the favorable development of the air situation. It was only on the first two days of the offensive that the French air forces were again really active-- the enemy had arranged a new disposition of ~~its~~ <sup>their</sup> air forces in anticipation of the coming German offensive. This renewed air combat activity collapsed already on the third day, and even the strictly defensive action by French fighters weakened steadily until it also collapsed completely. In this connection the reader is reminded that the Second Air Fleet had to cope with enemy fighter forces which remained active almost to the very last day in the Atlantic coast areas.

This absence of enemy resistance in the air in all but the coastal areas made it possible for German reconnaissance to cover enemy territories all along the frontage and in the far rear almost without interference and to gather the necessary target data. From the innumerable reconnaissance reports received concerning enemy movements on the ground and in the air it can be assumed that the command had such a clear picture of the enemy situation at all times that it was able to conduct operations as though carrying out a peacetime maneuver.

Attack operations initially reflect much the same picture as developments in this subject in the previous







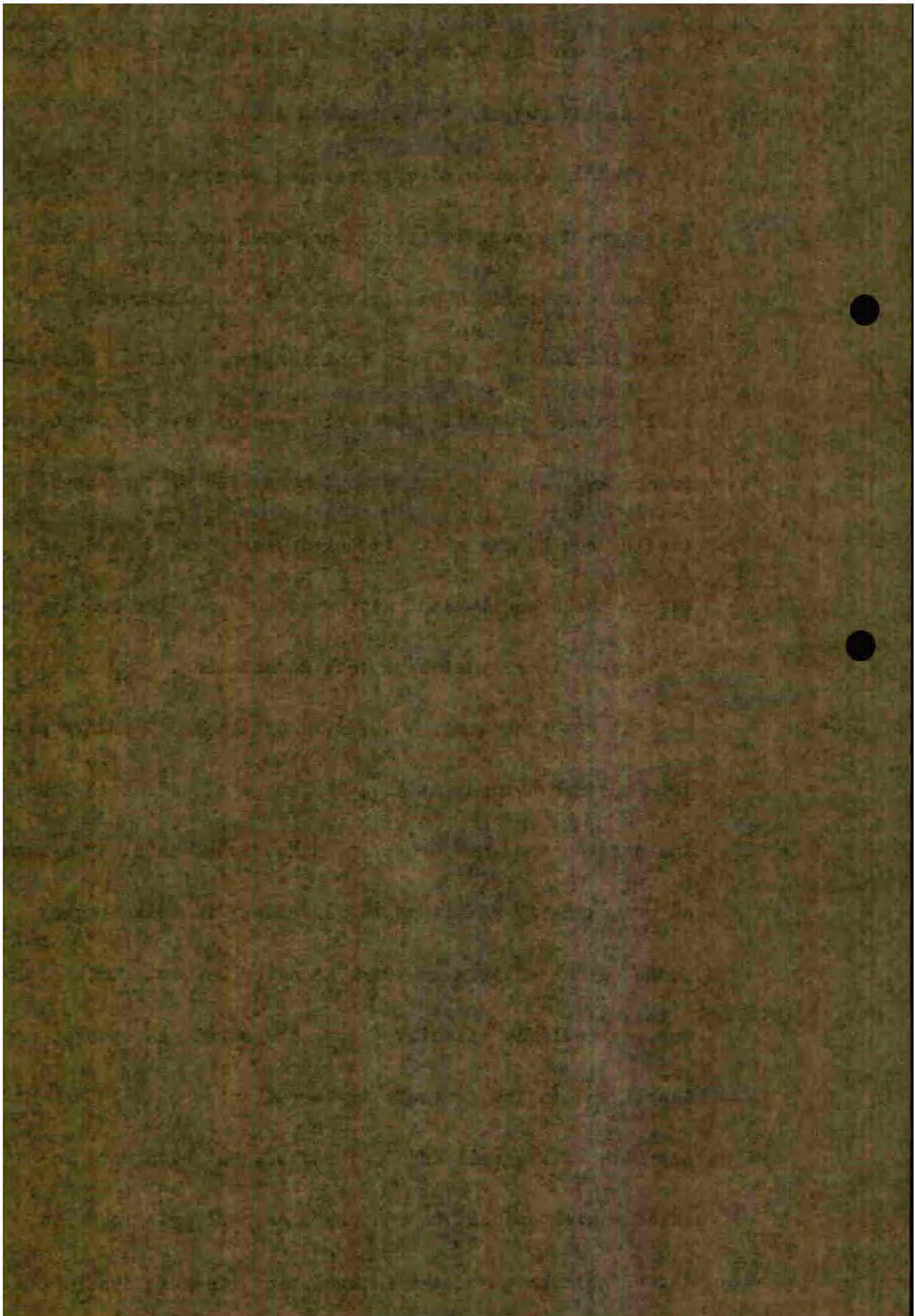
278 offensives: close direct tactical support for the Army on the field of battle, which enable<sup>d</sup> the ground forces to breach the enemy lines of resistance, gave way sooner or later, according to the progress made in ground operations, to indirect support operations in the pursuit.

But in an even more pronounced measure than in past campaigns the pursuit operations, when the enemy at such<sup>an</sup> unexpectedly early stage initiated their withdrawal, assumed the features of pure annihilation tactics. Particularly in the gradually develop<sup>ing</sup> pocket area of northeast France and along the other routes outside of that area leading south, air units attacked every target detected. Within the steadily contracting pocket area the results of these attacks must have been devastating.

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At the same time, however, a systematic ~~XXXXXXXXXX~~ pattern becomes evident at an early stage of action to disrupt and destroy the enemy rear communications, carried through as methodically ~~XXXXXXXXXXXXXXXXXXXX~~ in this closing phase of the western campaign as never before. This action was particularly effective above all within the pocket area<sup>a</sup> itself and in the sparsely traversed areas of the Belfort gap with its few rail and road routes, but even more so in what might almost be described as a classic form in the establishment of two interdiction lines in central







279 France on 16 June.<sup>35</sup> This concept of interdiction lines was nothing new. Such lines had been systematically planned, particularly for the Belgian railway network, during the planning and preparation stages for Operation "Gelb." In the case under discussion here, however, the principle which had been proved sound before was applied in an improvised form.

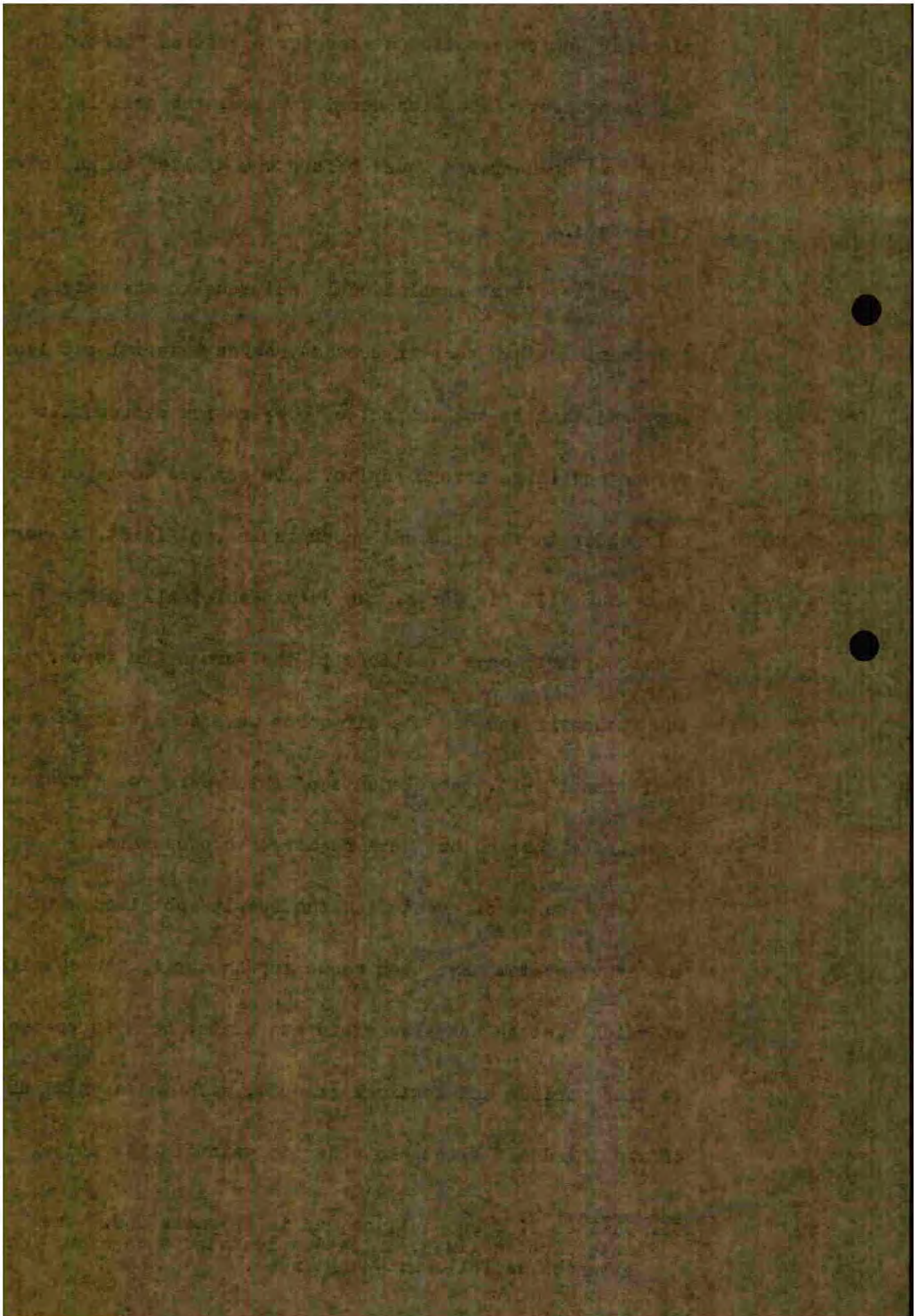
One important problem could not receive adequate treatment in this chapter because source material was lacking, and that is the subject of cooperation between air forces and large armored units. The methods employed are only clear in the case of Panzergruppe von Kleist, supported by the VIII Air Corps, the only specifically close tactical support corps available in the German Air Force. The panzergruppe and the air corps were committed as one operational unit, the elements of which were not directed by uniform command but were required to cooperate.

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The course of events and the results obtained with the above system have been shown in Chapter 4, the details of which must be compared again and again, both in respect to time periods and tactical aspects, with the operations of the Third Air Fleet in order to maintain the proper

<sup>35</sup> ~~interrelation~~ Chapter 5; G and outline map in Appendix 100. The interdiction lines, which supplemented each other extended as follows: --Continued.







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Matters were different in the case of Panzergruppe Guderian. It is an established fact that this force also received support from elements of the Third Air Fleet. However, the source material available from the side of the German Air Force do not reflect a clear picture of the forms and methods of cooperation adopted. Army views on the subject will be dealt with in connection with a subject to be treated later. In contrast with the case of Panzergruppe von Kleist, no air forces designed specifically as close-attack units were available to support Panzergruppe Guderian, a mission which the long-range bomber units of the Third Air Fleet had to execute concurrently with their other missions.

That no final solution had been found as yet for the problem of cooperation between air and tank units is indicated by the foregoing account of events: tank forces had driven deeply into the areas under attack by air forces, and it was no longer possible to dispatch air units to attack targets in some areas because tank units were operating in their planned air target areas.

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Owing to the lack of source material, no reply can be offered here to the questions which arise from such

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35!—Continued: (1) from Moulins in the west through Paray le Monial, Macon, to Bourg, and farther northeast (2) from Dijon through Auxonne, Dole, and Meuchard.



281 experiences. However, even these questions are only one part of the overall complex problem of Air Force-Army cooperation.

In view of the primary Army-support nature of the missions of the Third Air Fleet, the coordinated action by Army and Air Force units must have been based on very close cooperation. This must have been particularly so during the breakthrough battles on the ground in the center and in the air fleet's action ahead of the First and Seventh Armies. With the steady contraction of the pocket area, when fronts were becoming ~~more~~ less and less clearly definable, however, extremely close cooperation became a matter of decisive importance. Since all command records for the time are lacking, the question must remain open to what extent the Third Air Fleet directed such operations centrally and to what extent certain Air Force units may have been attached permanently to specific Army forces.

As related previously in this study, the plans for Operation "Rot" during the preparatory stages had provided for specific air wings to support specific field armies. It is not possible to ascertain whether this method was retained. In view of the great flexibility with which the air fleet conducted its operations and its rapid shifts in main emphasis, however, it seems more likely that



282 any close integration of Army and Air Force units was restricted to specific periods and specific special tactical situations as, for example, in action supporting the First and Seventh Armies but even more so during air operations in the Lorraine pocket area when the situation on the ground there became more and more confusing.

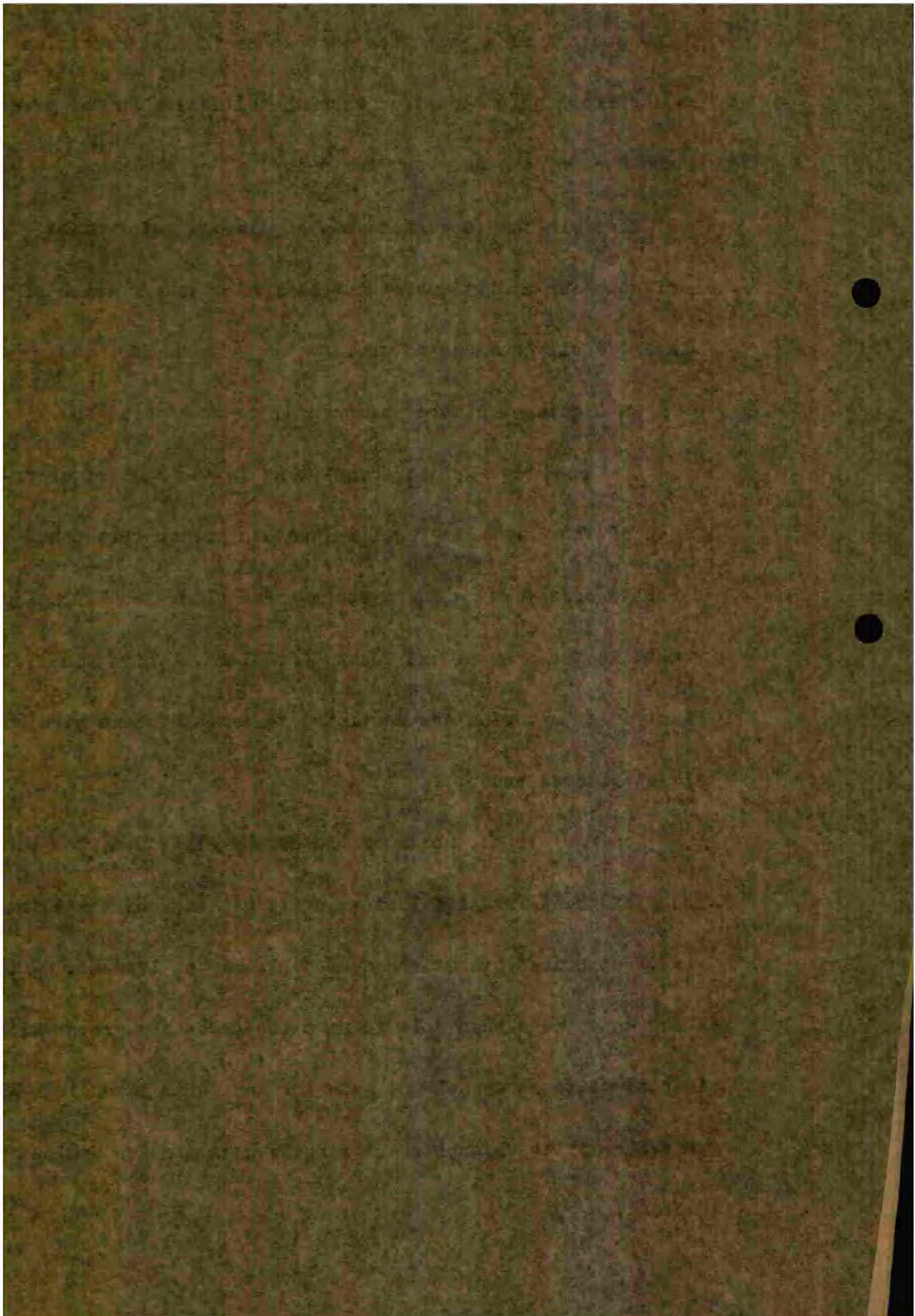
There is thus a regrettable gap in the information available for a critique on the ~~REMARKS~~ measures taken of a specifically command nature.

In closing, two more points need to be brought out:

On the whole, weather conditions in the zone of operations of the Third Air Fleet in eastern France were considerably worse than in the western areas along the Atlantic coast, in the zone of the Second Air Fleet. Third Air Fleet units nevertheless continued to execute their missions almost without pause.

Contrary to the units of the Second Air Fleet, for the ~~REMARKS~~ majority of those of the Third Air Fleet combat operations ceased already on 19 June, 1940. These units were then able to make the necessary preparation in respect to personnel and materiel for their impending transfer to the Channel coast for the next mission against England.







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PART FOUR

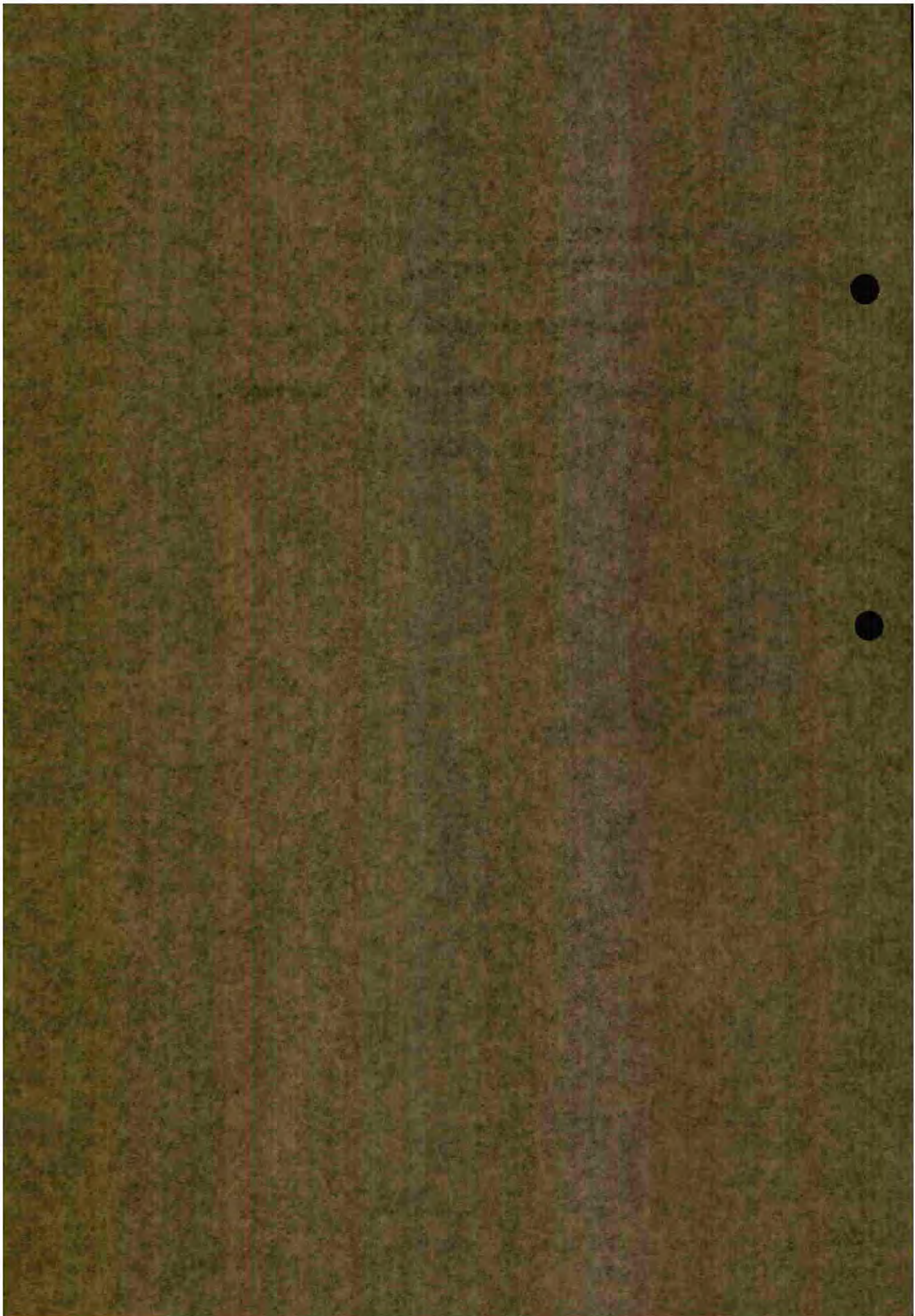
CHAPTER 6

COMMENTS ON OPERATION ROT

CONTENTS

- A. The "Joint Military Command Viewpoint" in Military Historical Research.
- B. Command of the German Air Force in Operation "Rot."
- C. The Air Situation and "Air Supremacy."
- D. Air Tactical Lessons.







A. The "Joint Military Command Viewpoint" in Research on Military History. The close of the discussion of Operation "Rot" at the same time brings the whole study on operations in the West to an end.

That study, known as "Stuile West" was designed as a study confined exclusively to Air Force operations, and it has actually been compiled with that end in view. At the same time, however, it was clearly realized from the beginning that it would not be right to present the operations of the German Air Force in the 1940 German campaign in the West as a complete and separate military history of air operations, since air operations of a strategic scope as understood later in the war were unknown at the time.

After the German Joint Military High Command had decided to apply in France the "recipe for victory" of the Polish campaign, but in an even more emphatic form, namely, to commit the operational air arm primarily in action supporting the Army, the combined operations of the two services were so closely interwoven that it was no longer possible to consider either of them separately. The problem has been to find a synthesis in which the operations of both the Air Force and the Army could be presented in the sense of their mutual planning and execution. This problem

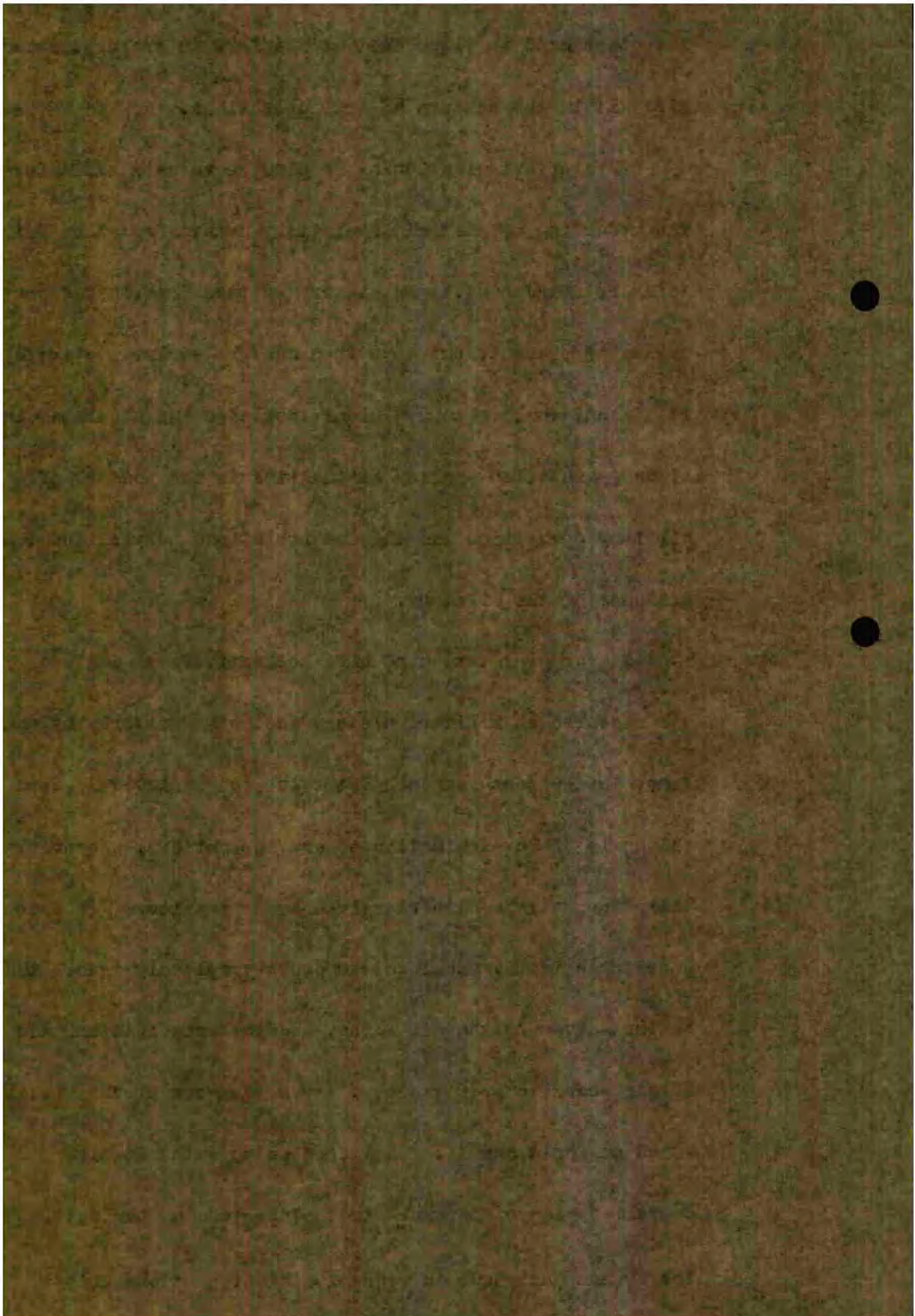


284        has not been satisfactorily solved. Therefore the whole study must be regarded, in this sense, as an endeavor on the one hand to write the history of air warfare, and on the other hand to place that air warfare in proper perspective within the pattern of Army operations.

      This effort might possibly also serve as a basis for the recording of historical military events from the "Joint Military Standpoint." No history written from that aspect exists at present, but a pattern must be evolved to write it if one would obtain a clear knowledge and understanding of the principles applied at the time in the conduct of military operations and the interrelations between the two branches of the military.

      The Army, a term used here collectively to include all research on military history conducted formerly by the Army, in the past approached the subject exclusively from the angle of an examination of Army operations. However, the presentations hitherto given by Army writers in some cases practically and in other cases completely ignore the support given by the Air Force, and the contribution made by air power towards victory. Even the work by von Fippelkirch on World War II, considered as an authoritative overall review of the <sup>whole</sup> war, in the chapters on the Battle for France, and thus on Operation "Rot", mentions only







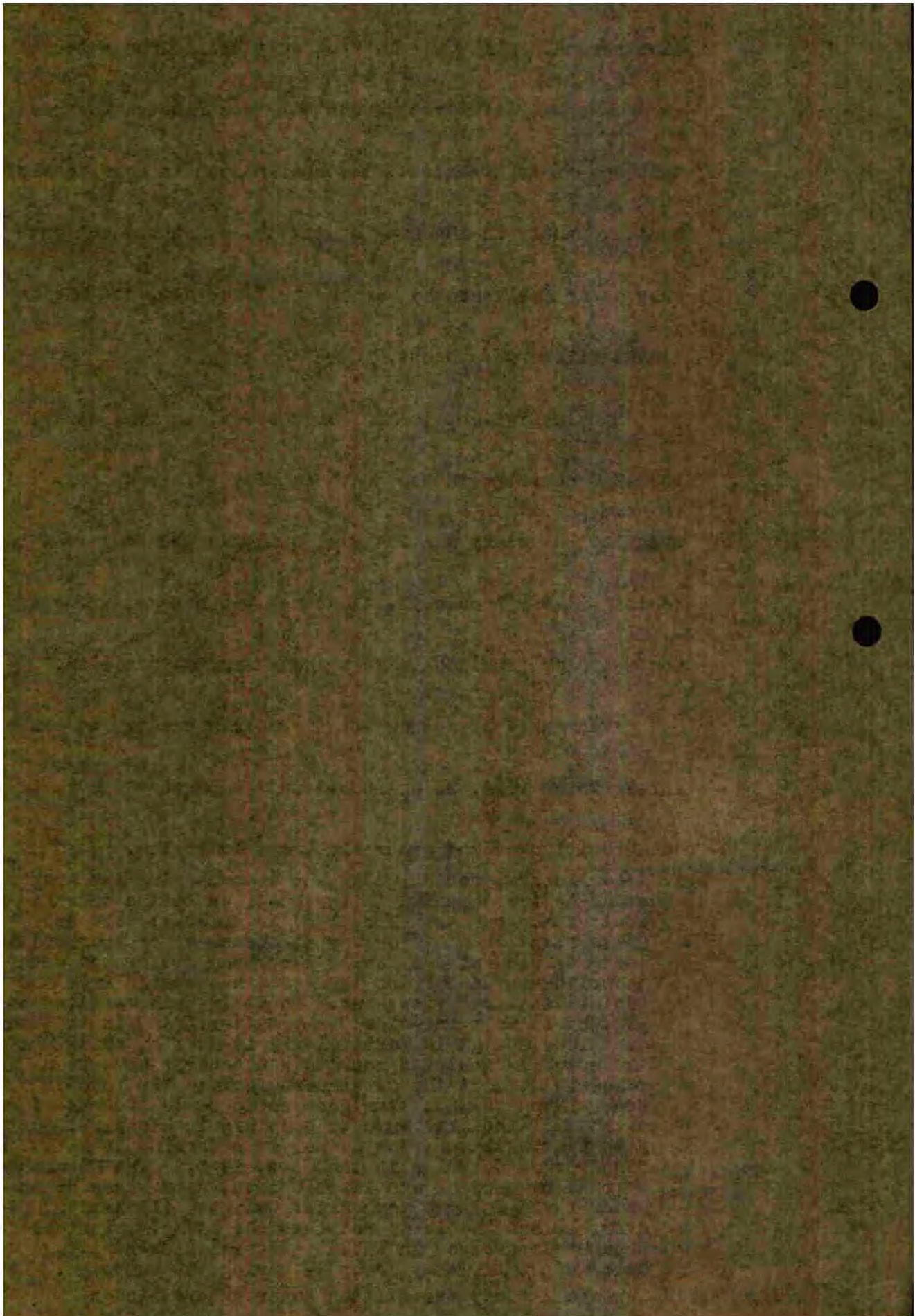
285 one single air attack, and that an attack by French air units which struck German tank units. That the German Air Force participated at all in the campaign is completely disregarded. While the lack of suitable source material on the German Air Force undoubtedly contributed towards this one-sided treatment, the real reason is more deeply rooted, namely in the Army mentality, which had not yet adopted as fully as the German Air Force had, the higher "Joint Military" concept.

Parallel with this Air Force study, an Army study on the 1940 campaign in the West is also being prepared, and even in that study justice will still not be done to this "Joint Military" concept, although the necessity for a new approach is acknowledged by some Army authorities.<sup>1</sup>

This makes it appear all the more necessary to place an Air Force view, as expressed in the present study, in juxtaposition to the generally known Army view.

1. Generaloberst von Salmuth, who is preparing the Army study on the campaign in the West, wrote the present author on 1 December 1957 as follows: "You are quite right in what you say at the close of your writing. In my opinion also it would have been better and wiser to write the history of the western campaign from the "Joint Military" viewpoint. As it is being written at present it is a one-sided Army matter. And in the case of this campaign in particular it must be said that the actually achieved results would never have been possible without the outstanding German Air Force." General von Salmuth then goes on to state the one-sided methods of the Army have to continue in his work. Note by translator: The author is referring to MS P-208 "The German Campaign in the West, 1940." The MS was started by General von Tippelskirch, upon whose death General von Salmuth took over. Owing to ill-health, however, he was unable to complete the study, which was brought to a close in 1959 by General Blumentritt, Chief of Staff, Army Group B, during the campaign. The whole study was written under supervision by General *Haber...*







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The decisively important point in which the principles observed in the preparation of the two studies, this present one and the one being written for the Army, is that in this present study the account of Air Force and Army operations has been balanced and coordinated so far as the sources available permit, and insofar as the purposes of an Air Force study require.







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## B. THE GERMAN AIR FORCE COMMAND DURING OPERATION "ROTI"

At the time of the events dealt with in this study trains of thought in Army circles were more objective and realistic than at present, although little documentary evidence is available on the subject.

However, the War Journal West (Kriegstagebuch West) of Army Group A<sup>2</sup> is available, and it can be used as an Army source to supplement what has been said so far in this present study and at the same time to lead up to the problems of German Air Force Command.

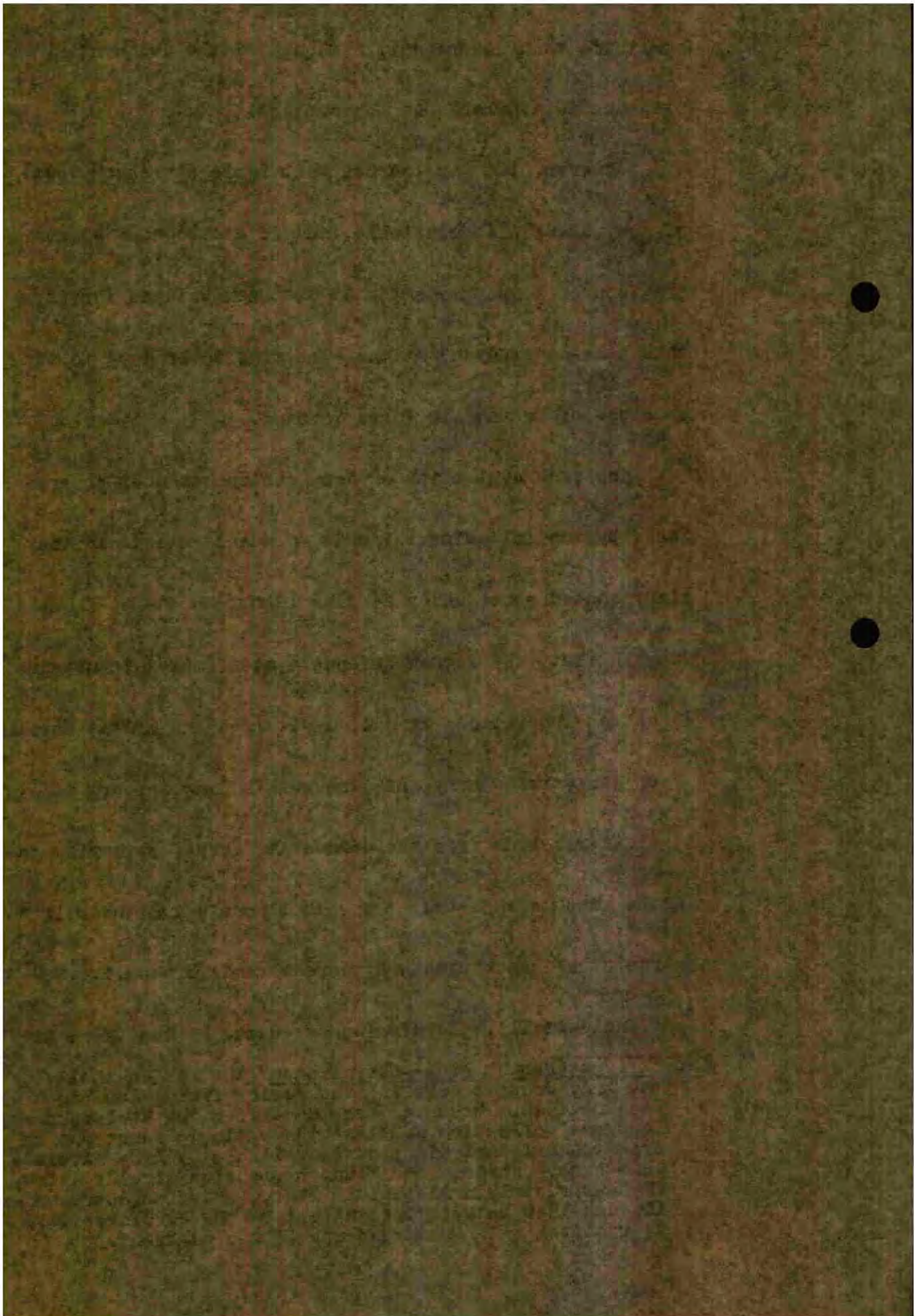
Any such evaluation of Army statements must be prefaced by the following reviewing comment entered in the diary quoted above under 24 June 1940

That the French defense system failed to measure up to expectations is due, apart from the combat morale of the Germany Army and the outstanding support it again received from the German Air Force, primarily to the circumstance that the combat morale and the will to resist of the French Army were already broken.<sup>3</sup>...."

Incidentally, the missions executed by the Third Air

2. "Kriegstagebuch West--Operationen" the War Journal of the Army Group B covering the period from 1 June to 24 June 1940. Excerpts were used from the Karlsruhe Document Collection supplemented by the present author from the original diary made available by Army circles.
3. This Army sentiment had found expression already a few days previously in the Halder Diary, where an entry under 11 June 1940 reads: "The support by the Air Force..... is realized with gratitude and acknowledgement."

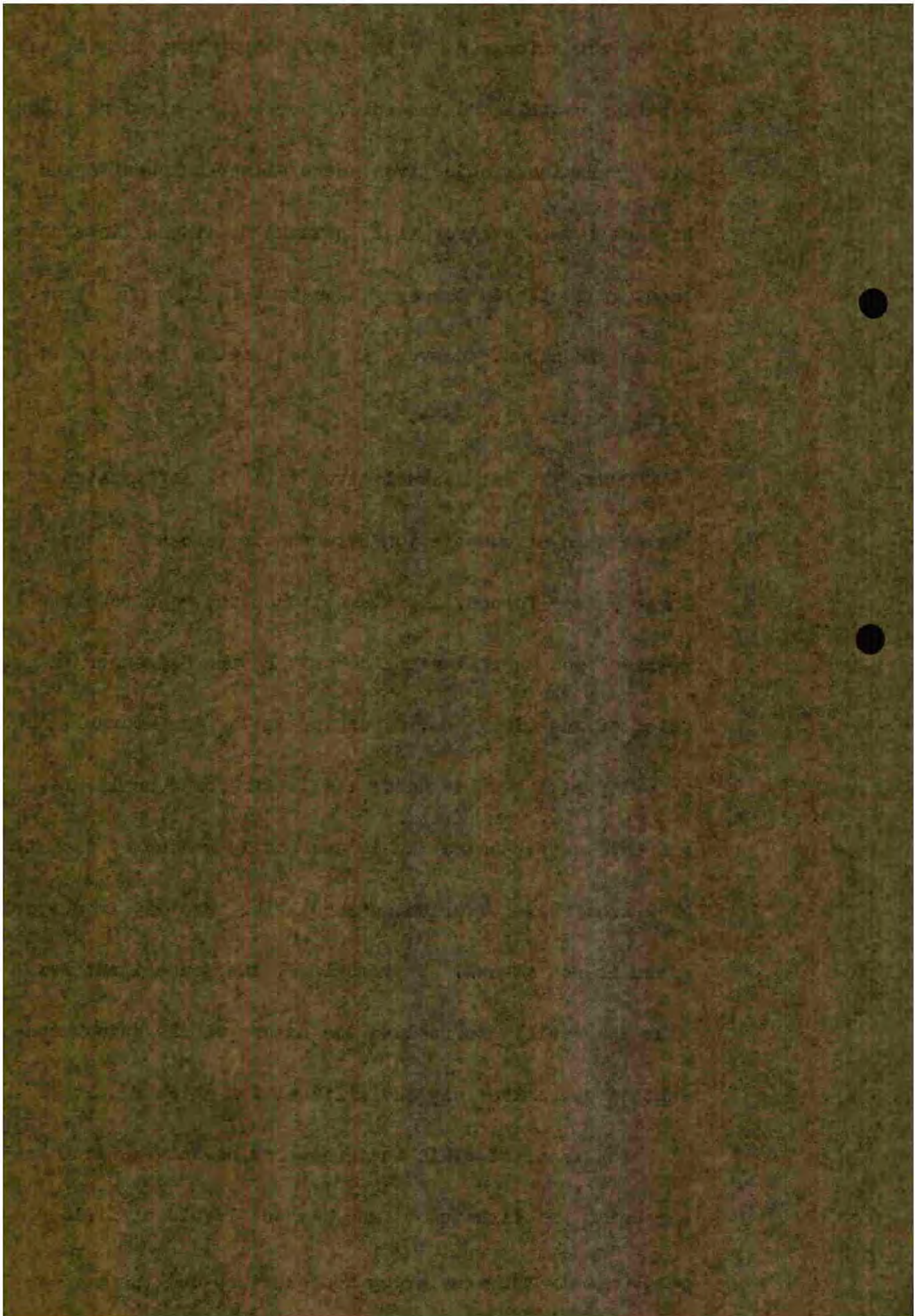














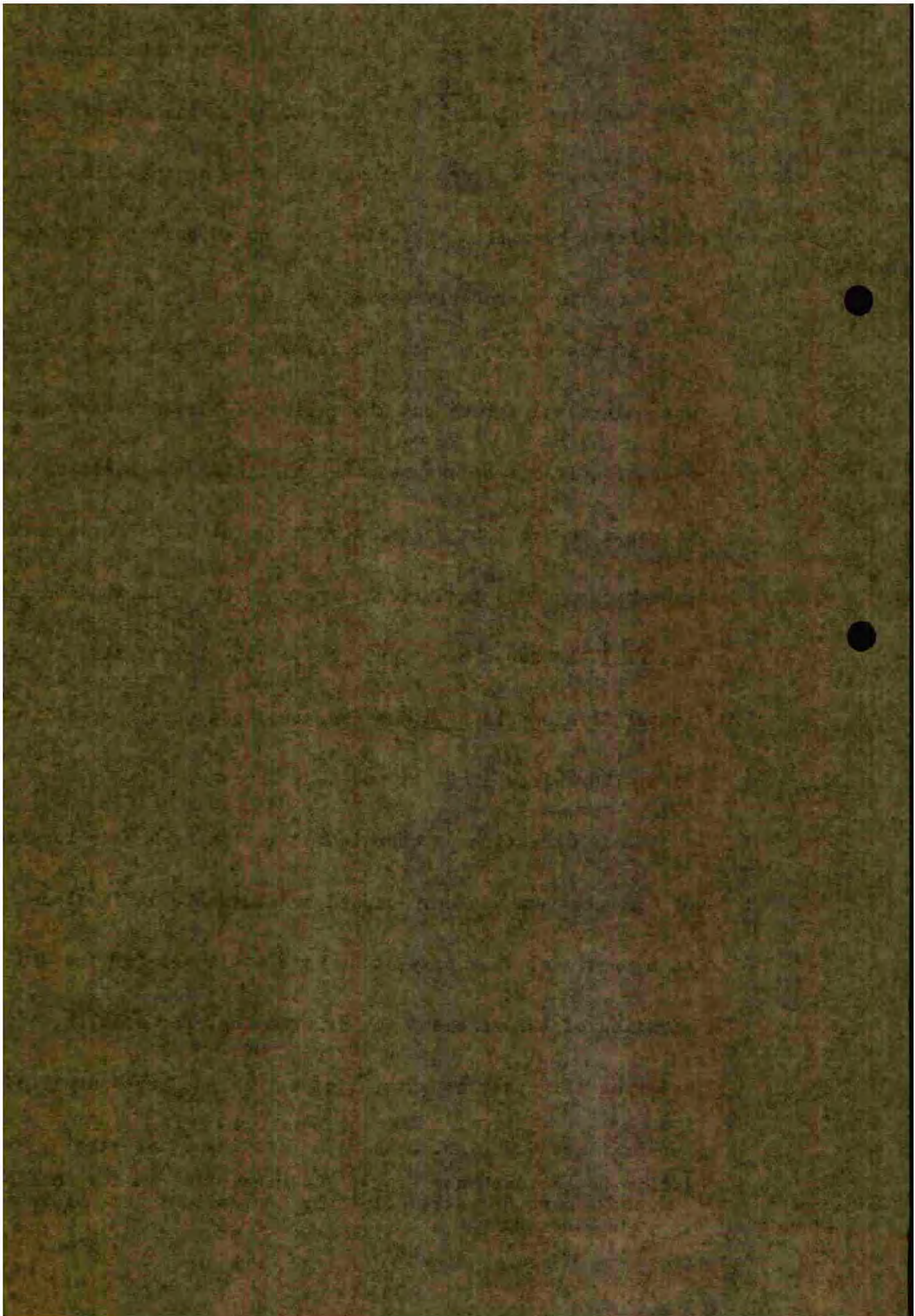
288 fleet headquarters. According to an entry under 18 June, for example, Army Group A instructed one of the panzer groups groups by radio not to cross a certain railway line on the following day "because on the other side of this line our units will be bombing." At this stage in the pursuit deep 289 inside enemy territory a command measure of this kind, which can almost be called primitive, was no support for the tank drive but more probably served to delay it.

If the system of command revealed by this diary entry was maintained throughout the period of Air Force-Army cooperation it can be assumed that ~~EMERGENCY~~ the basis of cooperation was less one of direct coordination between the panzer groups and individual aircorps (such as that between the VIII Air Corps and Panzergruppe von Kleist) <sup>but rather</sup> than a system of "liaison la-haut", meaning that cooperation was directed by the Third Air Fleet and Army Group A.

This direction of coordinated action by higher levels of command seems to have caused considerable difficulties in operations. One Army study made available for the preparation of this present Air Force study, for example, contains an illuminating entry quoted from the War Journal of Panzergruppe Guderian. Because of its importance the

1. "Die Operationen der Gruppe Guderian (XIX) in der Schlacht von Frankreich (9.-24.6.1940) by Generalleutnant Heidkampfer, Bueckeburg.







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diary entry is quoted verbatim in Appendix 103.<sup>5</sup>

This entry appears to confirm the assumption mentioned above that cooperation between the armored and air forces was coordinated only by the highest levels of field command, air fleet and army group headquarters, and not by means of direct contact between the armored and air corps, which apparently did not even have direct radio communications. The most important of the difficulties encountered in coordinated air-ground operations were the outcome of the resultant loss of time. The consequence was that an air strike directly ahead of the German lines was frequently a wasted effort, since movements on the ground were not synchronized with air action, and could not be so synchronized.

A remedy was found for such situations<sup>as</sup> becomes evident later in the study by Heidkemper,<sup>6</sup> where a passage states that already on 14 June a bombing zone was agreed upon with the Air Force. This bombing area was not in the line of advance of the armored force but instead was to cover its flank. This method was probably retained from then on in the planning of air support. Insofar as one

5. The present author can not vouch for the authenticity, since the sources used by Heidkemper in many cases are "copies taken from copies."

6. See Footnote 4, above.







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can talk of a "front line" in the case of the widely spaced armored spearheads operating in a large area, air action of this type can no longer be considered as preparation for attack on the ground. The principle of "flank cover by the Air Force," as applied in the operational sense in the case of Operation "Gelb," was thus repeated at the tactical level during the final stages of Operation "Rot."

No complete records are available for a comparison of the types of cooperation employed between armored and air forces. However, it is perhaps possible nevertheless to say that the system of continuous tactical cooperation between large armored units on the one hand and close-range bombing units specially suited for close battle support on the other hand (the system employed in the case of Panzergruppe von Kleist supported by the VIII Air Corps) proved <sup>than</sup> sounder the system employed in the case of Panzergruppe Guderian supported by the II Air Corps, in which system long-range units of the air corps supported the ground operations of the armored units from case to case.

The essential problem here is less one of an organized combined command, for example, the assignment of air units under an independently operating large armored force (which would have been practically impossible at the time because of the German Air Force command principles), than one of







291 very close and personal contact (liaison par la base) at the tactical levels, which could be based on a well organized radio communications system making genuine cooperation possible. The lack of such radio communications was the decisive factor, apart from the fact that the long-range bomber forces were designed for other types of missions, were assigned different targets daily, and in point of their command setup and their ground organization were not suitable for specifically close combat missions requiring extremely close coordination with the army commands involved.

So much for cooperation by the Third Air Fleet with large armored forces.

The subject of cooperation at the air corps- field army level has been mentioned briefly in the Summary to Chapter 5,<sup>7</sup> where it was not possible to offer any concrete information because of the lack of German Air Force records on the subject. It was stated there as "assumed" that close integration between air corps and field armies remained restricted to action during "special situations." This assumption seems confirmed in one case by an Army source.<sup>8</sup>

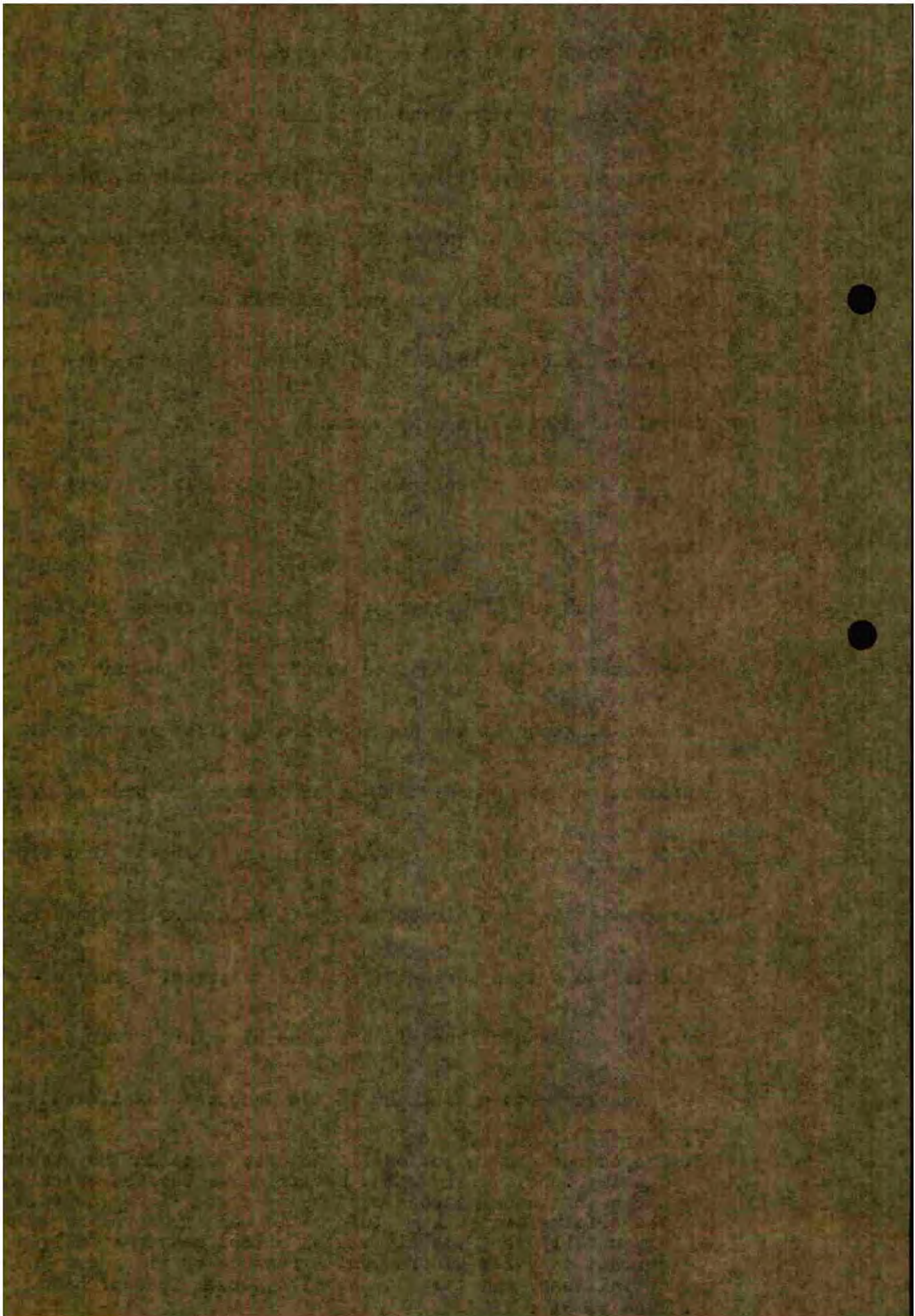
According to a document in the Jacobsen compilation,<sup>9</sup>

7. Chapter 5, above.

8. The source has intentionally not been used in the chapter dealing specifically with the Air Force because experience shows that such sources must be regarded with reserve. The origins of the Army information on Air Force matters are usually very vaguely stated or not stated at all; in content they reveal frequent erroneous or misunderstood definitions; and they do not always seem free of bias.

9. See p. 317.







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units of the V Air Corps supported the attack by the First Army on 14 June 1940.<sup>10</sup>

Here, for the first time in Operation "Rot" we have a case of cooperation between one specific army and one specific air corps in a separate operation. In this connection an operational order for the V Air Corps is available. Since it is the only such order available for air operations in Operation "Rot," the text of the order is included in Appendix 104 in spite of the serious ambiguities it contains.<sup>11</sup>

action

So far as coordinated army-air in this case is concerned the order reveals that the direction of operations was by the air corps in agreement with the army headquarters; the order gives no indication of any division of the air corps for the assignment of air wings to army corps, etc.

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It is safe to assume that the procedure remained the same in the offensive staged by the Seventh Army across the Upper Rhine on the following day; possibly, the same units of the V Air Corps were also involved again, since no units flew missions ahead of the First Army on the same day.

9. Hans-Adolf Jacobsen: "Dokumente zur Vorgeschichte des Westfeldzuges 1939-1940; Munster-Rechnitt-Verlag; Section III, 28.

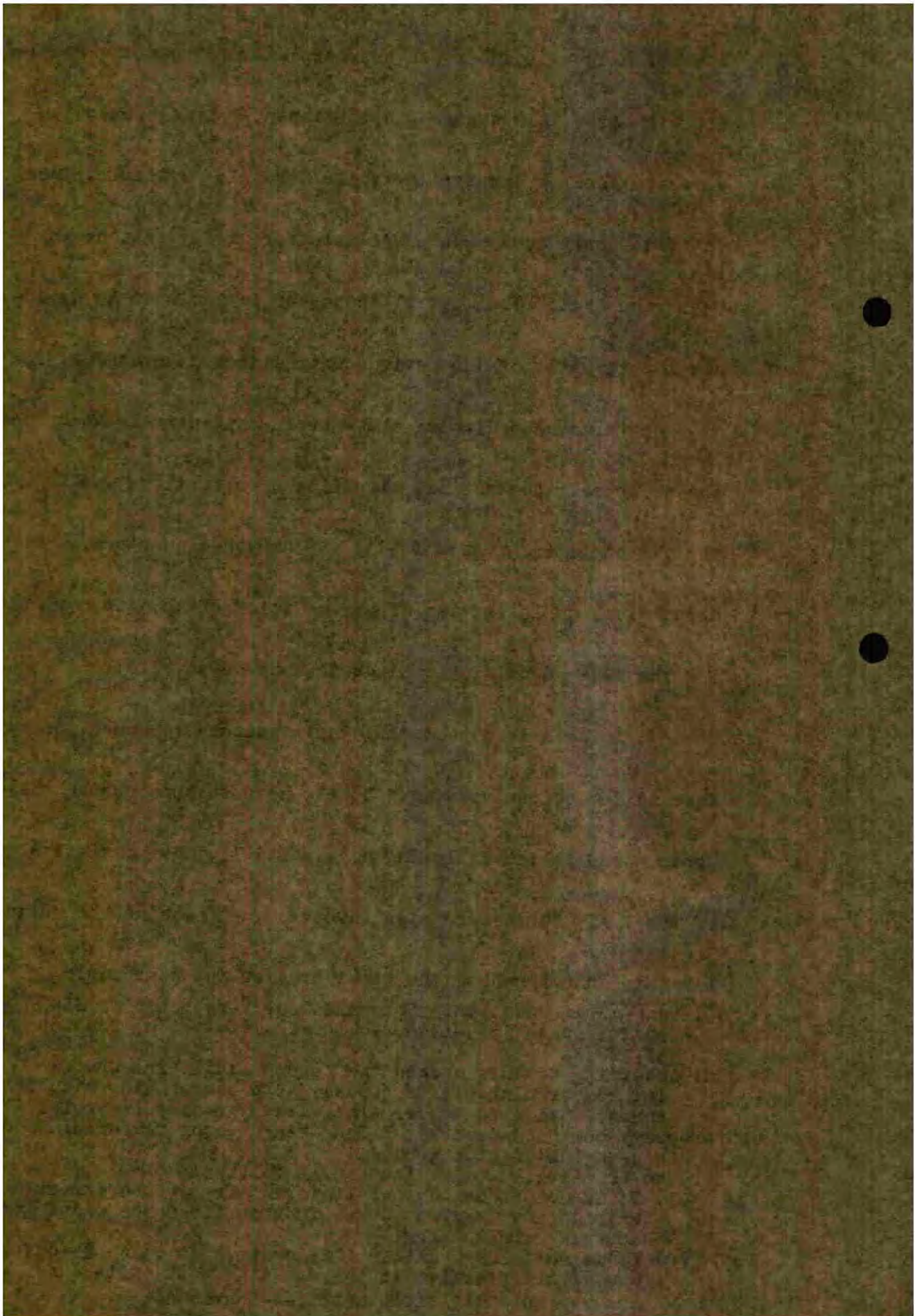
10. According to this source the forces available were: 51st Bomber Wing with 2 groups; 55th Bomber Wing with 3 groups; 28th Dive-Bomber Wing with 3 groups; 1 special super-heavy-bomb squadron(?); 1 long-range recon squadron; 2 twin-engine fighter groups!!

11. The principal ambiguities are as follows:

(1) It is not clear whether it is an Air Force order or an "orientation" excerpt taken from an Air Force order for its own command area;

(2) It is not clear whether this order, issued on 9 June was still effective in the existing text on 14 June and was actually effectuated;---Continued







Whereas source material on the subject of cooperation between air corps and field armies is confined to this one questionable document just quoted, no original documents whatever are available on the subject of cooperation between the army groups and the air fleets.

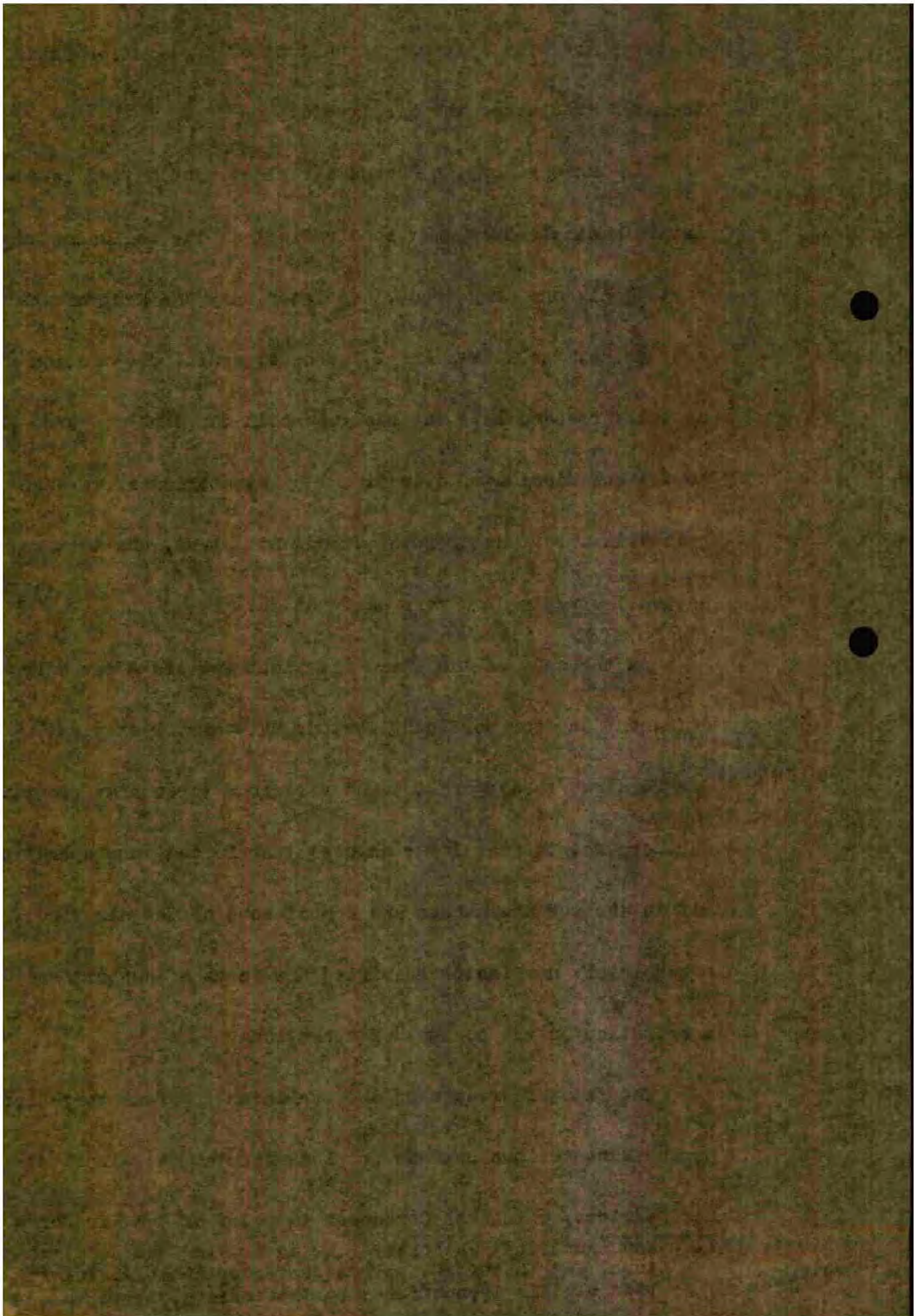
In the case of the Second Air Fleet the matter is relatively simple because this air fleet at the beginning supported only one army group, and later only one army of that army group, the Fourth Army. But here, again, cooperation actually receded into the background in the same measure as the new mission of operational or strategic air warfare gained in importance for the Second Air fleet, and that happened already at a very early stage.

In the case of the Third Air Fleet matters were very different and far more complicated. This air fleet first was required to support two and very soon three army groups. Furthermore, the two large armored task forces were operating within the reconnaissance and combat zone of the air fleet, a completely new factor requiring new forms of support and cooperation in the conduct of operations.

The first four days of the preliminary offensive period produced no serious command problems for the two air fleet headquarters, which the Commander in Chief of the Air Force

11.--Continued: (3) The "order" has no heading and no signature, and therefore appears very questionable. Information of this type offered by "Historians, serve to confuse rather than to clarify matters.







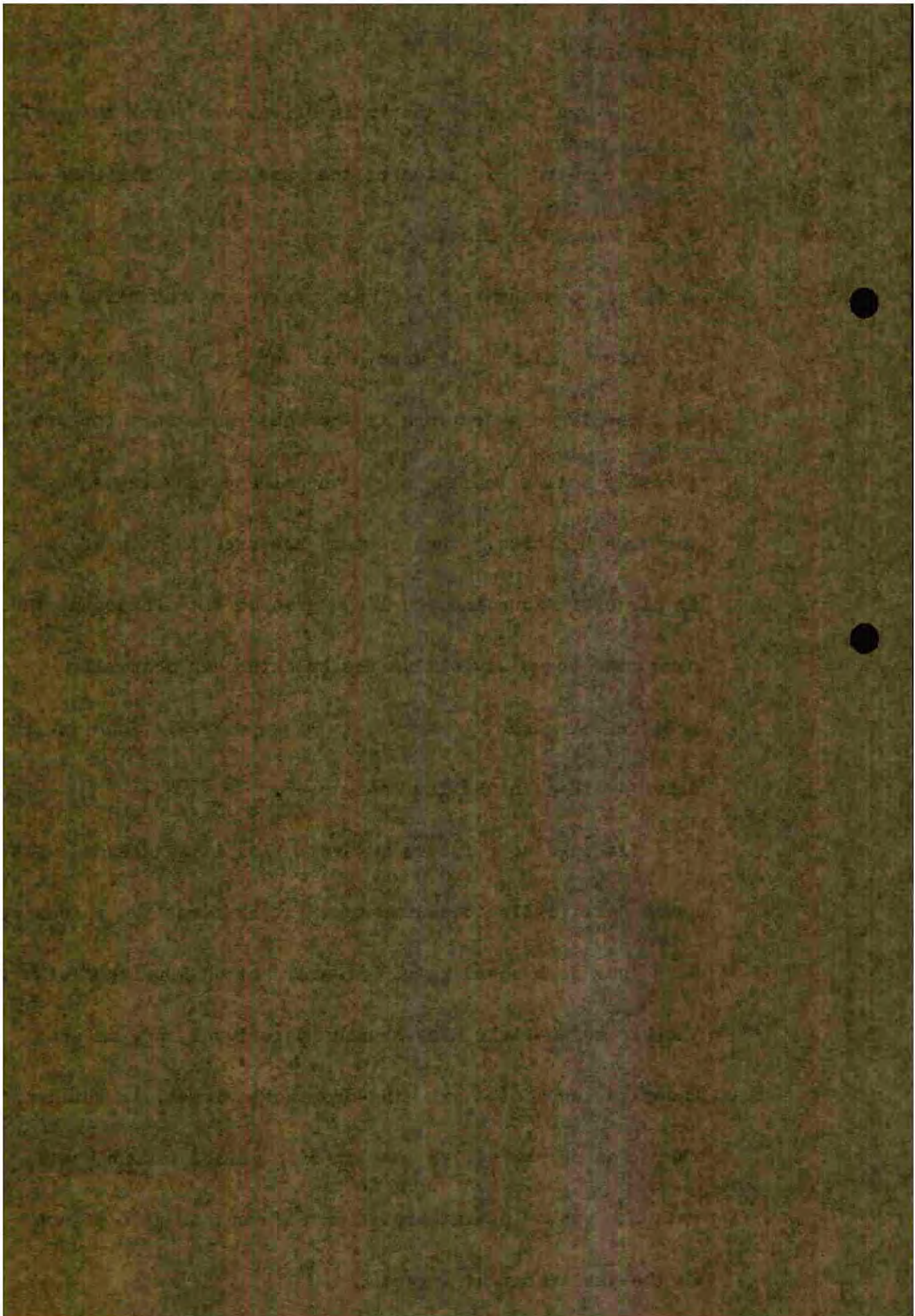
295 had committed on a very narrow frontage. The whole pattern was a repetition of the opening phase of Operation "Gelb;" the air fleets were to prepare for and support the Army breakthrough.

The four days of the "main offensive" which then followed required execution of the same type of missions only by the Third Air Fleet.

Real command problems only evolved on the ninth day of Operation "Rot," on 13 June, when the Third Air Fleet shifted emphasis to operations in the eastern segment for preparatory action leading up to the planned envelopment of the French armies. West of this new area of main effort in air operations the two large armored task forces at the same time began exploiting the breakthrough meanwhile achieved through the enemy main lines of resistance for a drive ~~XXXX~~ into the far enemy rear.

Although no evidence is available, it ~~XXXXXXXXXXXX~~ seems justifiable to assume that in the first two phases of each four days coordinated air-army action developed ~~at the~~ <sup>XXXX</sup> the air corps-field army headquarters level and, in some cases as low as the air wing-army corps level, in which there was no stereotype pattern of combined command but rather a system of integrated development of main effort in the assignment of targets.







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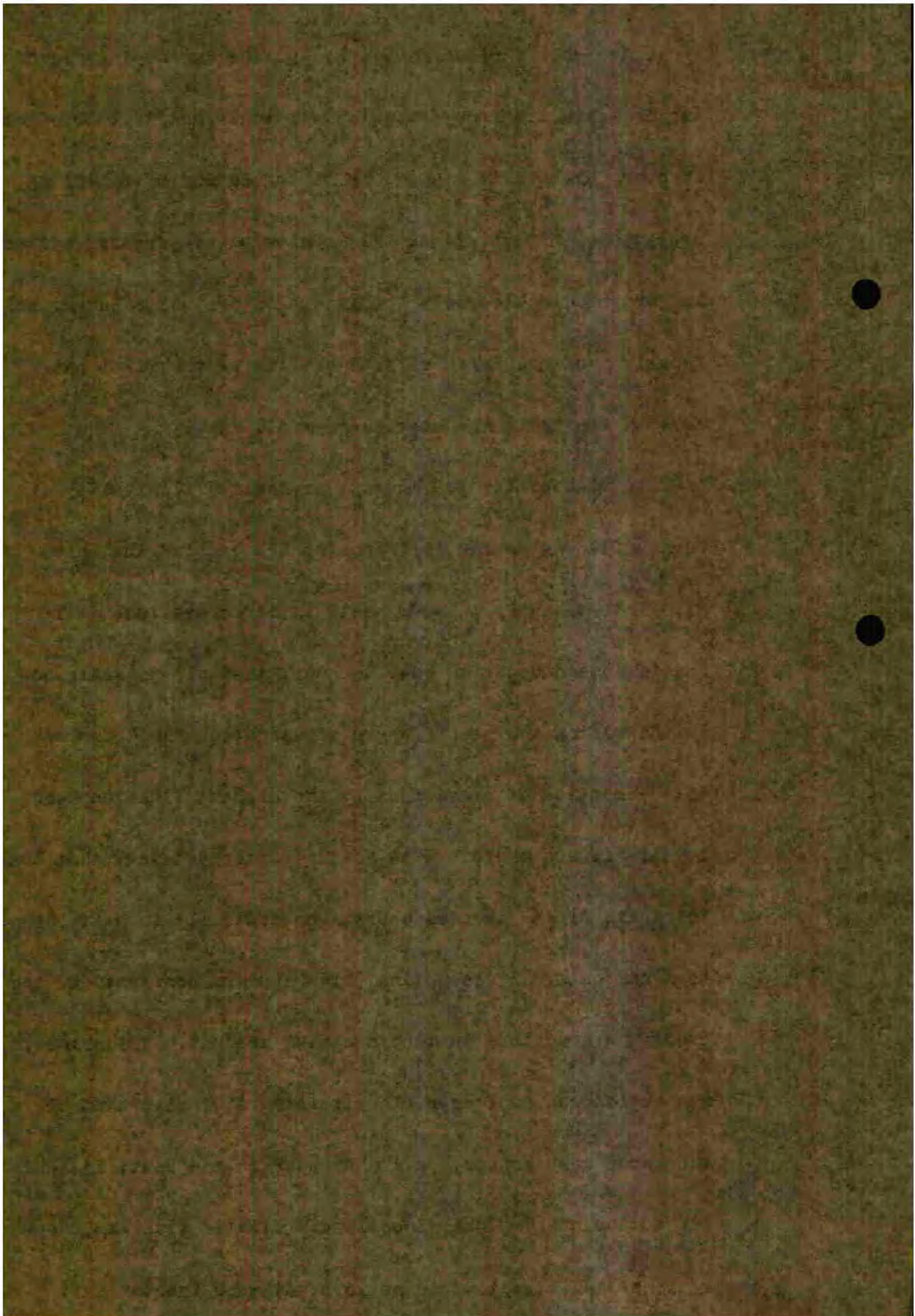
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Nevertheless, the system here was probably primarily one of "liaison par le bas".

From the ninth day of the offensive on the wide frontages, the multifarious missions, and the increasing distance inside enemy territory at which air power had to be brought to bear, or, briefly stated, in the execution of far-flung operational air missions, this system of cooperation was no longer practicable, with the exception of the temporary and locally confined "main effort" battles of the First and Seventh Armies in the eastern segment.

In view of the previously emphasized flexibility of command in the German Air Force, which enabled the Third Air Fleet to shift main emphasis in its operations daily and in some cases from hour to hour, the only possible solution during the second phase of Operation "Rot" was one of a direction of operations by the highest field command level. It can therefore be assumed with certainty that the Third Air Fleet directed operations centrally from its own command posts, an assumption which appears confirmed by the events as described in the foregoing account. Furthermore, its action was no longer closely integrated with that of the three army groups, as it had been in the past; instead air action now was only loosely coordinated with Army operations and steadily became more and more independent.







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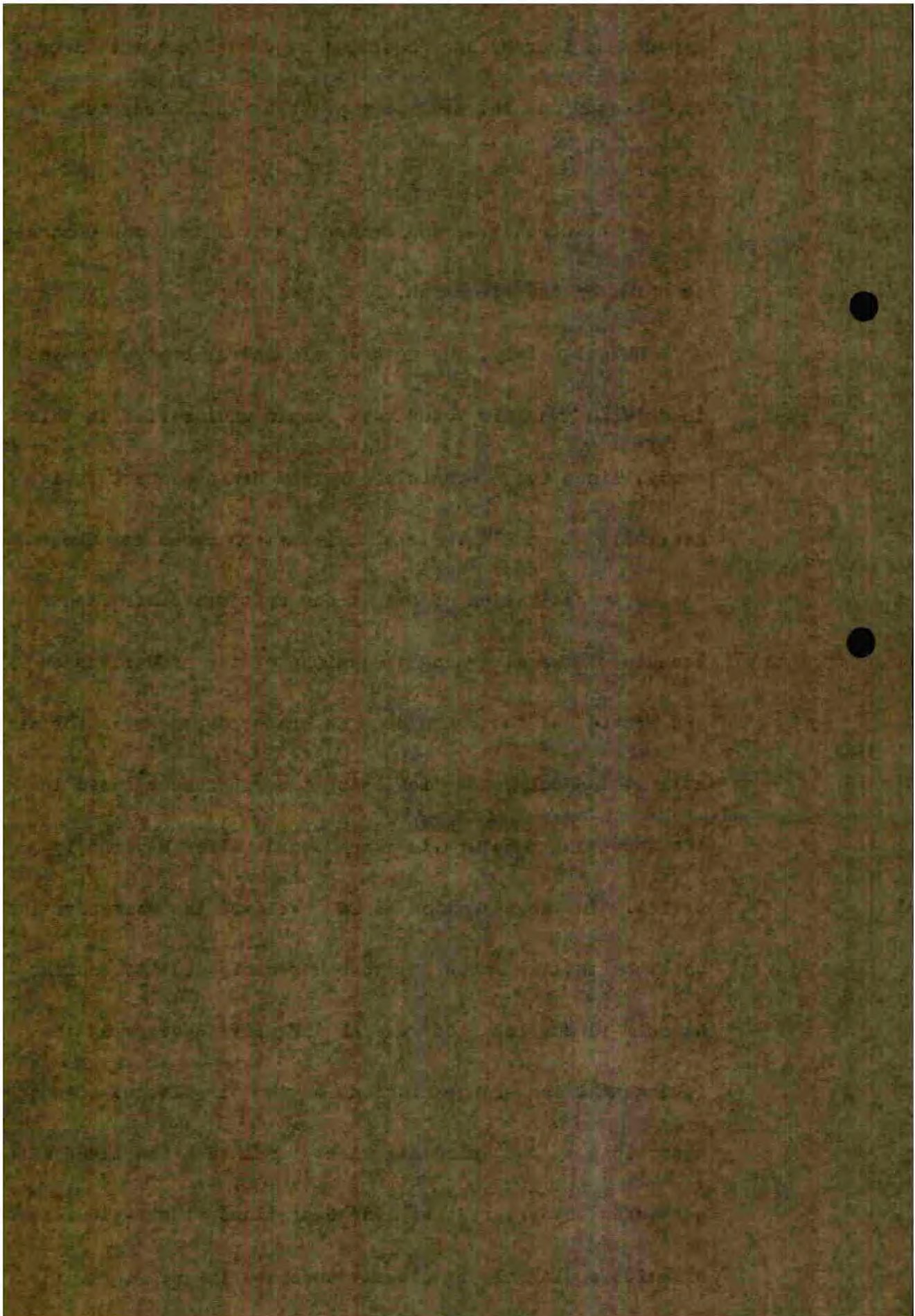
This "independence" in air operations naturally remained restricted by two factors:

a. Developments in the overall situation on the ground and thereby the resultant requests from the three army groups and the two large armored task forces for air support;

b. Directives and orders received from the Commander in Chief of the Air Force.

Unfortunately, the methods of control by the Commander in Chief of the Air Force must remain unclarified in this study, since not a single order from his headquarters is available at writing. In actual fact no necessity arose for any coordination of operations by the two air fleets because of the diverging directions of the offensives on the ground and the consequent separate target areas for air attack, the only exception being the one case related in the foregoing chapters, in which coordination apparently failed. In the situation as it developed the Commander in Chief of the Air Force had no other choice but to confine himself to the issue of general directives governing the fundamental long-range missions of the air fleets. Since operations by the Third Air Fleet remained primarily contingent upon the progress of Army operations, the rapid changes of which could only be clearly observed in the field, the







297 there remained primarily the need for mission assignments for the Second Air Fleet, such as the mission of combat action against seaborne targets, of action to neutralize the Atlantic coast ports, the transition to combat action against England, to name only the more important missions which exceeded the scope of tactical and operational tasks and were already of a military-political nature and could only be executed on orders from the highest command level.

298 And thus, on writing the account of Operation "Rot" from the viewpoint of military history the unusual circumstance develops that the pattern of the conduct of air warfare has to be pieced together and developed from the lower levels of command. From the thousands of individual reports making up the situation reports compiled by the Commander in Chief of the Air Force it has been necessary to ~~retrace~~ retrace ~~the~~ the actual events and place them in proper perspective within the overall picture.

It was only possible from this mosaic picture to draw conclusions concerning the mental processes underlying the conduct of operations, and these conclusions necessarily are purely subjective.<sup>12</sup>

So far in this review only the command trains of thought directed forwards, meaning to the Army front on the ground

<sup>12</sup> The author was able to employ the opposite process in his study "Der Rollenfeldzug 1939," for which--continue'



298 and beyond--into enemy territory have been considered. The  
final review must also look backwards, meaning that it is  
necessary also to return to the repeatedly mentioned prob-  
lem of the separation of attack and defense in the Air Force  
Command and in the conduct of air operations.

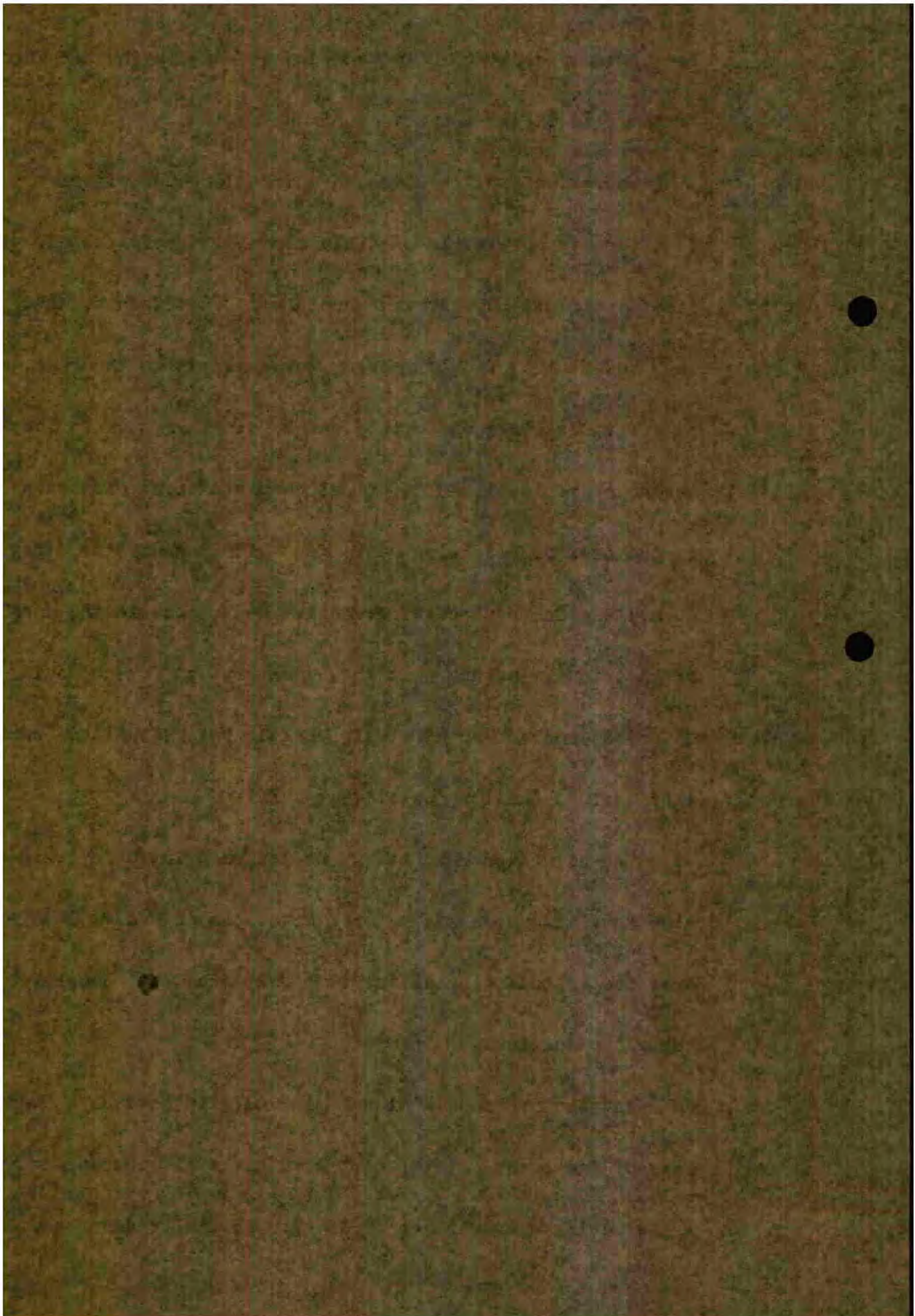
Operation "Rot" had for the first time made it clear  
that the highest levels of field command, namely the air  
fleet headquarters, were responsible for two fronts, that  
299 they had to look simultaneously forwards and to the rear.

This dual responsibility seemed within reason as long  
as the operational and technical communications situation  
in the area of offensive operations within enemy territory  
as well as in the area of defensive operations in the zone  
of interior was such that the commitment of forces could  
be considered as one strategic whole. This situation had  
existed in Operation "Gelb."

The situation undoubtedly no longer existed in Opera-  
tion "Rot." The German Air Force High Command had failed to  
draw the logical conclusions timeously from this completely  
changed situation.

The picture thus evolves, particularly obvious in the  
case of the Second Air Fleet,<sup>13</sup> that the field commands  
while moving ever farther from their initial base areas,







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and while the capabilities of their communication lines were decreasing, had, with a divided staff, to accomplish concurrently two completely different and separate missions, which, only to mention the geographical sense, diverged by 180 degrees and produced their effects in diametrically opposite directions. This resulted in a psychological dilemma for the field commands at the expense of their one mission, that of home air defense.

300

However, the mission of home air defense had become increasingly important by the day in proportion to the measure at which the Royal Air Force systematically stepped up its bombing attacks from bases in England,<sup>14</sup> rendering protection of the vitally important Ruhr region a problem practically impossible of solution.

The review of the 1940 campaign in the West necessarily had to remain confined to the period and area of that campaign. It is nevertheless necessary, however, to point time and again to the interacting repercussions which had developed between the zones of operations in France and in the Ruhr region. A detailed study of these subjects would be well worth while as a separate study. However, such a study might produce evidence showing how short-sighted the command concepts were on the German side compared with the long view of the British command in their planning for







300 air warfare.

All that remains to be said in this connection is that at the latest with the commencement of operation "Rot" the responsibility for the conduct of aggressive air operations within the zones of operations on the ground should have been organizationally separated from the responsibility for the direction of air defense over the zone of interior.

301 The specific mission of air defense should have been taken out of the complex of operational command and the conduct of air operations in the field and consolidated under a central command headquarters for air defense in the West responsible directly to the Commander in Chief of the Air Force.

The organizationally logical combination of the mission of air defense with the ground organization under direction by the old and the newly established air district commands (the latter in Holland, Belgium, and Northern France) as the responsible headquarters of the so-called territorial organization, was a problem which could have been solved with ease. In matters of air defense these air district commands would have been responsible to the previously

12.--Continued: all directives issued by the CINC, Air Force were available for use as a pattern of the actual events

13. See Chapter 2, F.

14. The increasing intensity of this conduct of air warfare against northwest Germany from bases in England can be clearly traced from the daily Situation Reports of the CINC, Air Force, together with details on the disappointingly small numbers of planes shot down by the German defenses. It would be desirable to--Continued



501

mentioned "central command headquarters." In the administration and operation of the ground organization they could have remained responsible to the air fleet headquarters which, as had been the case in the past, could still have relied on the air district commands as the headquarters responsible for the proper functioning of the ground organization, and for the supply and signal communications services.

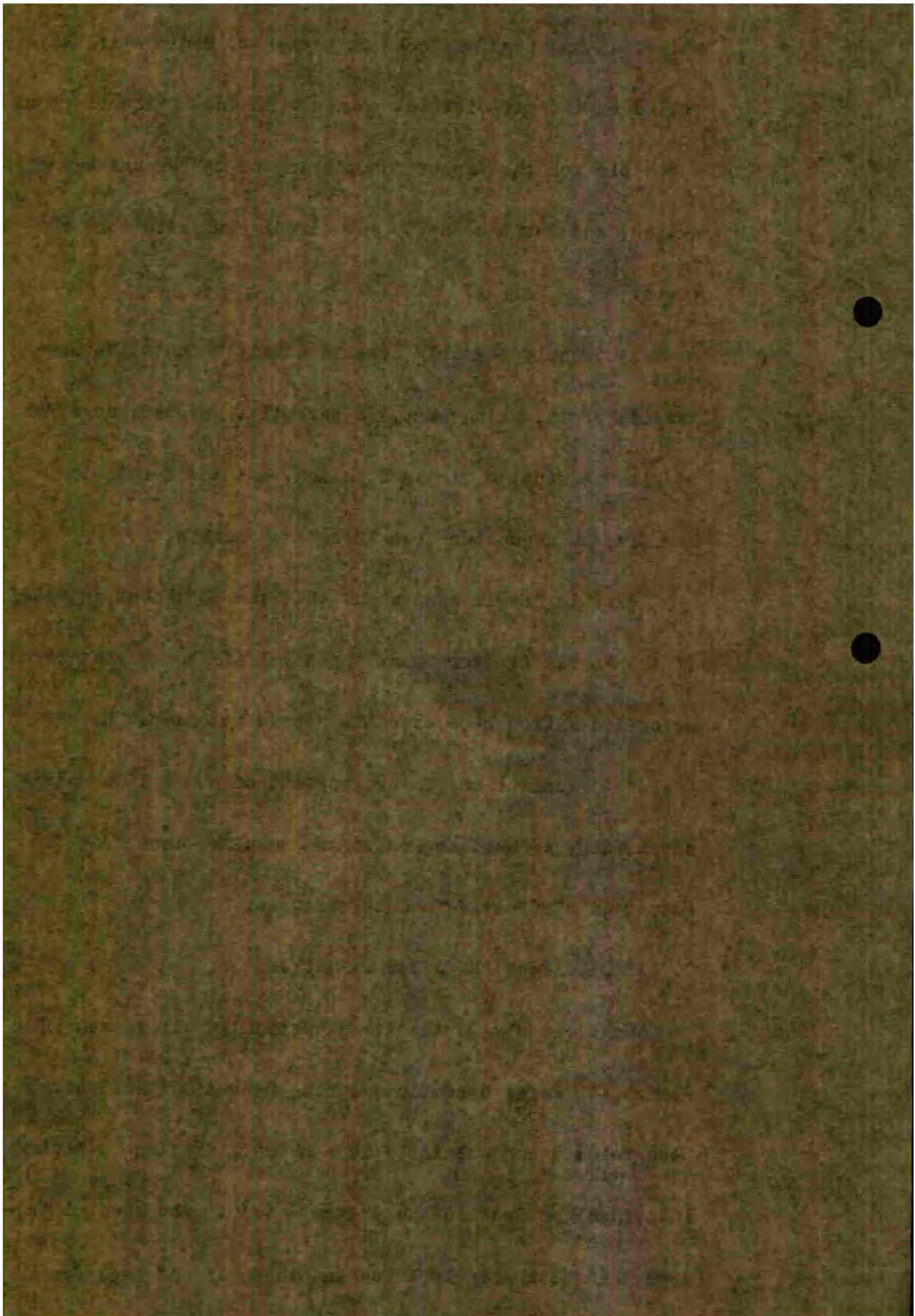
It is only possible here to submit a tentative suggestion of this kind here. Apparently, however, no effort at all was made to find a solution, and the far distant air fleet headquarters remained "responsible."

This is how it came about that the Commander in Chief of the German Air Force gave the Royal Air Force what might be called a free hand over the German interior. He had failed to realize the future portent of the British air operations, and had neglected to encounter them from the outset with effective countermeasures.

#### C. AIR SITUATION AND AIR SUPREMACY.

Developments in the air situation in all phases of German Air Force operations during Operation "Rot" have been related and submitted to a summary critique covering individual periods in the present study. The general tendency has been clearly shown and there is not need for an







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repeated discussion in this connection. All that remains is to emphasize a few points evolving from the review of the overall development.

After the close of Operation "Gelb" the German Air Force Command was convinced of the German air superiority established some time ago and the German air supremacy over the theater of operations on the Continent established soon thereafter. This was followed at the opening of Operation "Rot" by surprise and disappointment when French resistance in the air suddenly and unexpectedly stiffened. The French no longer confined themselves to defensive action in the air but went over to the attack. Too late, the French had learned from the tactical principles the German Air Force had long since tried and tested in practice, and now committed what was left of the bomber and ground-attack (battle) units repeatedly in daylight and night attacks against German troop targets in the front areas and against traffic targets in the German rear. This French effort came too late and was too weak to bring any relief in the ground situation.

Simultaneously, unexpectedly strong resistance became evident all along the front, ~~INDICATED OPERATIONS~~ with main 14.—Continued: examine the systematic methods and the intensity of the British conduct of attack operations in order to place them in proper perspective compared with the intensity of German operations at the same time. There is no doubt that the CINC, German Air Force at the time underestimated the object, methods and effects of the British air offensive against the German interior.



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emphasis on operations from the fighter base area around Paris.

This proved two things:

(1) During the interval between Operation "Gelb" and Operation "Rot" the French command had succeeded in organising ~~IMPLEMENTING~~ a new disposition of air forces back of the weyand line in preparation for the impending battle of defense.

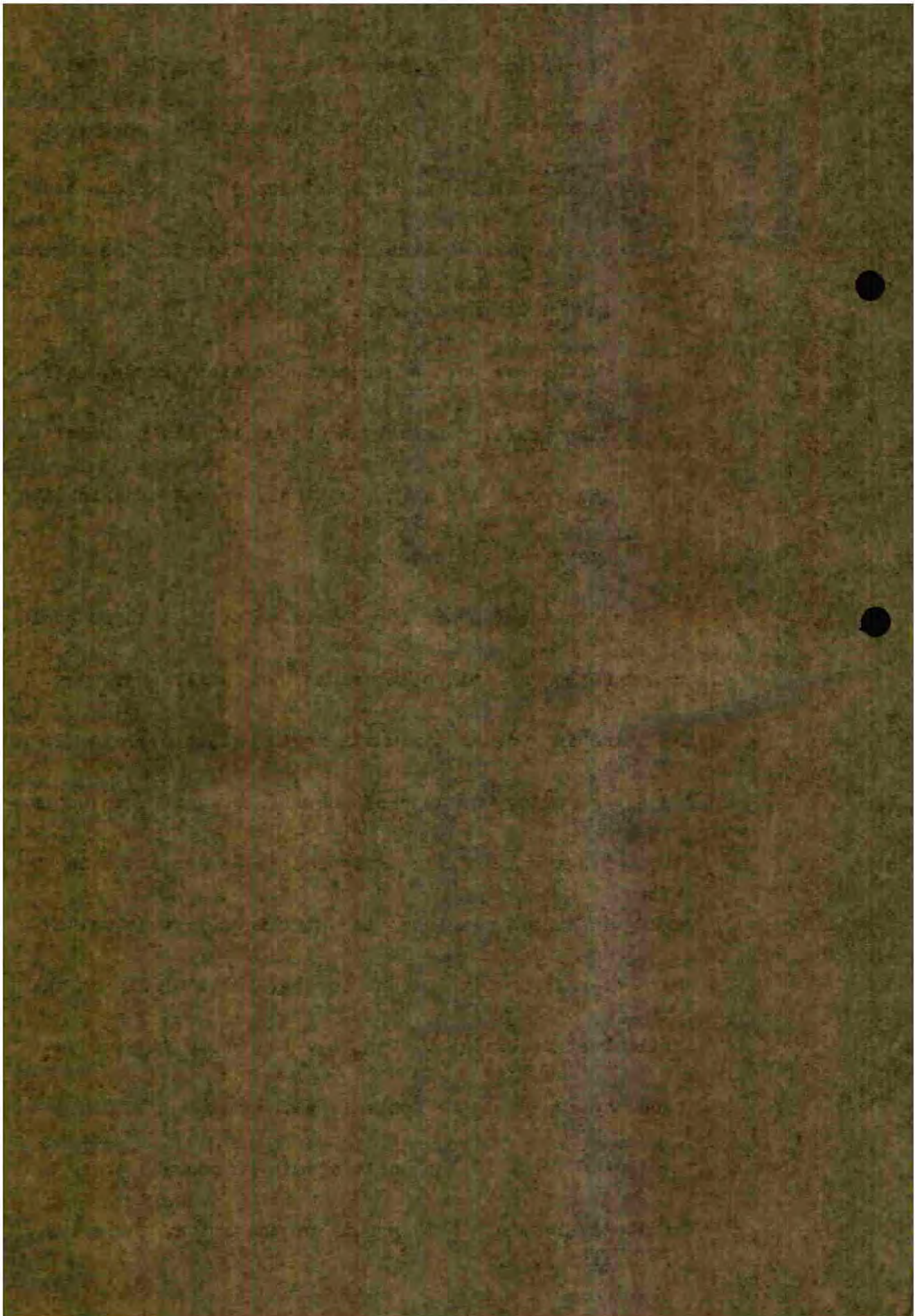
(2) The German air attack against Paris, Operation Paula,<sup>15</sup> had produced practically no results. The French air units and their ground organization had remained intact.

For the German Air Force this meant that there could no longer be any talk of absolute German air supremacy. The attacking German air units again had to operate with fighter escorts, and some of the fighter units, in cooperation with the AAA units, again had to be committed in purely defensive missions to maintain a protective "canopy" over the German ground forces, particularly at the critical river bridges. Finally, the enemy fighter defenses again had to be neutralized.

Owing to their lack of adequate forces and owing to the steady loss of their ground organization, the enemy

15. Chapter 1, 3.







304 were able to sustain this resistance in the air for only a short while and then it finally collapsed.

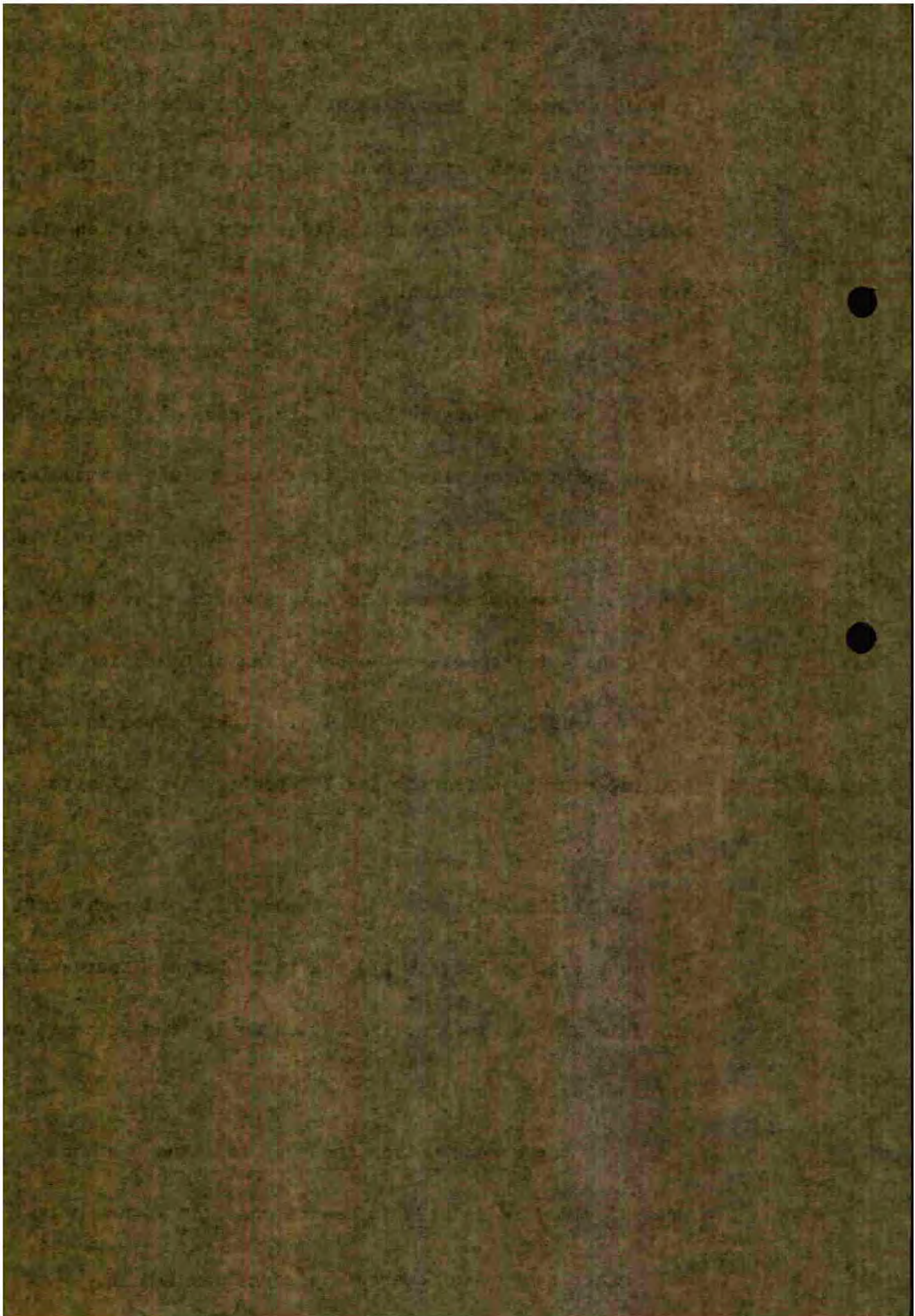
The decisively important lesson here is that air supremacy is never a permanent condition, but has to be constantly maintained through combat action even against a weakened opponent who suddenly accepts battle and is in a position to decide whether to place main emphasis on offensive or defensive action.

It is difficult to estimate the actual effective and operable strength of the French air forces at the beginning of and during Operation "Rot"; and this applies particularly to the fighter forces. In a different connection in this study<sup>16</sup> an attempt was made to determine the strength of the French air forces at the beginning of Operation "Rot"; it was assumed at the time that ".....only approximately 400 inferior type fighter and 70 bomber aircraft were available."

By 31 June allegedly "the number of fighter aircraft had decreased to between 170 and 180"<sup>17</sup> but the source given in this number gives no indication as to from where this information was obtained.

From the account given in Chapters 3 and 5 of the present study it is safe to assume that the French actually had larger numbers of operable aircraft available, as







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seems evident alone from the concentration of French fighters facing the Second Air Fleet in the final phase of combat at the Atlantic coast, as well as from the numbers shot down in daily air combat as given in the surveys of German and enemy aircraft losses.

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However, it was not ~~the~~ alone the losses incurred in the constant battle against superior German air strengths, nor yet the German attacks against their ground organization which in the end eliminated French air power from participation in the final phases of Operation "Rot," but primarily the progressive loss of ground service installations caused by the precipitant withdrawal of the French armies on the ground. A typical example here was that of the general area of Paris, which served as the strongest French air base. This whole air base area was lost at a single stroke when the French Government decided to abandon Paris. From that moment on the scattered effort and the increasing weakness of the French air defenses was obvious.

What played an eminently important role in eliminating the ground organization of the French air forces, however, was the drives by the large armored task forces into the far French rear. Far in the rear of the battle fronts on

16. Chapter 1, 5.  
17. Tippleskirch, 1951 Edition, p. 99.



305 the ground these armored forces eliminated the airfields and other installations of the ground organization, the supply services, and signal communications, and thus prevented operations by the only enemy forces which could have proved a menace to them. The armored operations thus had a direct impact on the air situation, without doubt for the first time in history.

Finally, the cessation of French air activities so soon after the renewed aggressiveness during the first 4 to 6 days of the new German offensive was also largely due to the structural set up of the French air forces, their unsuitable organization.

As long as the fronts on the ground remained firm and under proper control by the command, it was still possible to direct the action of the air units, the majority of which, under the French system, were allocated to the various field army commands. In the ~~su/suit~~ <sup>withdrawal</sup> stage resulting from the German breakthrough, the properly planned conduct of air operations also ceased, and the air units were constantly displacing to airfields farther in the rear. Quite apart from this, however, the nature of the French command system would have made properly concentrated air operations impossible anyhow, since it lacked a central air command in contrast with the German system which insured by near



306 of a uniform command system insured a flexible development of main concentrations of power wherever needed.

The developments on the side of the enemy outlined above enabled the German Air Force to regain within a few days the air supremacy it had lost, and from then on to maintain it because there was no enemy who could have contested it.

This development of the air situation to the advantage of the German side was also influenced by another decisively important factor, the passive behaviour of the enemy, contrasted with the high activity on the German side, supported the German effort in an unexpected measure.

307 Already in the previous discussion of Operation "Gelb" the point was brought out that, to the surprise of the German Command, the anticipated enemy air attacks against the German ground organization failed to materialize. In like manner not a single case is known of an enemy air attack against any German tactical airfield during Operation "Rot." The German side had already applied their principle in three offensive operations of first eliminating or paralyzing the enemy ground organization for air forces, a fact which must have been known. However, the enemy failed to draw the logical conclusions from this knowledge. It would have been possible even



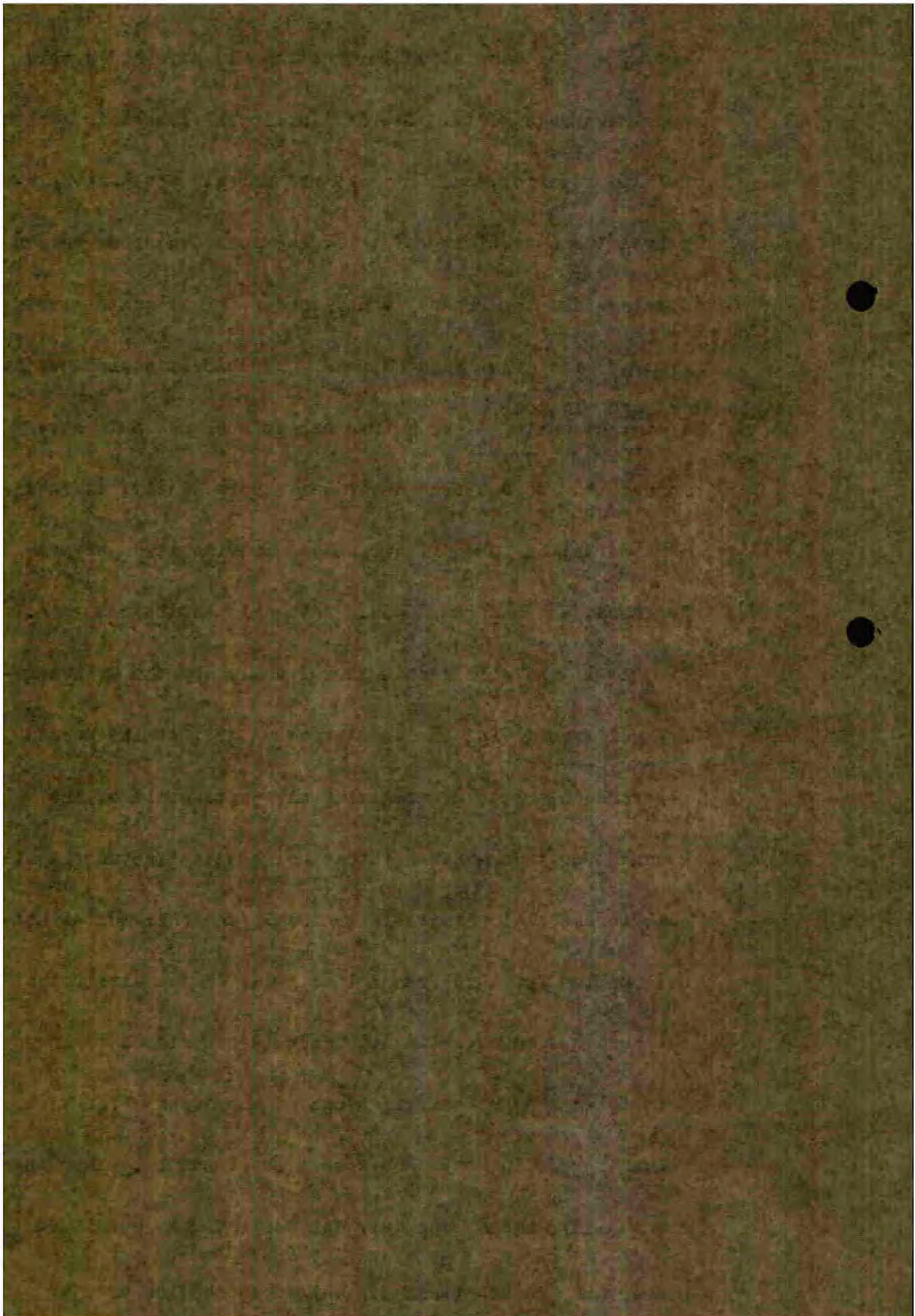




307 with small forces, for example, to stage a surprise attack against the tactical airfields of the VIII Air Corps, ~~which~~ the units of which were stationed very close to the front areas, so that the attacking units would have had a very short approach route. Besides inflicting losses in personnel and materiel, such attacks undoubtedly would have impaired the operability of this, the most dangerous weapon used against the French ground forces. That quite apart from the fact that such attacks undoubtedly would have had at least a psychological ~~an~~ impact on the other German air forces and would have forced them to disperse their units more widely, to expend more effort on camouflage, and to provide stronger AAA defenses, which in turn would have delayed their action.

It is and will remain inexplicable why the French refrained from taking any counteraction against the German Air Force by means of attacking air units while on the ground even if one takes into consideration the numerically weak forces still available to them. The only conceivable explanation for this French inactivity in the air is that the French Command, with its concepts restricted to Army principles thought only in terms of air support for the ground forces in combat on the field of battle. When the French Army Command decided, all too late, to commit its bomber and ground-attack air units in the low-altitude







308 attacks previously discussed in this study, they again still thought at the most in terms of tactical support, ~~not~~ namely, for one army or for one army corps. They completely lacked operational thought in the dimensions of air warfare, but they also lacked an operational command headquarters which would have been capable of concentrating air power over a single focal target or target area. Finally, they also lacked an understanding for integrated action by offensive bomber forces and defensive escort units--the French units committed in the low-altitude attacks had no fighter escorts and consequently were bound to fail at a heavy cost in losses.

These very serious flaws and weaknesses in the French Command set up and its organization contributed in an unexpectedly large measure to facilitate matters for the German Air Force in the execution of its missions under the most favorable conditions possible. The German Air Force had become accustomed to using its ground organization as though under peacetime conditions, no air threat interfered with or impaired take-off, landing, or supply operations or rest periods.

309 This fact, however, created a latent danger which could become serious if the German Air Force at any future date should encounter an equally capable opponent apply

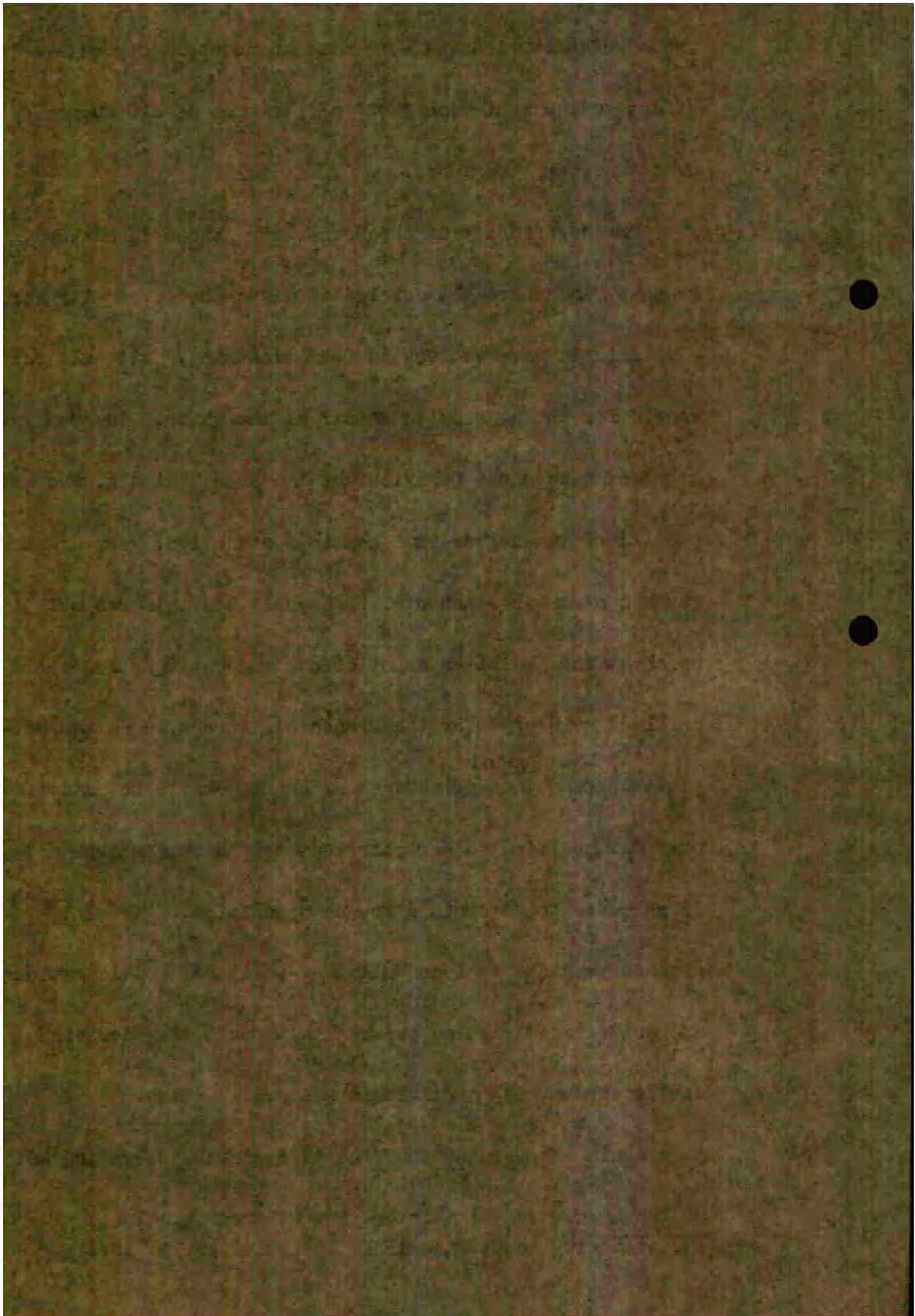


310 applying tactical, operational, and organizational principles similar to its own. However, the German Air Force units for the time being thus remained completely undisturbed in their ground organization and were able to devote their entire effort to the achievement and maintenance of air supremacy over the enemy territory.

The superiority of the German air ~~forces~~<sup>units</sup> in numbers, weapons, and above all morale had given the German Air Force a relatively easy victory in Operation "Rot," with all due regard for the aggressive spirit of the units. In even greater measure the behaviour of the French airmen, who sacrificed themselves in a hopeless situation, commands the respect of their opponents. Perhaps it was this respect which at the armistice negotiations at Compiègne led to one last "victory" for the French air forces, when the original German <sup>demand</sup> that all French aircraft were to be handed over was modified to a requirement for their "internment" in response to determined French opposition.<sup>18</sup> In what measure psychological and military-political considerations and motives contributed towards this relenting decision on the German side must remain an open question.

310 Again the German Air Force emerged from Operation "Rot" as the unquestionable victor. But at what price?  
 18. According to Toppelskirch, 1951 Edition, p. 107.







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Chapter 1 of this study, which deals with the period between Operation "Golt" and Operation "Rot," contains two sub-headings, namely, (1) No Respite in Air Operations (German heading: Die Luftwaffe hat keine Operationspause) and (4) Scattered Air Effort and Excessive Demands on Air Power (German heading: Die Zersplitterung und Ueberforderung der Luftwaffe), which in their brief formulation already state the factors which were destined to determine the opening of Operation "Rot."

A review of Operation "Rot" shows that both statements contained in those sub-headings were correct.

Although the whole complex of operations, including the battle for air supremacy, action supporting the Army, action to annihilate the enemy forces during the pursuit, and action to paralyze port installations at and shipping along the Atlantic coast, had resulted in complete victory, these ceaseless operations nevertheless continued to wear down personnel and materiel, and both of these factors were described already at the beginning of Operation "Rot" as "exhausted."<sup>19</sup>

The Air Force had accomplished its assigned missions as formulated in the basic operational order of the Army dated 31 May 1940.

19. Chapter 1.

20. The text of the general mission is given in Chapter 1 and Item 4, Appendix B2 to Chapter 1.



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meanwhile, three weeks of almost unceasing action had once again passed since the opening of the second offensive in the Western Theater.

Personnel and material losses had admittedly remained within tolerable limits but had approached the limits of tolerance. However, the German Air Force now really needed a pause for rest and rehabilitation in every respect.

This need for a pause was met, for at least a temporary period, only for the Third Air Fleet, and not for the Second Air Fleet. That air fleet remained without a break in combat operations and was already entering on the costly conduct of air operations against England which, beginning a few weeks later, was destined to tie up the entire German Air Force for a considerable time.

This situation within the German Air force, and its existence must be strongly reemphasized here, must be taken as the point of departure in an appraisal of its operations in the coming Battle For Britain.<sup>21</sup>

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21. Chapter 1.



## D. AIR TACTICAL LESSONS.

From the outset the purpose, execution, and nature of the study on the campaign in the west (Stadie west) were determined by operational aspects. For this reason the subject of air tactics has been neglected, if for no other reason than because of the complete lack of records from the intermediate levels of command and the tactical units in the field, the only exception being that of the VIII Air Corps, dealt with in Chapter 4 of this study, which is disregarded here because its operations have been described in detail.

Nonetheless it would seem an error of omission not to formulate before closing at least some of the tactical lessons which could be deduced during the study although ~~these must remain limited~~ subject to the limitations imposed by the availability of authentic sources and although they must remain restricted to those which have a command direction bearing on the subject of the ~~conduct~~ of operations.

(1) reconnaissance. Reconnaissance made a decisively important contribution, particularly in Operation "Hot," towards the success achieved in the conduct of air warfare. In tireless missions reconnaissance kept the entire enemy territory under surveillance day and night,



313 reporting on the number of aircraft detected on airfields, rail transport movements, road traffic, ships in ports, and everything which could be of interest in the direction of air operations, and thus furnishing the information required by the command for its decisions.

It was due to this continuous reconnaissance reporting that the command was able to direct attacks against those targets which were currently most important and worth while. In addition it furnished the information needed by the Air Force High Command in piecing together the current overall picture from which to form an accurate interpretation of the current overall enemy situation and enemy plans.

the reconnaissance units  
The fact that the opposition/~~ixx~~ encountered in their flights, even far in the enemy rear, decreased by the day detracts nothing from the merit of their performances. In order of importance, the adverse factors they had to contend against were weather conditions, antiaircraft artillery fire, and enemy fighters. Besides these external adverse factors what made their mission difficult, ~~was~~ from the command viewpoint, was the inherent complications of the assignment of missions.

The following forces participated in reconnaissance operations:



- 313 The tactical and strategic } Controlled by the Army High  
air reconnaissance units } Command, and by the Army group,  
allocated to the Army } army, and Panzer corps level  
headquarters.

The strategic air reconnaissance units assigned under the individual air fleet headquarters

The long-range reconnaissance units assigned under the various air corps headquarters (long-range bombers)

The close-range reconnaissance units of the VIII (Close-Tactical Support Air Corps)

The battle reconnaissance units of the bomber forces

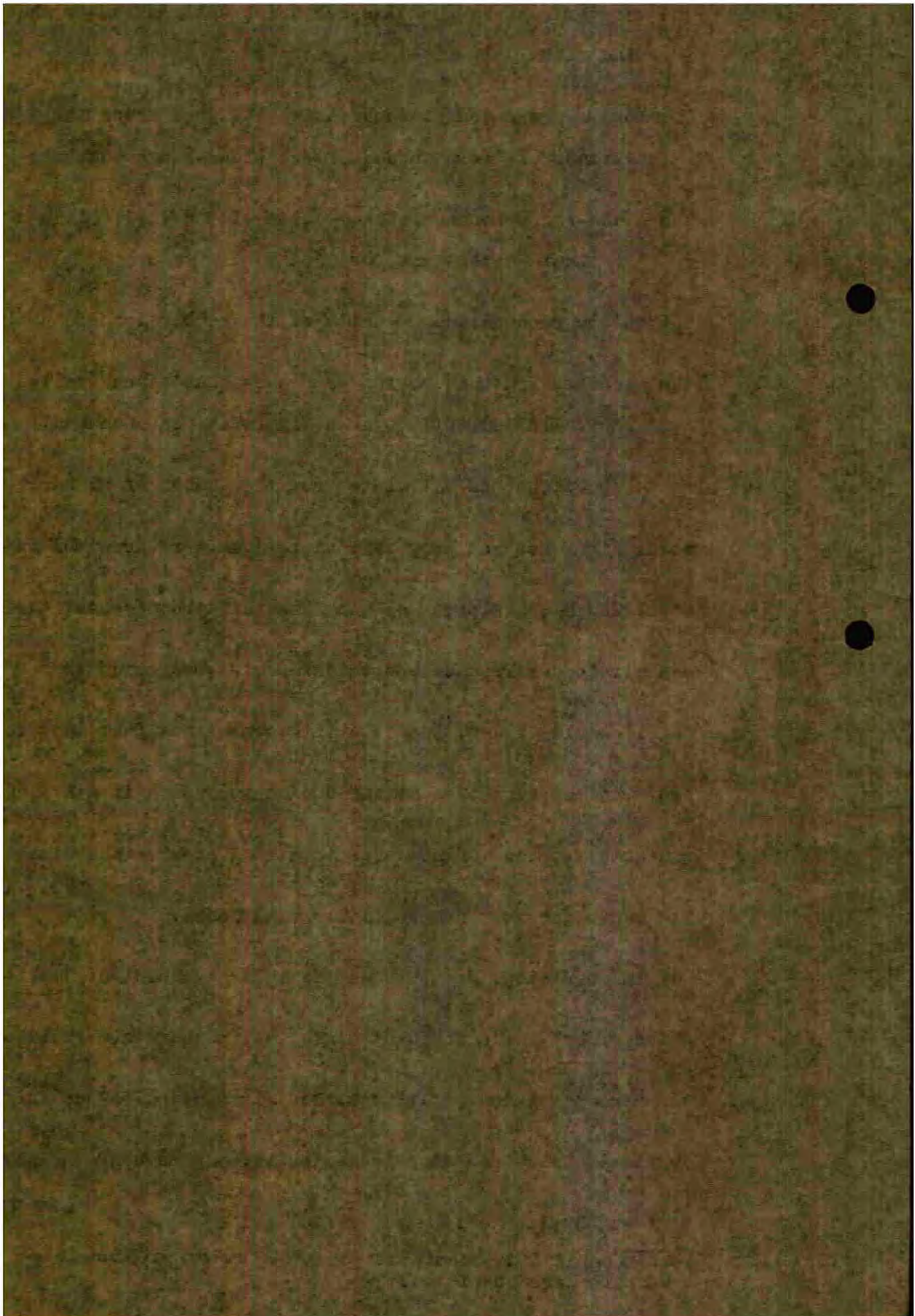
The special strategic or long-range reconnaissance units controlled directly by the Air Force High Command.

- 314 Any attempt to calculate from the number of higher level Air Force and Army command headquarters committed ~~the~~ ~~number~~ ~~of~~ ~~headquarters~~ how many headquarters directed their own air reconnaissance operations would produce quite a considerable figure. Added to this comes that fact that the Army and the Air Force commands concerned each in many cases conducted reconnaissance over identical areas, each with its own objectives and for its own purposes.

In practice, the outcome was a large amount of duplicated effort, with frequent confusion in the whole field of air reconnaissance activities. The air reconnaissance units available<sup>22</sup> were not used economically, and much of the work done was duplicated.

<sup>22</sup> According to Schmid at least 600 reconnaissance aircraft were committed.







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In a joint operation by two branches of the military, it is therefore essential to have a joint basic direction by a joint command headquarters, which will outline the general mission and subdivide the areas involved. This also calls for even closer cooperation between the various Army and Air Force commands in the actual performance of missions and in actual operations, a constant mutual exchange of reconnaissance information.

2. Development of Main Power Concentrations. The

uniform system of command in the German Air Force made it possible, in contrast with the French conduct of air operations, to put into practice with almost complete perfection the principle of power concentration.

315

The first case of a main concentration developed under direction by the Commander in Chief of the Air Force was that of the mass commitments by both air fleets ahead of the front prior to the "preliminary offensive. The second visible main power concentration through the consolidated commitments of both air fleets occurred during the mass commitments of air units during the pursuit south of the Loire River on 19 June.

As emphasized repeatedly, the two air fleets themselves had conducted their operations with extreme flexibility, with



316 constantly changing areas of main effort, in point of target selection, mission areas, and forces employed. The military principle of power concentration was observed and applied with almost more emphasis in Operation "Rot" than had been the case in Operation "Gelb."

What had made proper regard for this principle a matter of particularly urgent necessity was the fact that the German Air Force with the forces available to it had at one and the same time to execute three missions:

- to render direct support to the Army;
- to render indirect support to the Army;
- to conduct operational air warfare.

The separation of air forces into a tactical arm, to support Army operations, and a strategic arm, to conduct operational air warfare which developed later in the war was still unknown at that time. Such a subdivision would also have been impossible for the German Air Force at the time, because the forces available to it were too small. 316 The creation of the Close Tactical Air Support Corps, and the ~~g~~ excellent results achieved by the Corps, were however, a step in the direction of the development which was to evolve later. However, since the units of that corps, which were relatively weak, had to remain permanently committed within a tactically and locally confined area,

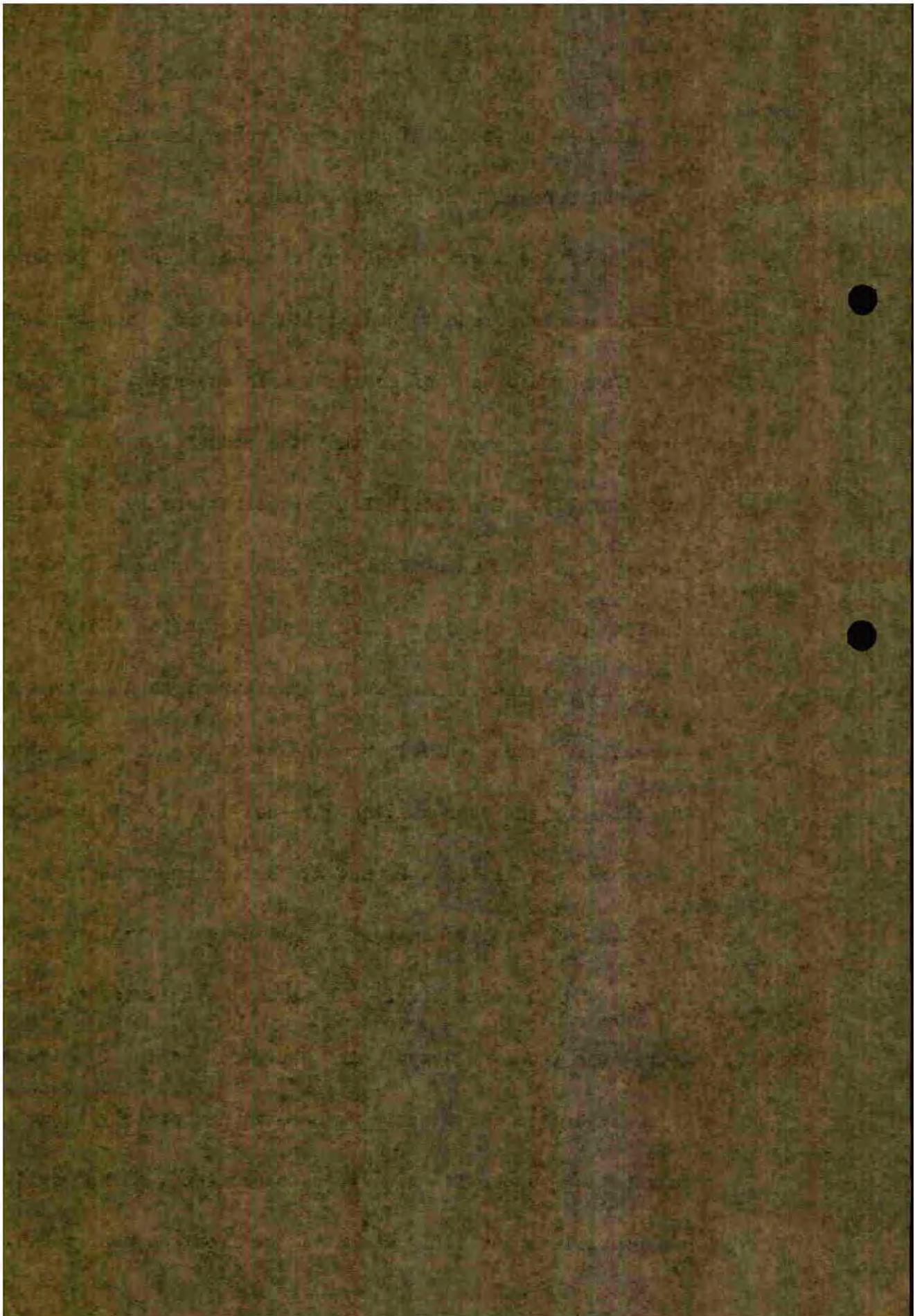


316 the command had no other choice but to also commit long-range bomber units temporarily at times to serve as the Army as a substitute for artillery. Although such missions were always only of a temporary nature, they did imply a use of these units in missions not compatible with the purposes for which they were designed.

Under the above compelling circumstances the German Air Force was forced to commit its units in a constantly changing development of areas of main emphasis. Events in Operation "Rot" have shown that the command handled this successfully. The flexibility of operation by the high level field command headquarters appears to be a special feature of the air operations during operation "Rot."

This system of main power concentrations used by the German Air Force evolved from the necessity to employ the "tactics of the poor man (the have-not)." In other words, the forces available were not adequately numerous to be able to act and give support at all necessary points and at one and the same time. The urgent appeals for air support came from the Army, which had been spoiled by direct air support in two campaigns, came in immediately when air action supporting the ground operations was not evident and audible immediately ahead of the front on the ground.







317 The reader is referred in this connection to the bitter comments by the Commanding General, VIII Air Corps, quoted in Chapter 4, above. It is also true that it called for some measure of cold-blooded calculation on the part of the air commands to "leave the Army in the lurch" in tactical matters at times when operational viewpoints and considerations required the commitment of the available forces in other missions in order to develop a genuine area of main effort, a genuine power concentration.

### 3. Surveillance of the Enemy Ground Organization.

Events at the beginning of Operation "Gelb" but also, although with certain limitations, at the beginning of Operation "Rot" had shown that action to eliminate or at least temporarily neutralize the enemy air forces through attack against the units on the ground within their ground organization was the primary objective at the beginning of an air offensive at that time.

At the beginning of Operation "Rot" the German Air Command assumed that it would encounter only weak and demoralized opposing air forces. Nevertheless, the command at the beginning of Operation "Rot" again directed systematically planned air attacks against the ground organization of the French air forces, although on a far less intense scale than had been the case at the beginning of



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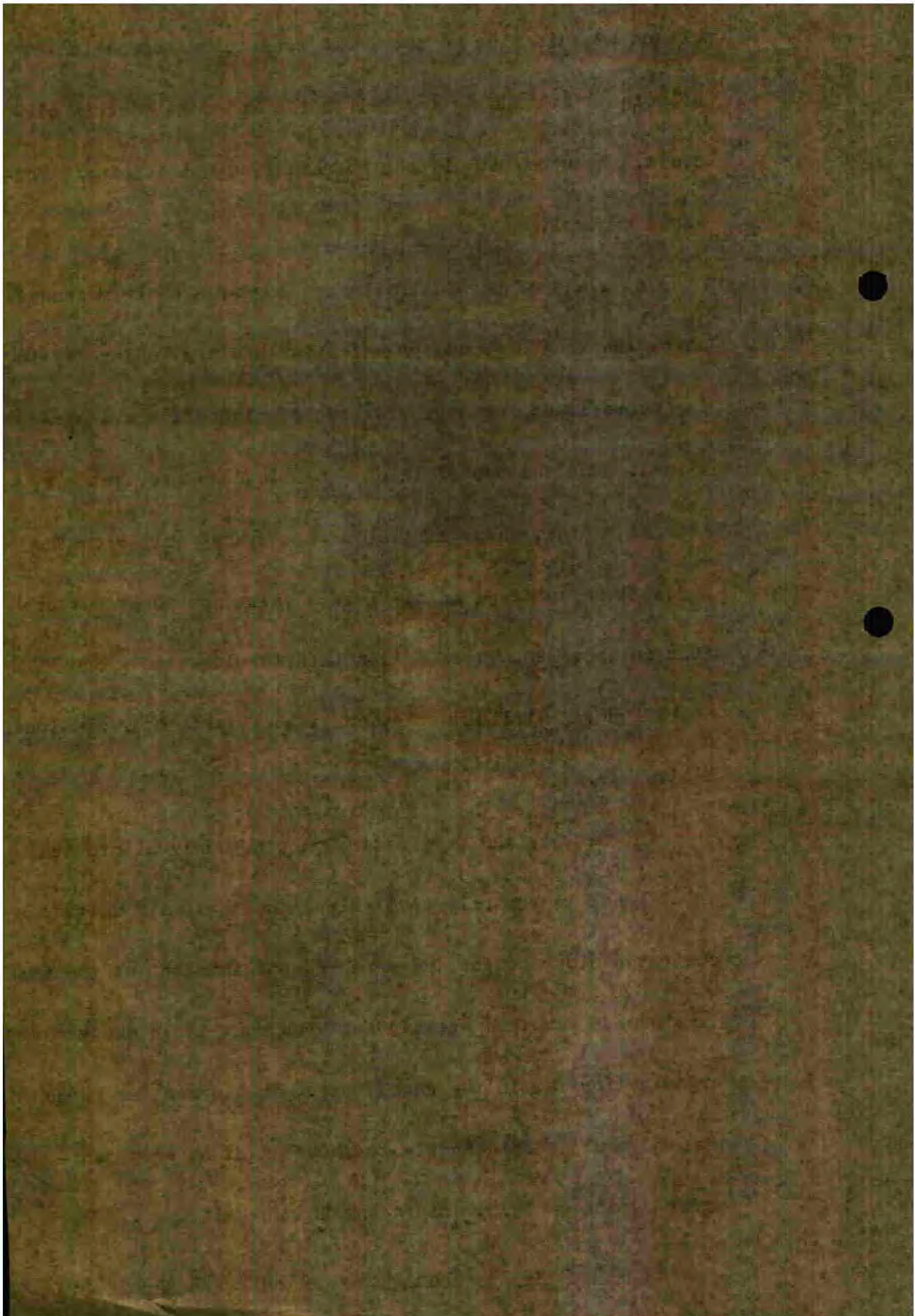
317 Operation "Gelb." Once the weakness of enemy resistance  
in the air was realized, the German Air Command admittedly  
refrained from systematic action to neutralize the French  
ground organization as such, and restricted its action to  
318 occasional attacks against airfields known to contain air-  
craft. However, it did not refrain from maintaining a con-  
stant control.

By means of carefully planned long-range air reconnais-  
sance the French ground organization was kept under day to  
day surveillance and the presence of aircraft was ascer-  
tained. The outcome of this reconnaissance was that air  
attacks against enemy airfields were staged only when the  
aircraft detected on an airfield gave reason to expect or  
fear intended enemy air action interfering with ground  
operations. Airfields farther in the French rear remained  
unattacked.

In this way the German Air Force not only eliminated  
or at least temporarily neutralized the enemy air units con-  
centrated close behind the enemy front lines but at the same  
time caused constant uneasiness throughout the enemy ground  
organization far in the enemy rear. The German Air Force  
command could afford merely to insure against enemy sur-  
prise action by maintaining constant surveillance.

4. Air Power as Long-Range Artillery for the Army.





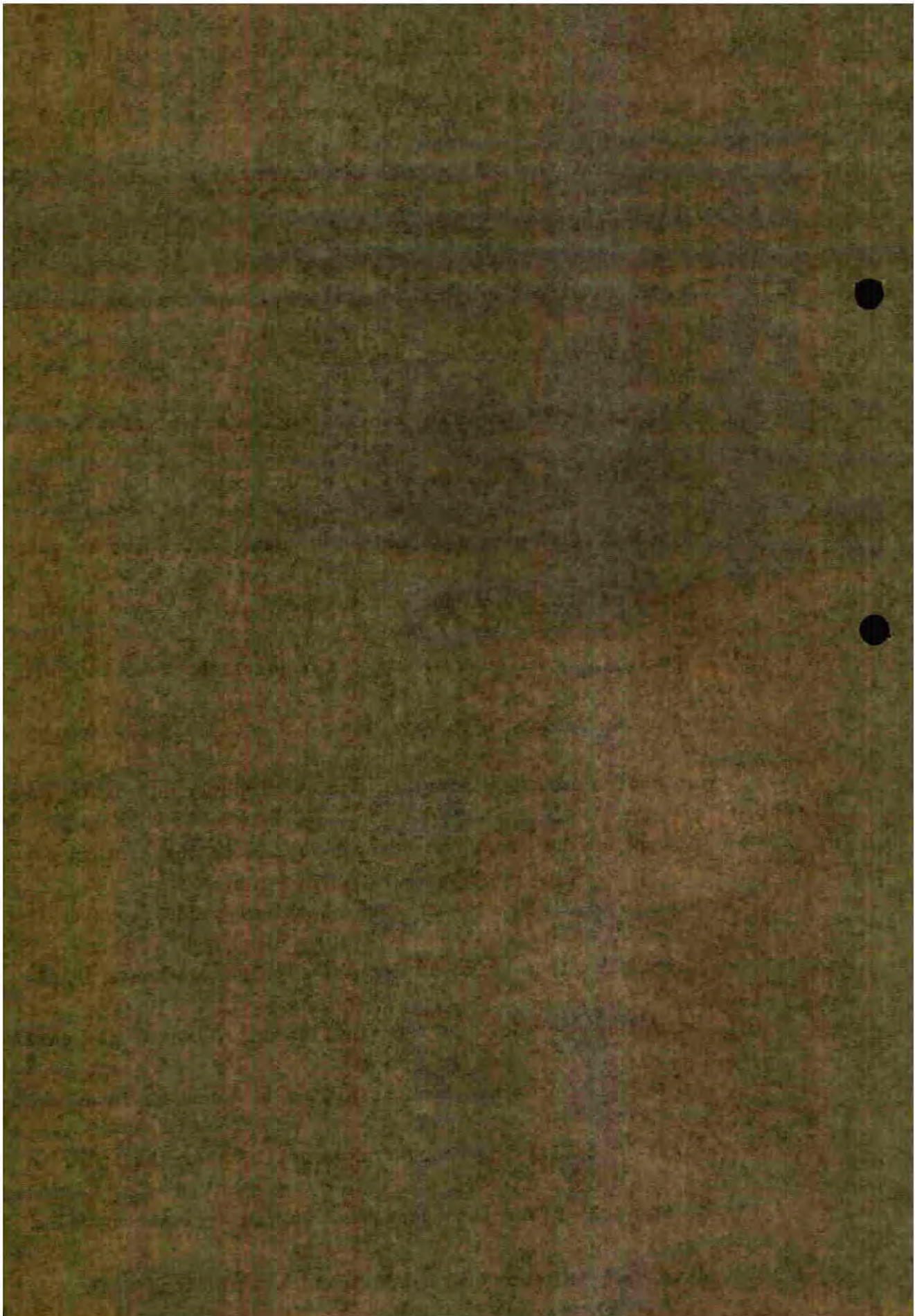


318 As early as in the Polish campaign of 1939 the German Air Force Command, on the basis of experience in that campaign, had discarded the theory propagated during peace of purely operational air warfare, and this decision remained in force in the campaign in the West in 1940.

Here, the bulk of all air units already in Operation "Gelb" had been committed in decisive tactical missions, 319 i. e. in direct support of the Army. The success actually achieved vindicated the soundness of this change of theory.

In Operation "Rot" the tactical mission was even more emphasized, namely, in the power concentration developed by commitment of practically the entire air force in action ahead of the Army front within the confined space of the "preliminary offensive;" in the case of the concentration of units by the Third Air Fleet during the break-through offensive in the center; in action directly supporting the attack by the First and Seventh Armies in the eastern segment; and finally in the case of the missions flown by Third Air Fleet units during the final engagements in Alsace and Lorraine. In the final essence, strong elements of the Air Force had been committed time and again as what might be called the "long-range artillery of the Army." It was only after the successful German breakthroughs had developed into pursuit operations that missions again







319 evolved for the Air Force which were more of an operational nature.

Once again events had vindicated the soundness of the new operational theory of the German Air Force Command.

However, there was a danger inherent in these developments: command personnel at all levels had commenced thinking in terms of tactical small area dispositions and cooperation instead of operations concepts and wide-area planning.

They had forgotten that so far, also in the western campaign the new German Air Force had passed its trial by fire under exceptionally favorable circumstances; they had not encountered any opponent of equal strength and equally high morale, who could have used the same quality of technical equipment and applied the same operational principles in counteraction, who might have forced the German Air Force into the conduct of genuine operational or strategic air warfare. Such an opponent the German Air Force had not yet encountered, it had achieved its victories too easily.

320

The mentality evolving from this development in German Air Force command circles appears understandable, but it contained a latent danger which which was destined to become a reality only much later.

Quite apart from believing that the victory in the past campaign meant that the whole war was won, the



320 responsible authorities remained rooted in past experience instead of looking ahead to future developments, and planning for future contingencies. The fact that nothing was done already at this juncture to develop long-range bombers and long-range fighters, without which real strategic air warfare could not be conducted and won, was due fundamentally to the ease with which victory had been gained in Operation "Rot." The theory of air power as long-range artillery had been accepted and, even though perhaps only subconsciously, the theory of operational or strategic air warfare had been abandoned.

No attention was given to the fact, however, that the future opponent, the British Royal Air Force, had already gained a large lead on the road to future development.



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CHAPTER 7STATISTICS ON GERMAN AND ENEMY LOSSES IN  
PERSONNEL AND AIRCRAFT

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As was done in the case of the account of Operation "Gelb," this presentation of Operation "Rot" will also be closed with the following compilation and evaluation of German and enemy losses.

The figures are offered with reservation to be exercised in the consideration of all statistical information from the period under study.

The material offered is arranged in this chapter as follows:

- A. GERMAN AND ENEMY AIRCRAFT LOSSES IN OPERATION "ROT."
- B. GERMAN AIR PERSONNEL LOSSES IN OPERATION "ROT."
- C. OVERALL GERMAN AIR FORCE PERSONNEL LOSSES DURING THE ENTIRE 1940 CAMPAIGN IN THE WEST.
- D. ANALYSIS AND CONCLUSIONS.
- E. FINAL AFTER-ACTION REPORT BY THE JOINT MILITARY HIGH COMMAND, DATED 2 JULY 1940, ON THE CAMPAIGN IN THE WEST--ONLY EXCERPTS CONCERNING THE GERMAN AIR FORCE ARE GIVEN HERE.



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## A. GERMAN AND ENEMY AIRCRAFT LOSSES IN OPERATION "ROTH"

ACCORDING TO GERMAN JOINT MILITARY HIGH COMMAND REPORTS

Report Date 1946 June	Enemy Aircraft Destroyed			German Aircraft	
	Total	In Air Combat	By AAA Fire	On the Ground <u>Losses</u>	
6	143	49	19	75	19
7	74	64	10	--	9
8	71	29	25	17	5
9	59	39	13	6	9
10	91	68	14	19	5
11	29	19	6	4	8
12	59	20	19	20	3
13	19	6	9	4	4
14	19	3	3	13	2
15	43	13	9	21	5
+ on 14	10	--	--	--	4
16	40	12	9	19	7
17	8	5	3	--	3
	+39	--	--	+39	--
18	5	--	--	--	1
19	6	--	--	--	5
20	21	--	--	--	6
21	6	2	4	--	2
22	25	11	12	2	1
	+63	--	--	--	--
23	49	6	--	43	4
24	<del>21</del> 8	--	--	--	--
	886				102



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To these figures of 386 enemy and 102 German planes can be added the losses in Operation Paula, the attack against Paris, against Paris, which can be regarded <sup>as</sup> preparation for Operation "R6t" and therefore as a part of that operation.

According to the Joint Military High Command report of 4 June 1940 these figures were as follows:

Enemy Losses: 79 aircraft shot down in air combat  
 21 " " " " by AAA  
 Approximately 350 " destroyed on the ground.  
 Total 450 (Approximate)

German Losses: 9 aircraft.

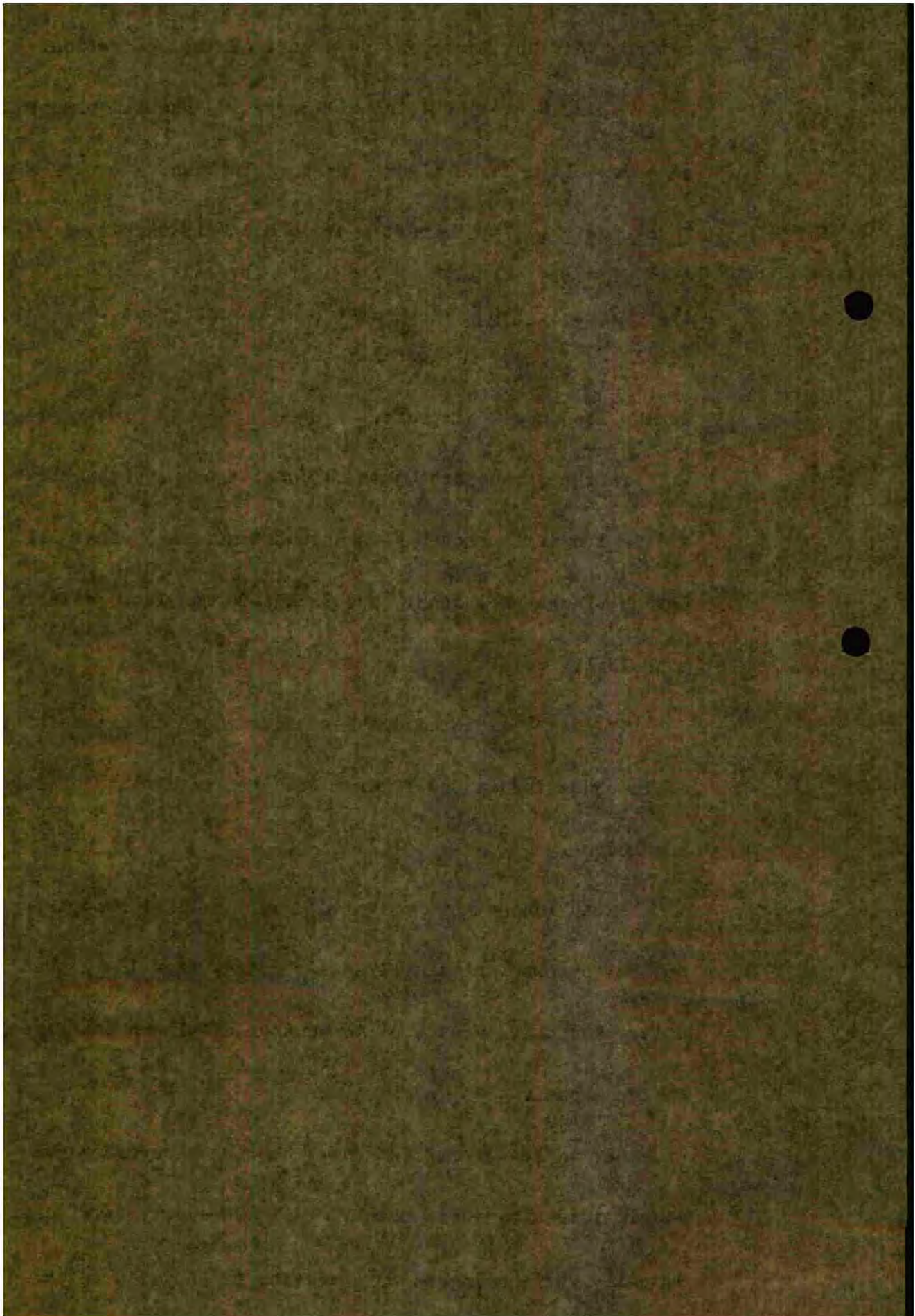
In the period from 5 to 24 June the enemy thus lost 1 336 aircraft through German combat action against 111 German planes shot down. <sup>Enemy-</sup>The French-German loss ratio is thus 13:1.

It must be pointed out here that there is a possibility of inaccuracies in the figures both for enemy and for German losses.

Enemy losses were computed from the first reports, not yet checked and usually exaggerated, from the combat units, and on estimates of the number of planes destroyed on the ground.

German losses reflect only the planes reported as missing, meaning those totally lost over enemy territory. Actually, German losses were heavier if one adds to those







reported missing the planes which landed on German ground with dead and wounded crew members. Some of these crashed and others, damaged, made emergency landings.

Air personnel losses as shown in Statistic Table B totalled MORE THAN 1,000, from which fact alone it can be deduced that German aircraft ~~losses~~ losses were heavier than reflected by the figures given above.

The above figure, intended for publication and therefore certainly dressed up for propaganda purposes, will now be compared with the figures taken from the situation reports of the Commander in Chief of the Air Force on enemy and German aircraft losses.

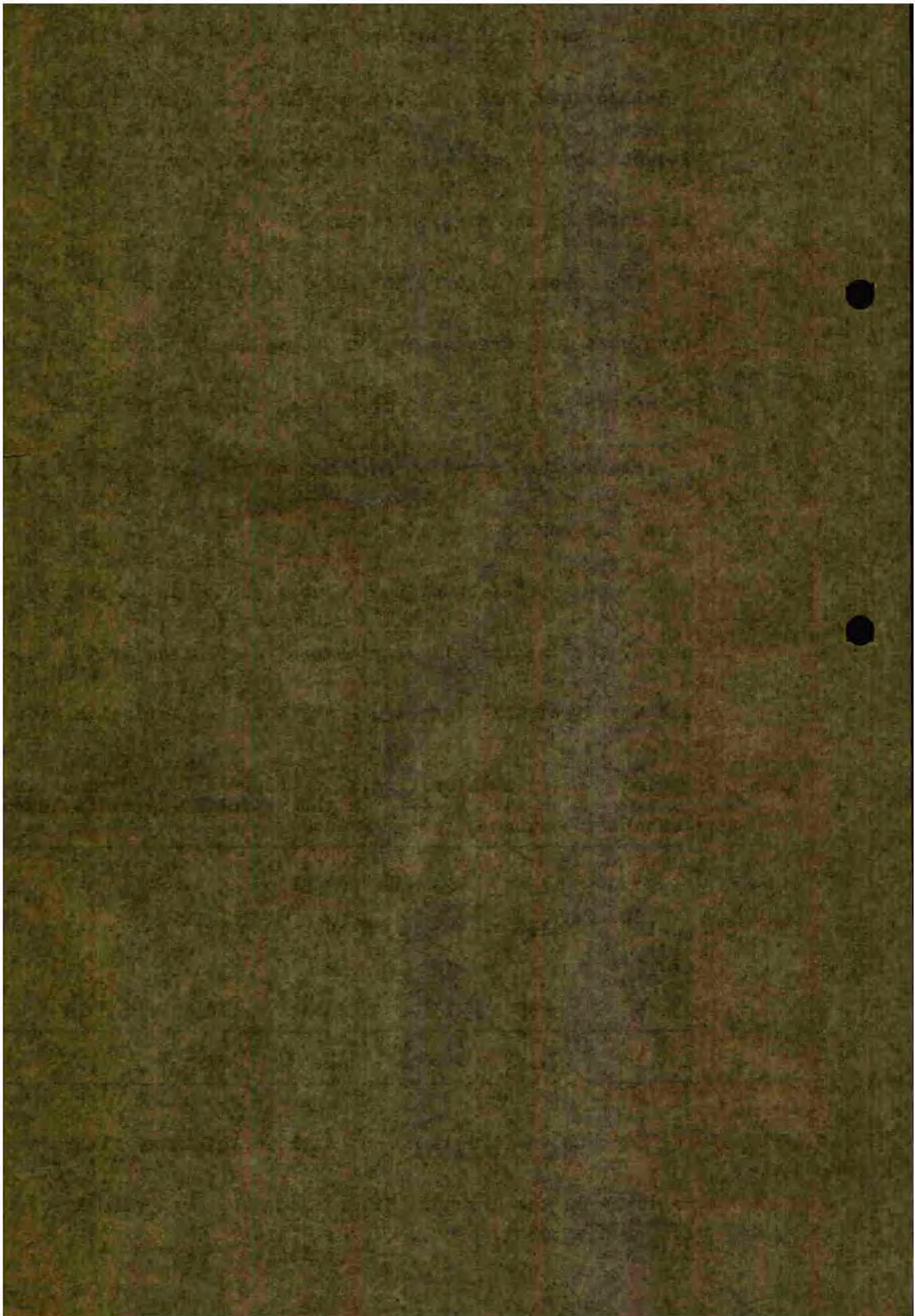
A consolidation of the figures quoted in Chapter 3, above, for the individual phases of operations by the Second Air Fleet all along the line shows the following picture

Period 1940 June	Enemy aircraft destroyed			Total	German aircraft losses
	In Air Combat	By AA Fire	On the Ground		
5-8 <sup>1</sup>	195	86	87	368	51
9-13 <sup>2</sup>	110	35	59	204	33
14-16 <sup>3</sup>	26	6	58	90	21
17-25 <sup>4</sup>	33	13	63	109	28
Totals	364	140	267	771	133

The above figures do not include the enemy aircraft captured on the ground. Otherwise, they are probably a

1. See Chapter 3, above.      2. Ibid  
3. Ibid                              4. Ibid.



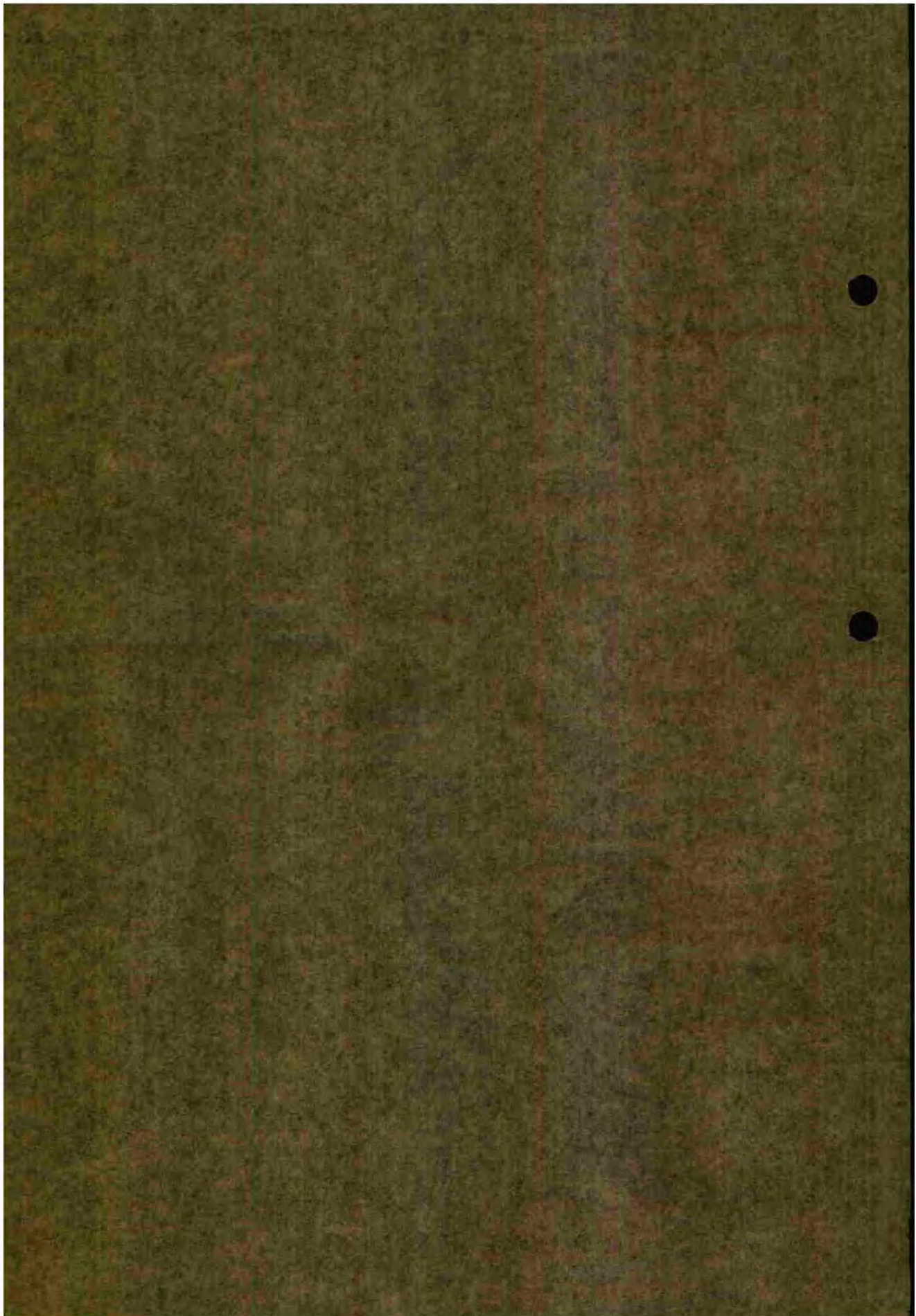




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traer reflection of the factual losses on both sides. They also bear comparison with the information on enemy losses taken from the MIIKAI final Joint Military High Command After-Action Report as presented in the following table.







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## B. GERMAN AIR PERSONNEL LOSSES DURING OPERATION "ROT."

The figures in the following statistical table are taken from the so-called (10-Tage Meldungen des Ob. d.L.) 10-day reports prepared by the Commander in Chief of the Air Force, which can be accepted as reliable.<sup>5</sup>

Phase	Period 1940 June	Dead	Missing	Wounded
I	1-10	114 (17)	317 (71)	149 (28)
		<del>114 (17)</del> [74 (12)]	<del>317 (71)</del> [316 (70)]	<del>149 (28)</del> [126 (27)]
II	11-20	94 (16)	214 (46)	97 (21)
		[67 (15)]	[216 (46)]	[72 (17)]
III	21-30	115 (17)	21 (9)	137 (30)
		[50 (9)]	[16 (5)]	[87 (17)]
Totals	June	323 (50)	552 (126)	383 (79)
		[191 (36)]	[345 (124)]	[285 (61)]

Legend: ( ) = Number of officer personnel included in preceding figure.

[ ] = Actual combat casualties, included in figures above.

Footnote 5. I. According to Ob. d. L., Generalstab, Gen. Qu., E. Abt. No. 2963/40 g. Kaob (I), 12 June 1940.

Phase II. Ibid, No. 3124/40, 22 June 1940.

Phase III. Ibid, No. 2356/40, 2 July 1940.



Analysis of the casualty figures on previous page.

The figures in square brackets, totalling under the separate headings

Dead	191
Reported missing	545
Wounded	<u>285</u>

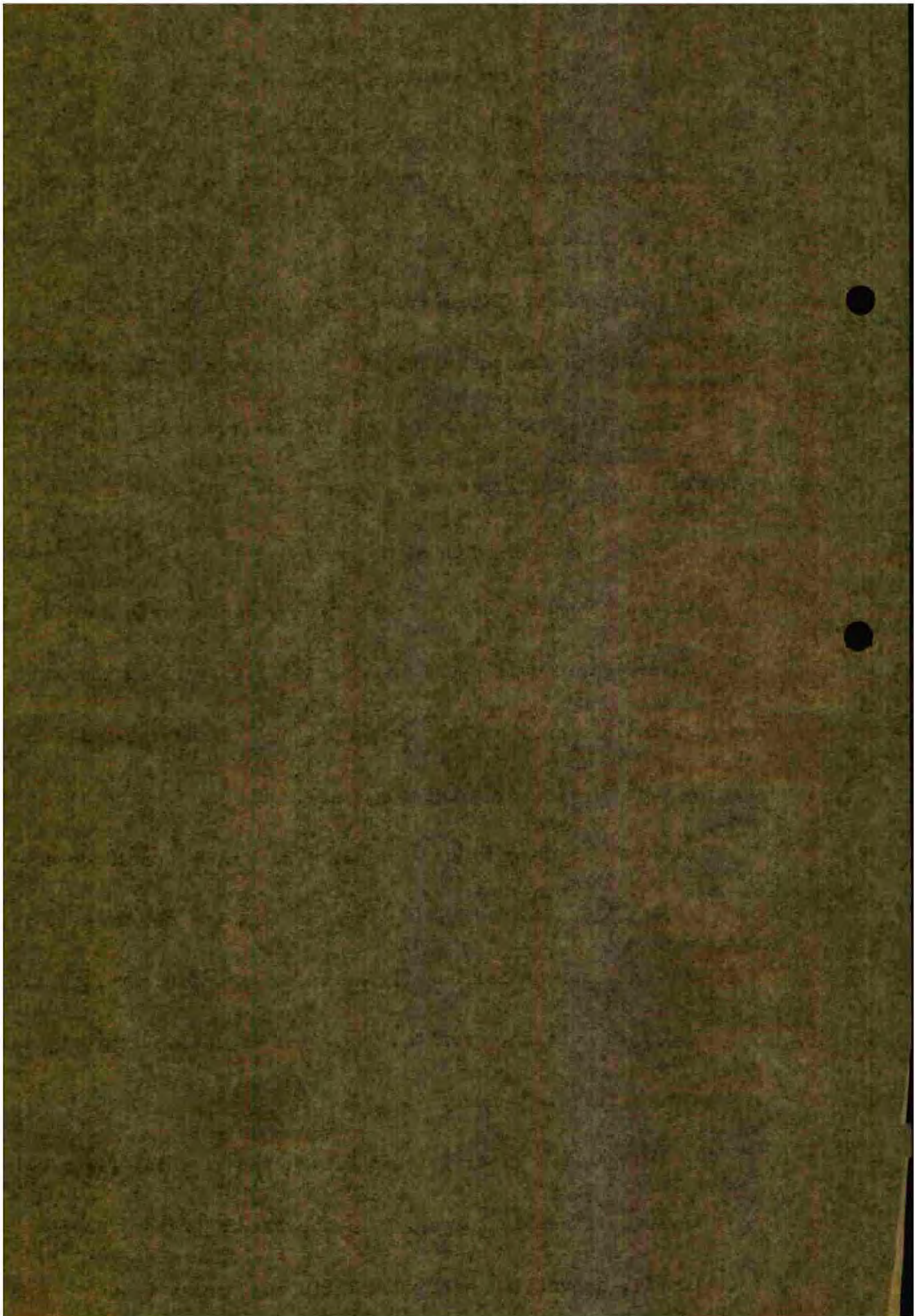
reflect a total loss through enemy action of 1 021 personnel in June 1940.

From this figure it is obvious that the air units encountered serious resistance even after having established German air supremacy, and that it was necessary to constantly reestablish air supremacy at a cost in losses.

In the circumstances as they are known, it seems safe to assume that the majority of these losses were not incurred during air operations directly supporting the Army operations on the ground, but during the numerous attacks by Second Air Fleet units against seaborne and coastal targets and targets in England. The French Canal ports repeatedly attacked during this period, and the targets in England, were still heavily defended by anti-aircraft artillery. In addition, over the Canal and England, enemy fighters were a serious menace.

It is not clear to what extent the official figures include losses in Norway. Only the ten-day report used in (I), above, is marked Not Including Norway (ohne







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Norwegen).

G. TOTAL GERMAN AIR FORCES LOSSES DURING 1940 OFFENSIVE IN THE WEST:

The Commander in Chief of the Air Force "ten-day report" dated 2 July 1940 (see footnote 5, above) also shows the total Air Force personnel losses since 10 May 1940, i.e. for the entire period of the offensive in the West. The figures from that source have been so processed here that they reflect the loss in flight personnel and also the total personnel losses of the entire German Air Force.

I. FLYING PERSONNEL

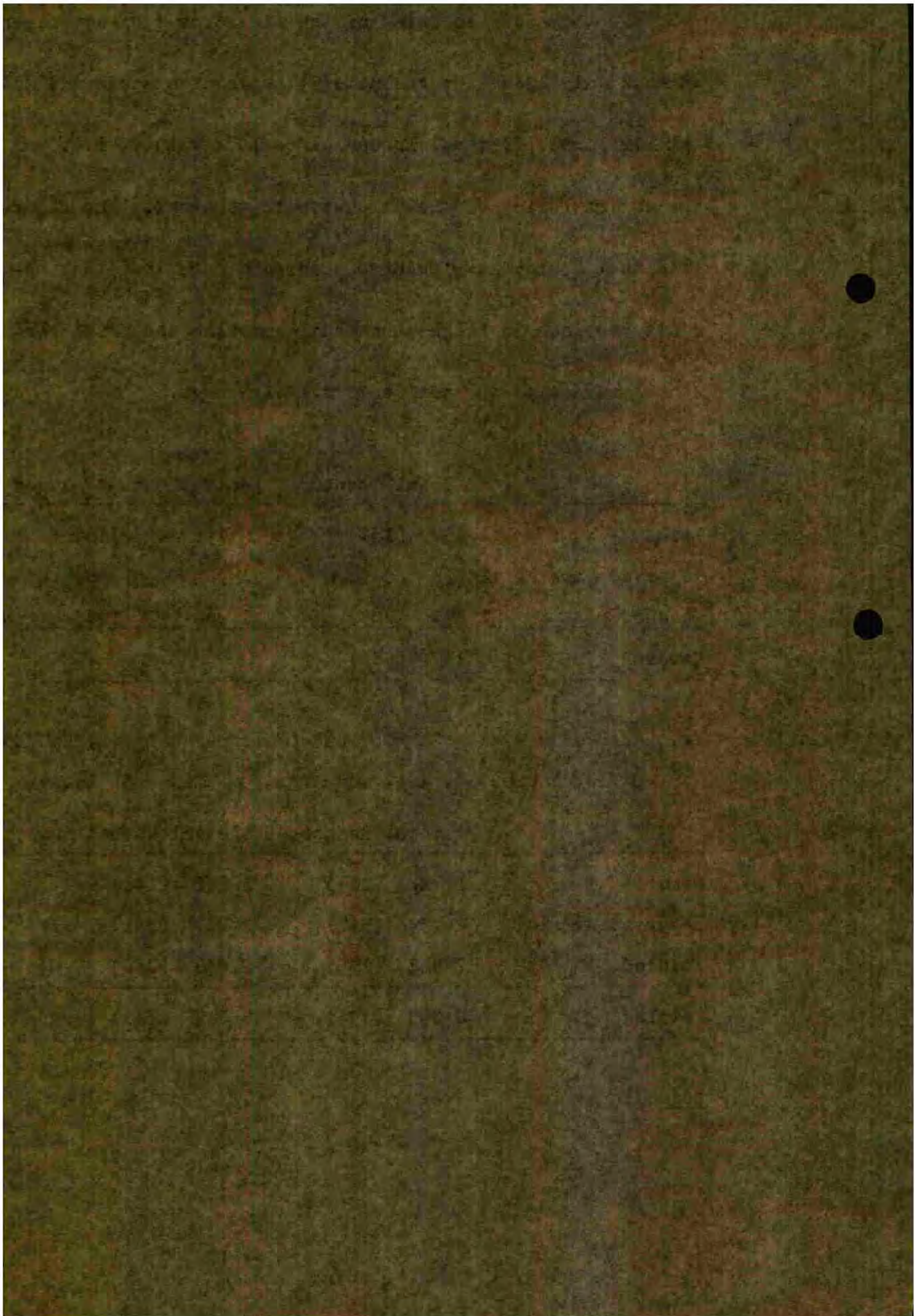
	Total Losses	Actual Combat Losses
Dead	1 092 (136)	796 (118)
Reported Missing	1 930 (339)	1 925 (338)
Wounded	1 595 (205)	1 264 (139)
Totals	4 417 (680)	

II. TOTAL GERMAN AIR FORCE LOSSES (FLYING PERSONNEL, GROUND SERVICE PERSONNEL, AAA, and AIR SIGNAL PERSONNEL).

	Total Losses	Actual Combat Losses
Dead	1 722 (169)	1 222 (145)
Reported Missing	2 034 (342)	2 029 (341)
Wounded	2 897 (285)	2 448 (260)
Totals	6 653 (796)	5 699 (746)

Legend: As in B, above.







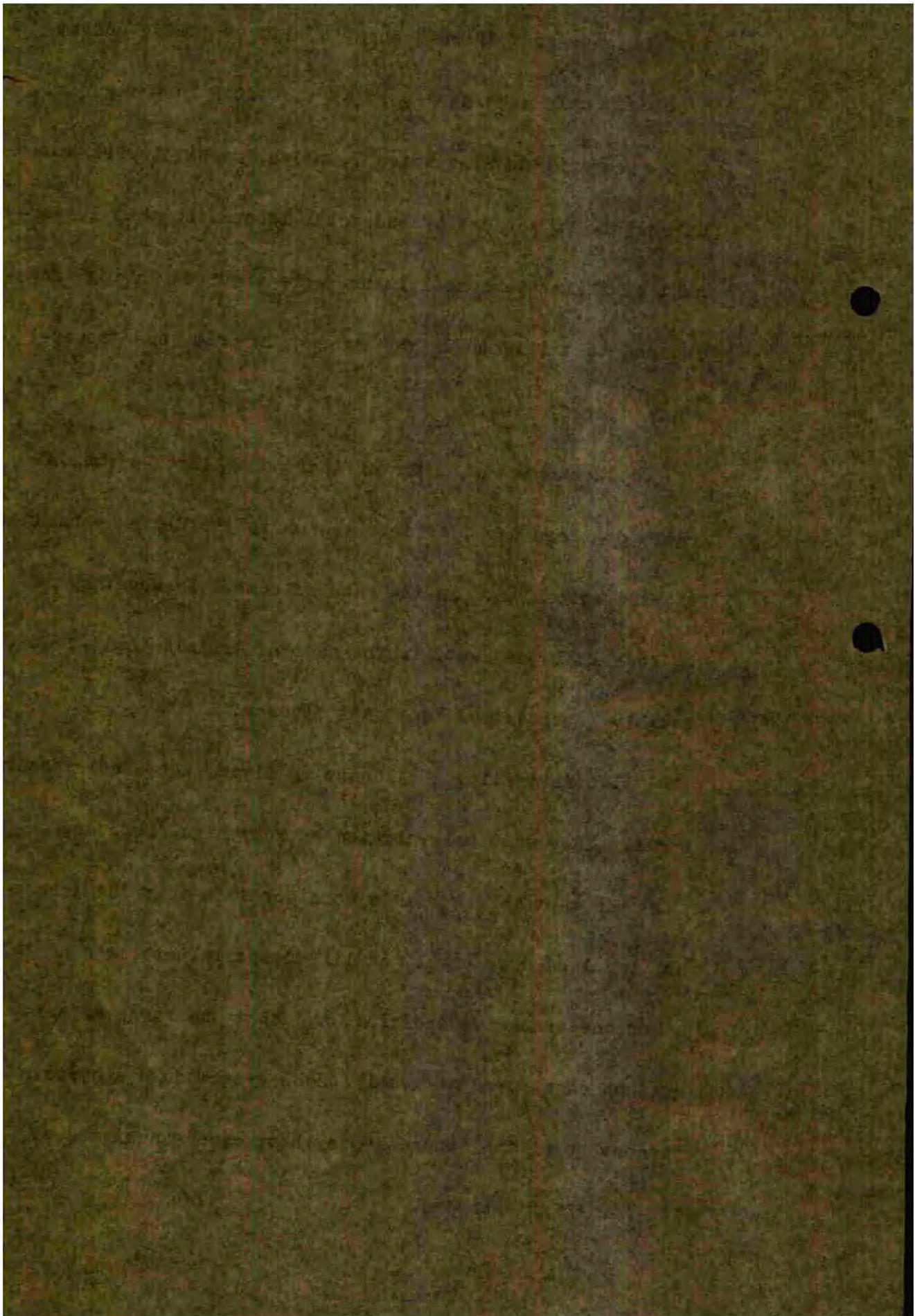
1. The figures for losses in flying personnel show first of all that actual combat losses, shown in the "ten-day" reports as "through enemy action or during combat mission," only make up a part of the total loss figures.

According to Statistics I, above, combat losses made up roughly 90 percent of the total losses, so that 10 percent of flying personnel losses were incurred during training and test flights in the zone of interior and the occupied territories.

2. Consistent with the officer to enlisted personnel ratio of those days, officer losses in the flying personnel bracket were high. In the case of combat losses they made up roughly 16 percent, in the case of training units, etc. roughly 1 percent of the total figures.

3. Numerically, the losses in flying personnel appear small. They must be evaluated as very high, however, when the fact is taken into consideration that the personnel involved were highly qualified specialists, who had undergone extensive training, and that the large majority must be considered as total losses even though a certain percentage of the "wounded" may have been reassigned as fit for flight service.







The bulk of the peacetime personnel of the German Air Force had been lost thus in the campaign in the West, after the small casualties incurred in the campaigns in Poland and Norway.

4. The flying personnel replacement situation had consequently become critical. This fact is confirmed by a few remarks attached to the individual "-10-days" reports by the Commander in Chief of the Air Force, for example,

a. Report on 12 June 1940.

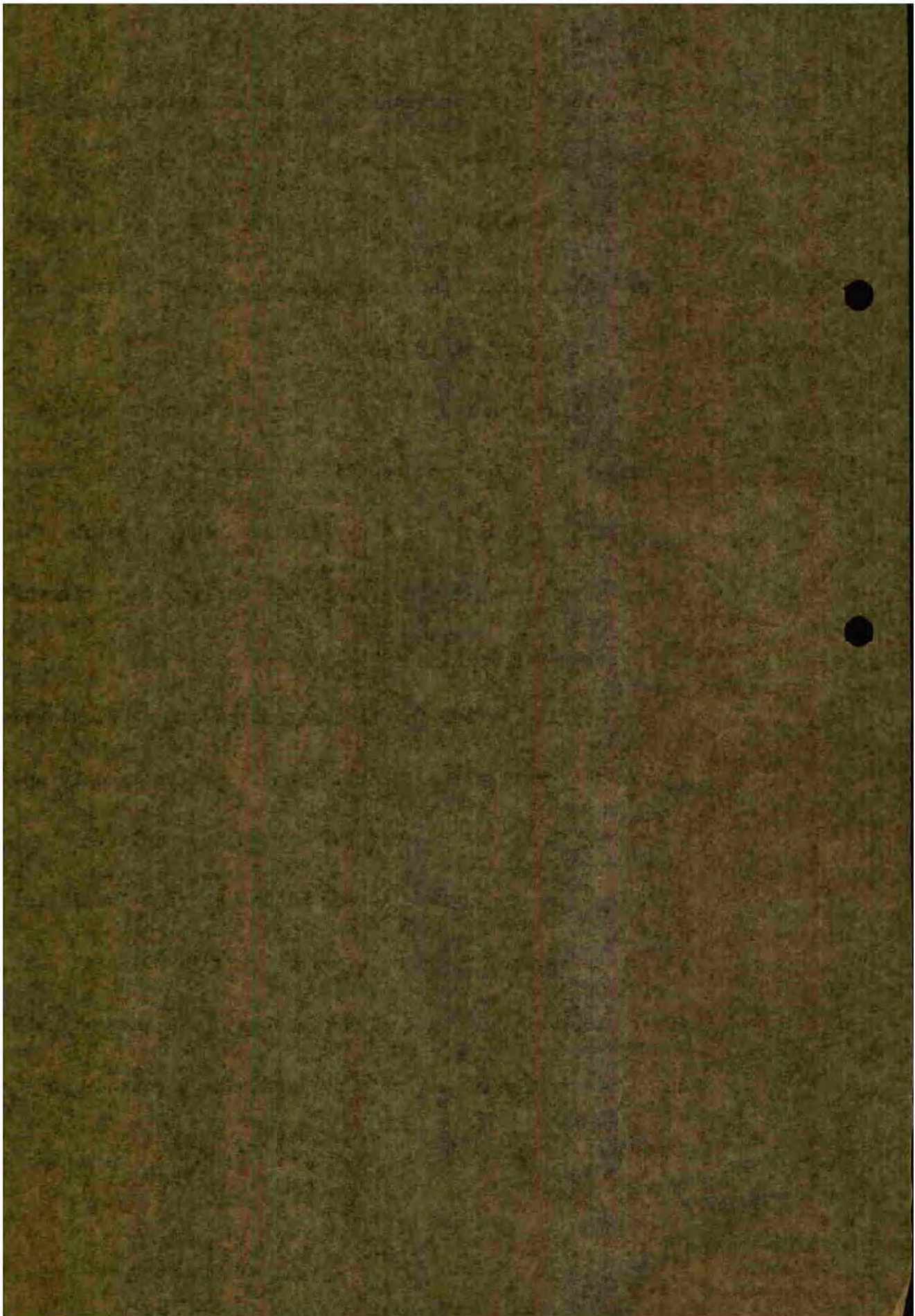
All vacancies in the authorized strength of the bomber units can not be filled, since the young crews still need training. Generally speaking, however, there are more aircraft crews available on line than aircraft.

b. Report on 22 June 1940.

~~EXTREMELY~~ In all cases crews can be furnished for the available aircraft. The situation is only unfavorable in the case of the dive-bomber units.

For a proper understanding of the above it would be necessary to know how many aircraft were "available" on line. Probably, it was only possible to man them all because the number of aircraft on line had decreased considerably.







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c. Report on 2 July 1940.

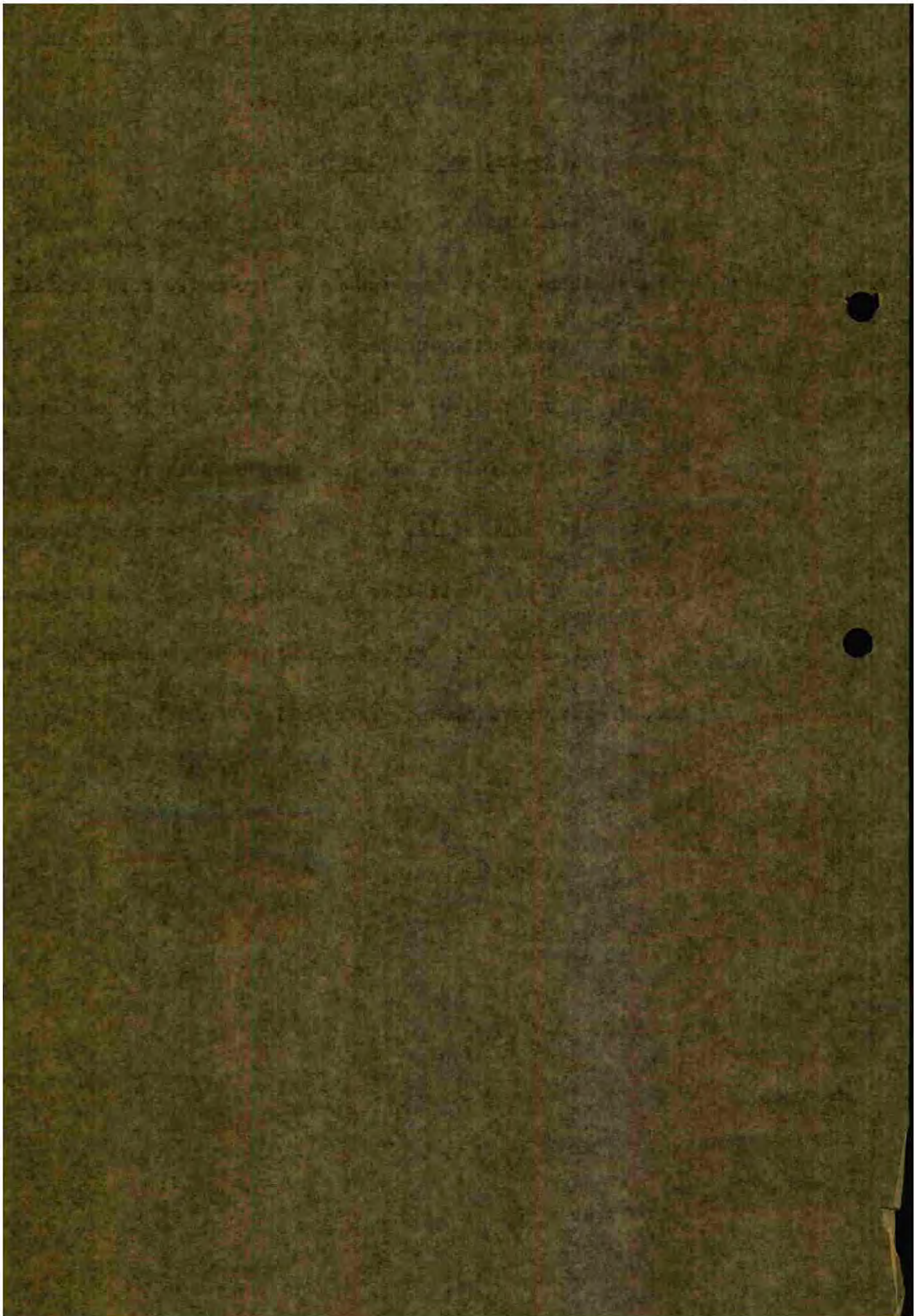
On an average more crews are available than aircraft. Replacements in young trainees from the schools are numerically adequate, but in some cases training standards achieved are inadequate.

d. Report on 12 July 1940.

Vacancies are gradually being filled. Inadequate experience of young personnel. Vacancies hard to fill in the dive-bomber units.

5. On the subject of overall German Air Forces losses shown in Statistics II, all that can be said is that as a total they were small, but that, as a comparison between Statistics I and Statistics II shows, the biggest loss was in flying personnel, followed in order of sequence by AAA, ground service, and air signal personnel.







## D. FINAL ANALYSIS AND CONCLUSIONS.

Numbers and statistics alone can never reflect a true picture of the effective strength and striking power of the flying units of the German Air Force after conclusion of the 1940 campaign in the West.

There can admittedly be no doubt that the operational air arm in Operation "Gelb" and then in Operation "Rot" had made a decisive contribution towards the successful outcome and in particular towards the acceleration of the overall offensive. The discussions in Parts 3 and 4 of this study have made this fact abundantly clear.

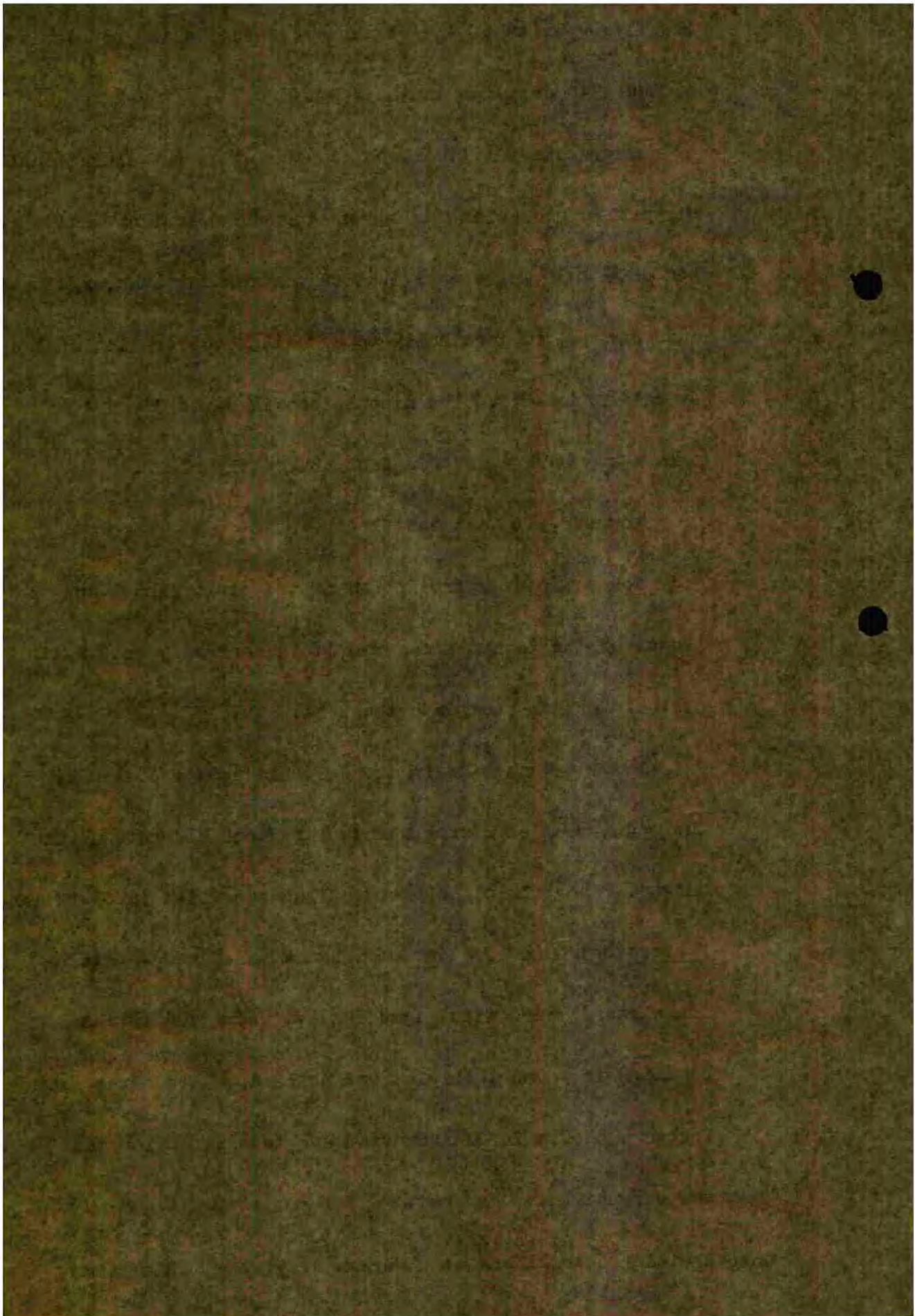
However, At what cost?

For a proper appreciation of the performances and losses of the German Air Force it is necessary once again to look farther back into the past.

The 1940 campaign in the West had been preceded by the commitment of strong German Air Force elements against Norway. The bulk of the forces thus committed in Operation "Weseruebung" (occupation of Denmark and Norway—note by Translator) were then, immediately, committed in the campaign in France, Belgium and Holland, whereas the Army forces employed in Scandinavia were not needed for the new offensive in the West.

Once again in contrast with the German Army, the German Air







332 Force again was allowed no pause between these two major operations.

333 During the pause for the Army, the Air Force remained uninterruptedly in action, at Dunkirk, Marseilles, and in the attack against Paris, and finally, had the concurrent mission of supporting the Army in the Somme river line of resistance, upon the holding of which the outcome of the coming offensive hinged.

These operations not only caused continuous losses, but also placed a severe strain on personnel and material. It was thus inescapable that the German Air Force entered "Rot" Operation with already weakened forces.

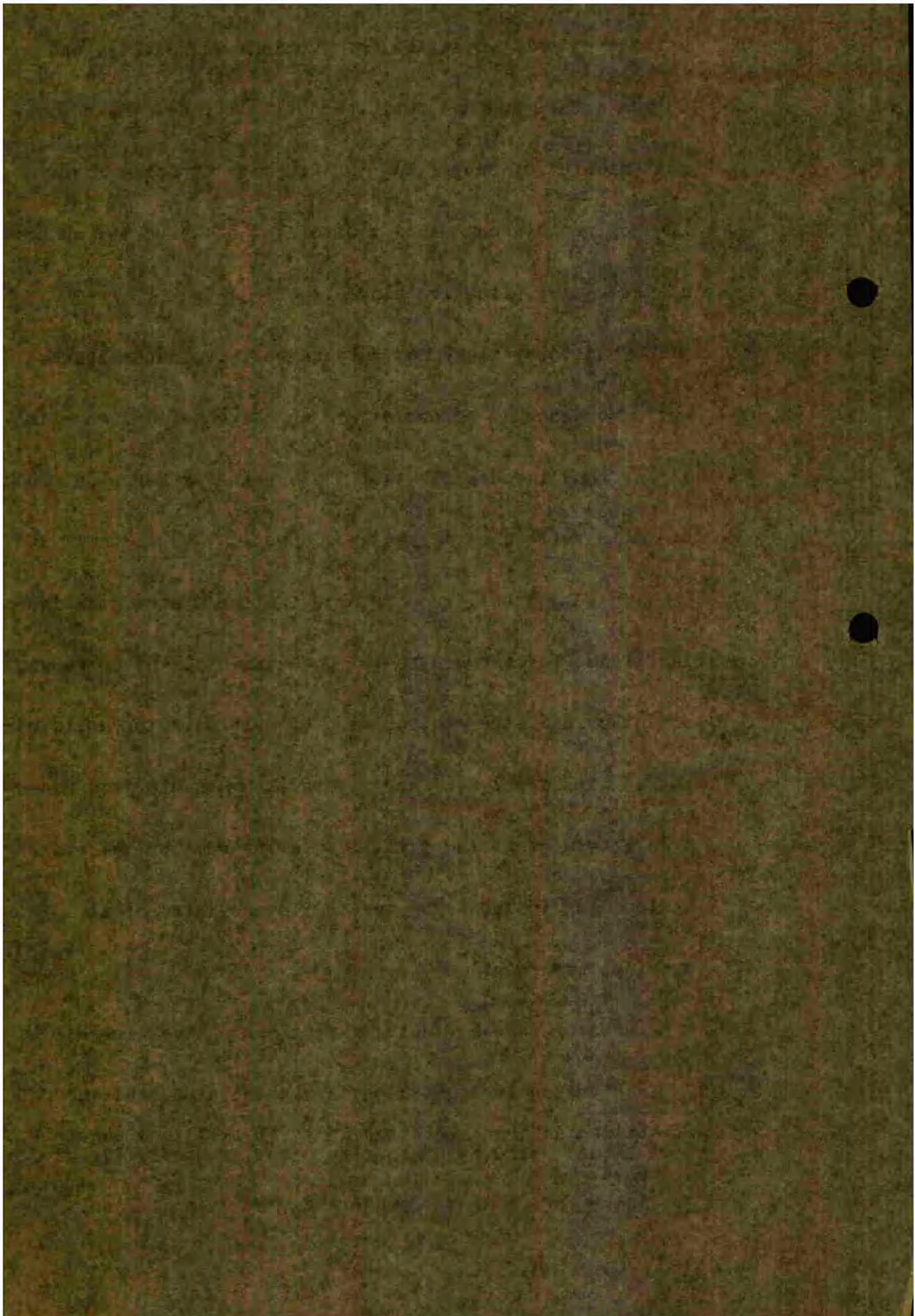
In some cases, records show that unit strengths in the flying forces were as low as between 50 and 60 percent of authorized strength,<sup>6</sup> as was the case with the units of the IV Air Corps. Another figure is available from records showing that the total losses incurred by the 4th Bomber Wing in the West amounted to one-third of its original strength.<sup>7</sup>

However, the offensive operations against targets in England and against shipping ~~IKM~~ between England and

6. Written information dated 15 April 1957 from General-lieutenant Rolle, at that time Chief of Staff, IV Air Corps.

7. History of the 4th Bomber Wing, by Colonel Rath.







333 the Continent, carried out concurrently with operations supporting the Army offensive, also caused noticeable losses, particularly in the case of the 9th Air Division.

And finally, the almost uninterrupted commitment of the VIII (Close Tactical Support) Air Corps had also resulted in losses seriously reducing the striking power of its units.<sup>8</sup>

However, the major loss for the Air Force as a whole had been in the heavy battles fought over Dunkirk,<sup>9</sup> and the reader is reminded here that even before then the Commanding General, Second Air Fleet, had described his forces as weakened and exhausted.<sup>10</sup>

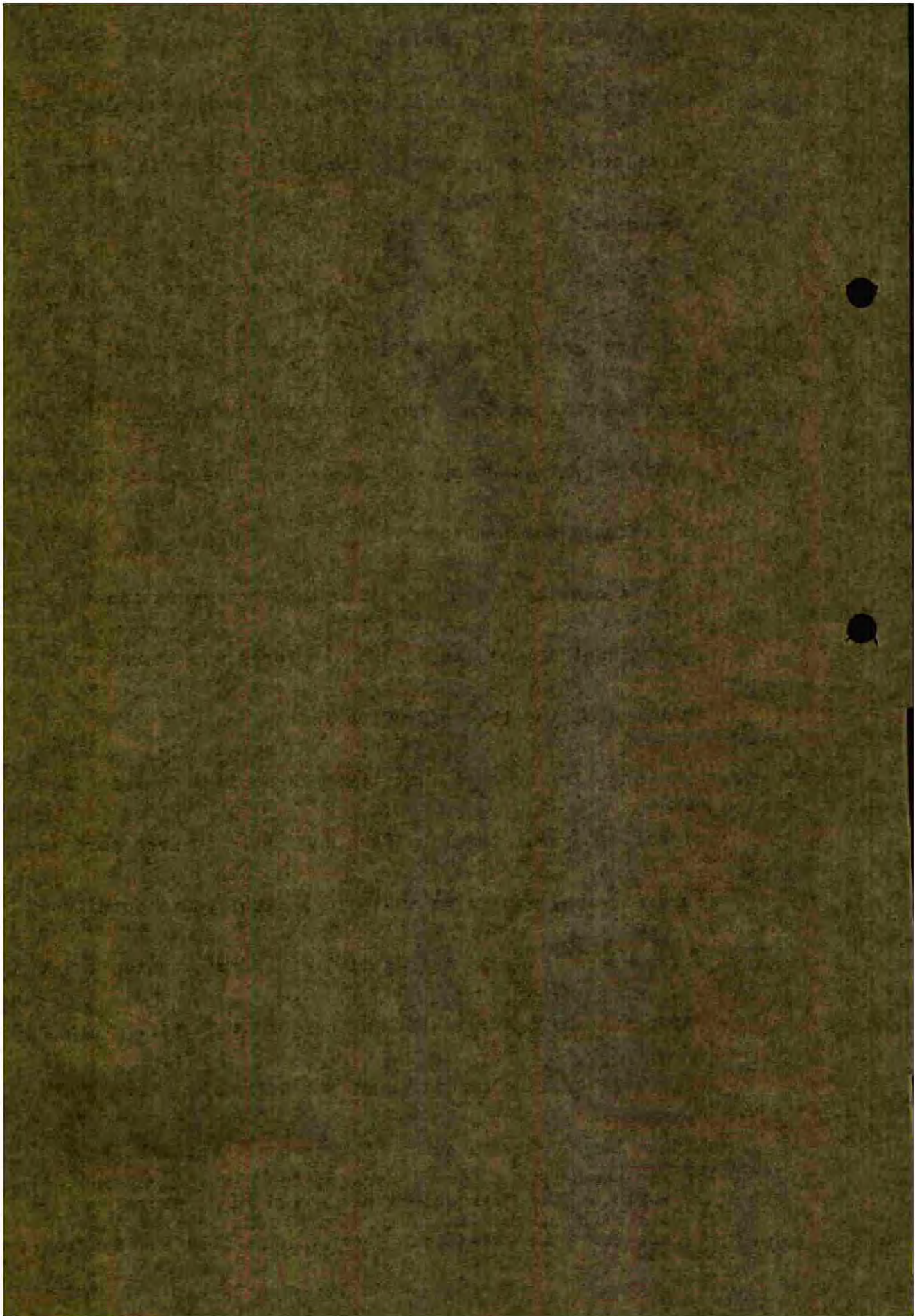
It can therefore be said without exaggeration that the operational arm of the German Air Force was "burnt out" at the end of the 1940 offensive in the West.

The Air Force at that time had no idea that its real ordeal, its real trial by fire, and with it even more severe strains, was still impending, namely, its commitment a few weeks later in the Battle for Britain, which the Air Force had to fight without any support whatever.

However, the condition of the German Air Force both within itself and in point of the power available to it

8. The reader is referred here to the CINC. Air Force reports on the replacement situation in G. above, and to the difficulties encountered in operations by the VIII Air Corps in Operation "Rot" as described in--Continued







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when the moment came for the new offensive, the Battle for Britain, had to be taken into consideration as a decisively important factor in appraising the chances of success or failure and then balancing the essentiality of the offensive against the possibilities of carrying it through.

In point of quality the German Air Force, so far as the majority of its aircraft crews were concerned, entered upon the new air offensive at best with second class personnel, since the bulk of its personnel with peacetime training had been lost in the campaign in the West, as previously stated.

This knowledge had to be taken as a starting point in a discussion of the German Air Force effort in the Battle for Britain.

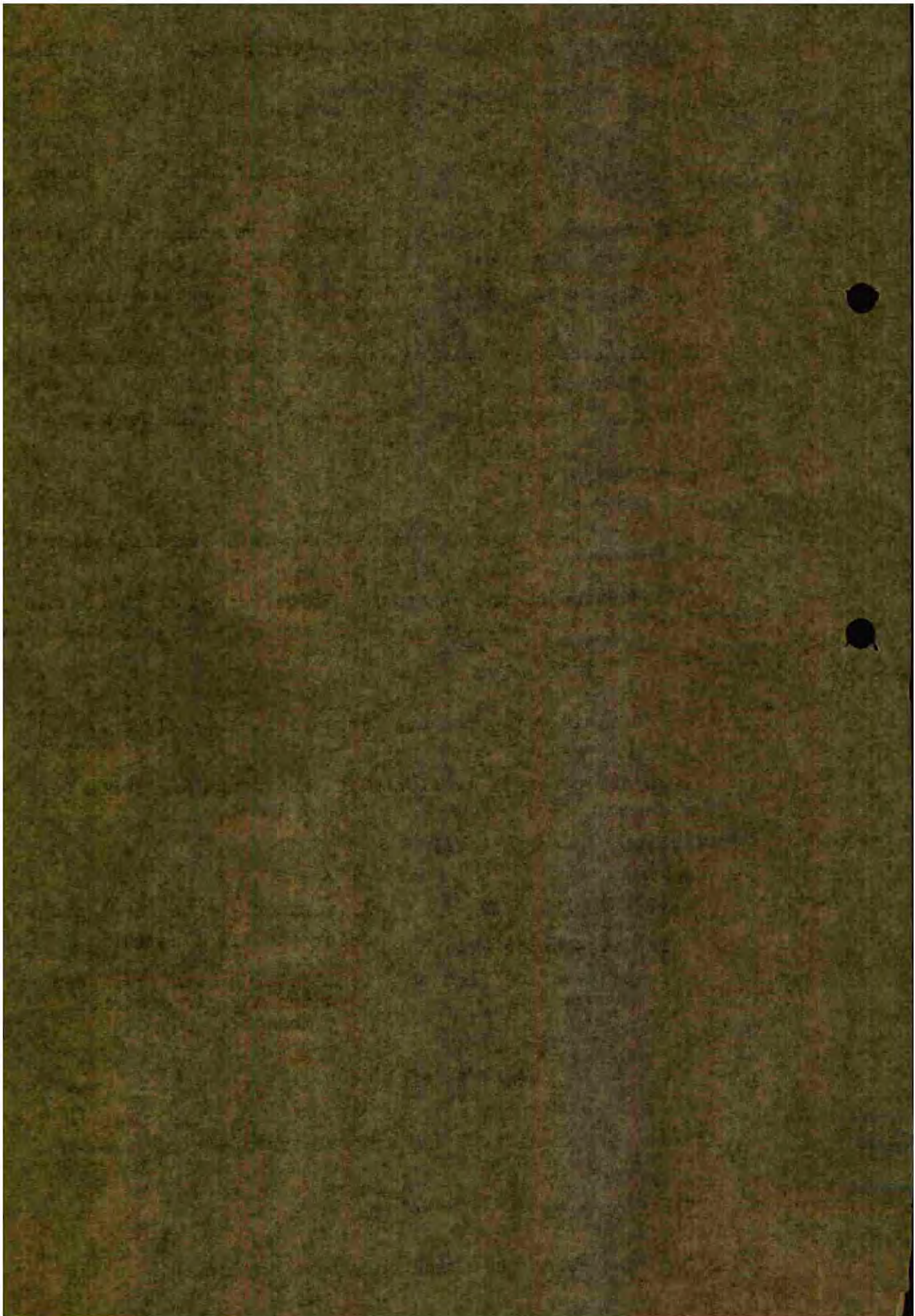
"Official" figures are misleading. The Halder Diary<sup>11</sup> gives the strength available in the German Air Force on 4 July 1940 as follows:

45 bomber groups	19 fighter groups (assigned under the air fleets)
12 dive-bomber groups	
10 twin-engine fighter groups	15 fighter groups (assigned under the air district commands).

A remark added to that statement reads ".....we entered the war with 1 200 bomber aircraft. Crews we now have 1 100, aircraft 900."

Figures of that kind only have any meaning in the







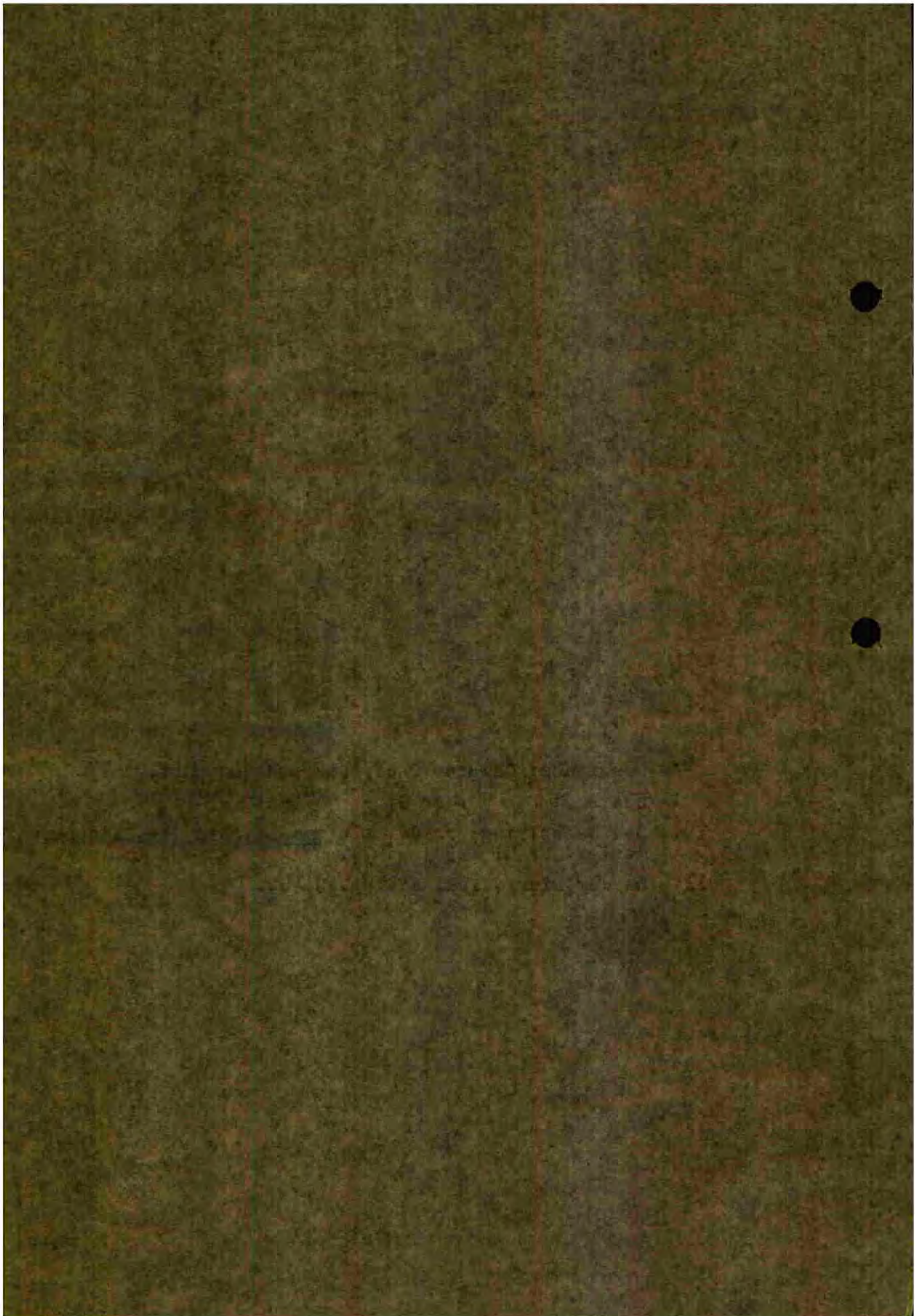
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field of organization. They give no indication of the actual operable strengths and striking force of the units.

8. ---Continued: Chapter 2 of this present part.
9. See Part 2, Chapter 9.
10. See Kesselring: Soldat bis zum Letzten Tag, Athenaeum Verlag, Bonn, 1953, p. 73.
11. Halder Diary, Vol. IV, pp. 91-92.







E. FINAL AFTER-ACTION REPORT BY THE GERMAN JOINT MILITARY  
HIGH COMMAND ON THE 1940 CAMPAIGN IN THE WEST.

PRELIMINARY REMARKS.

presentation

This annex is based on a copy of the original After-Action Report made available by the Karlsruhe Document Collection and responsibility for its accuracy must be left to the Karlsruhe Center.

Because of the large volume of the entire after-action report, which gives a consolidated resumé of the entire development of Army operations, it appears adequate for the purposes of this Air Force study to give below only those parts which refer to the Air Force.

The headlines have been inserted by the author of this present study to indicate the specific phases of the operations or the specific subjects involved in the references to the Air Force.

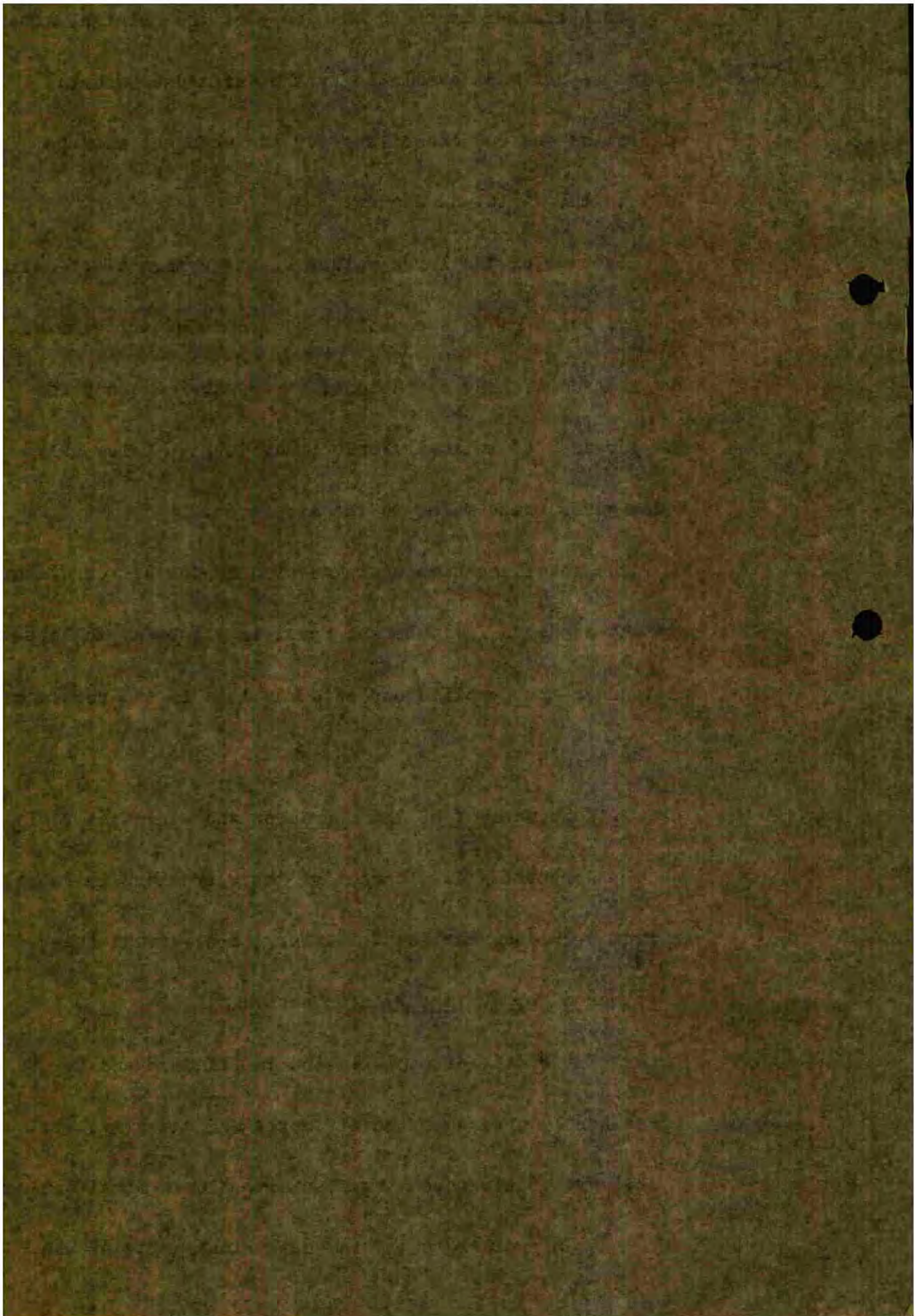
1. Commencement of the Operation and Operation Paula.

Concerning development of the operations in France from 5-25 June the Joint Military High Command (Ober-Kommando der Wehrmacht) announces:

The Battle of annihilation in Flanders and Artois was hardly over when the Air Force and the Army..... delivered their second and decisive blow against France.

As a prelude to the new operations units of the







German Air Force attacked the airfields and air armament industries in the general area of Paris with devastating results.

2. Concerning the Preliminary Offensive, 5-8 June 1940.

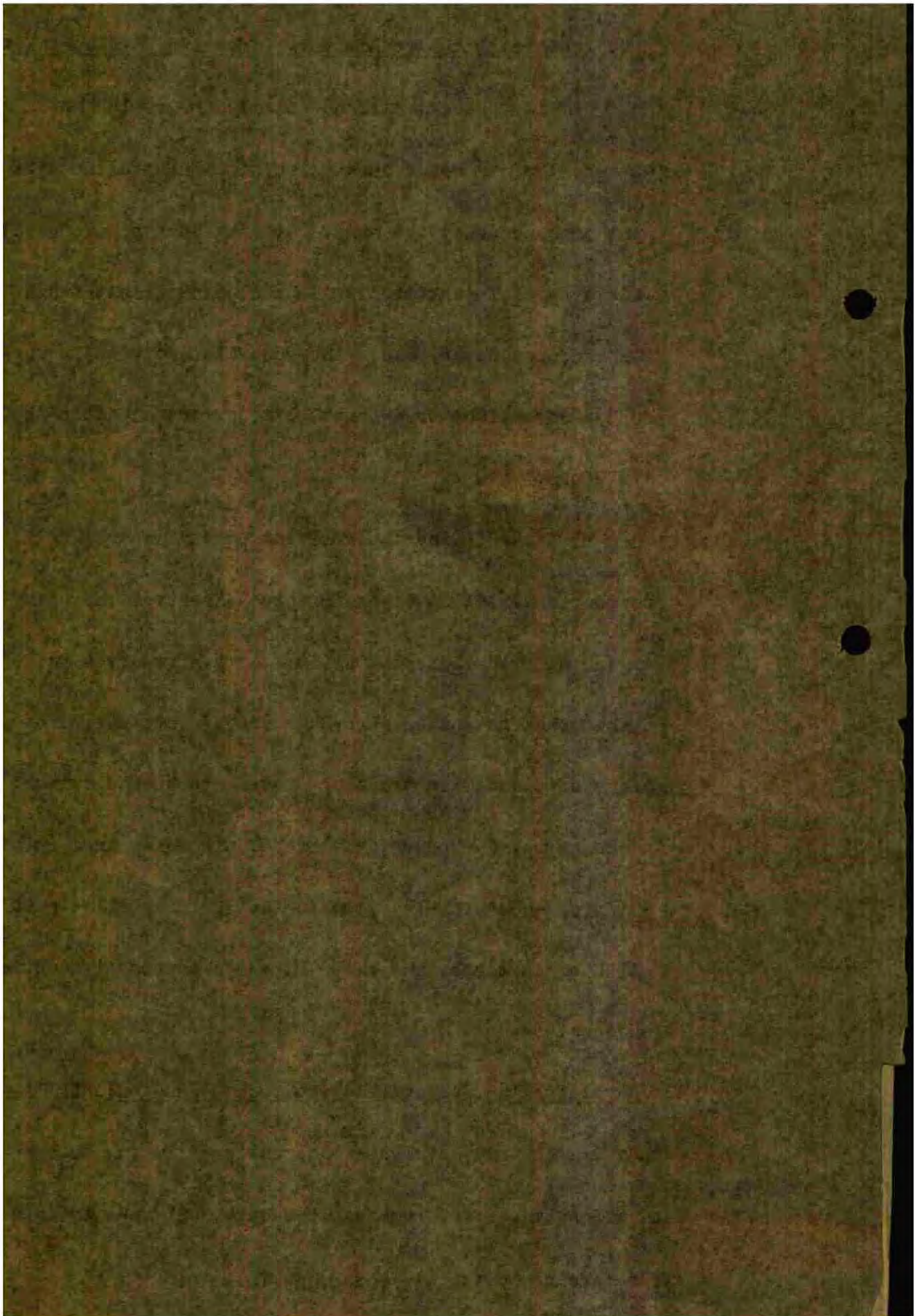
With its concentrated and firmly controlled mass attacks the Air Force here again facilitated the achievement of success by the Army. It (the German Air Force) made a special contribution in the quick breakthrough to the Seine River, where the enemy infantry and armored forces assembled for a counterattack were scattered by its bombs.

By interdicting the rail routes and destroying railway material it (the Air Force) deprived the enemy of the ~~NECESSARILY~~ possibility to move reserves and commit them in the breakthrough area. When the first signs of evacuation transport movements became evident at Le Havre, Cherbourg, and Brest, air units in a swift shift of emphasis also attacked the port installations, oil storage tanks, and ships at these points with obvious success.

3. Concerning the Main Offensive, from 9 June on only

events in the Army movements are mentioned during the main offensive, with, remarkably enough, only one incidental reference to the Air Force, as follows:







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.....again excellently supported by the Air force.

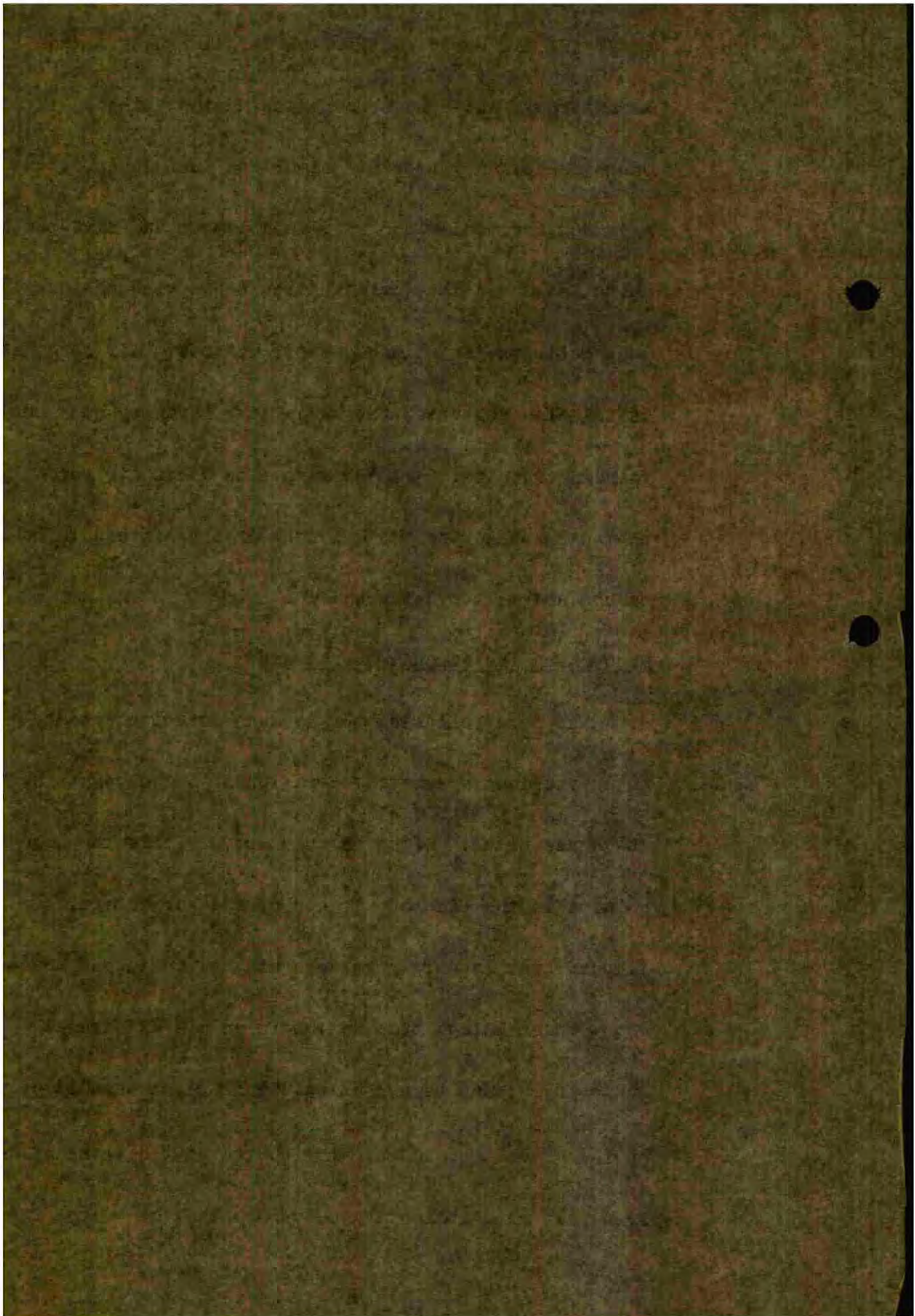
4. Concerning the Offensive by Army Group C.

In very close and exemplary cooperation with the Army, the Air Force contributed largely towards the breakthrough achieved through the Maginot line south of Saarbruecken and later at Colmar and Suelhausen. Whenever weather conditions permitted bomber and dive-bomber units attacked the fortification works with the heaviest bomb calibers and silenced their weapons. Air Force AAA units also supported the assaulting infantry with outstanding results. At the same time other Air Force elements supported the drive by armored forces to Basancou and to the Swiss border.

5. Concerning the Pursuit Operations:

The days following the 15 June were featured by an unprecedented pursuit operation from the coast to the Meuse River. After the capture of Paris the French columns in the line of advance of the German armies flooded back in a retrograde south and southwest movement, under attack time and again on all withdrawal routes by German bomber units. This close pursuit by on the ground and in the air frustrated the plans of the French to reestablish themselves behind the Loire River.





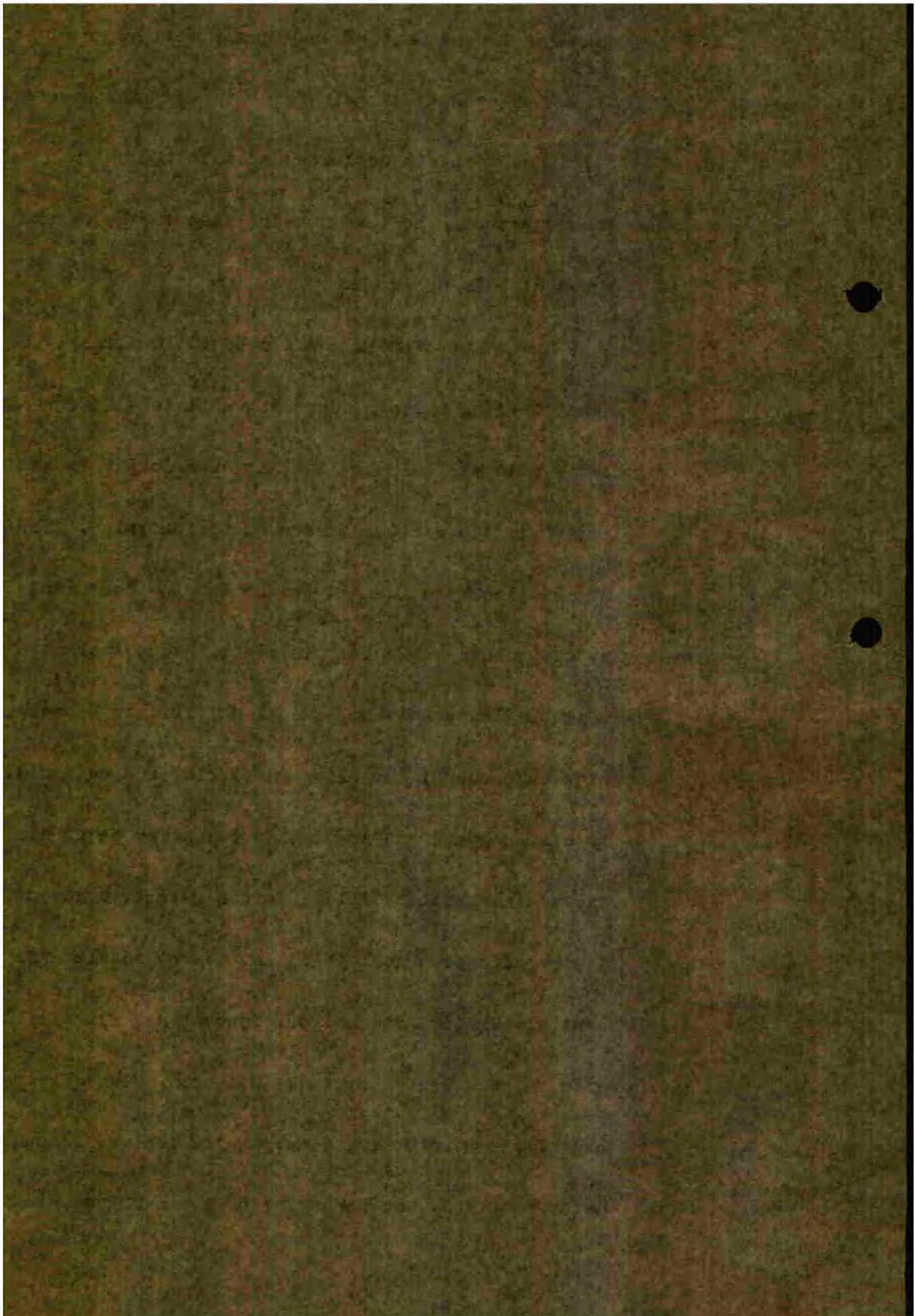


6. A Consolidated Survey of Air Force Operations.

The report by the Joint Military High Command (Oberkommando der Wehrmacht) on the first phase of the campaign in the West already commended the great contribution made by the Air Force towards the unusually quick and complete decisions achieved. What was said then applies in no less measure also to the second phase of this campaign.

Under the overall command of Field Marshal General Goering the Air Force was able to unreservedly throw into the balance the air superiority it had gained in the earlier phases of the campaign. The air battles were fought for the most part by the Second and Third Air Fleets under energetic and able leadership by General der Flieger Kesselring and General der Flieger Sperrle, respectively. Both in command and in combat action the major air and antiaircraft artillery forces gave evidence of their courageous and unflinching combat morale under Generals Grauert and Keller, General der Flakartillerie Weise, Generalleutnant Bogatsch, Generalleutnant Ritter von Grein, Generalmajor Coeler, Generalmajor Dossloch, and Generalmajor Freiherr von Richtofen.







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The Army in its frequently difficult and costly battles welcomed the self-sacrificing support from the Air Force with as much gratitude as enthusiasm.

7. Concerning the Strength Available to the Air Force:

If the former Allies seek the reasons in the numerical superiority of the German side, that is not consonant with the historical facts; the German air forces were admittedly considerably stronger in numbers than those of the Allies.....

8. Concerning Combat Morale in the German Air Force.

The exemplary personal efforts of all military commanders of the Army and the Air Force down to the lowest grades will remain in the Book of Fame for all times.

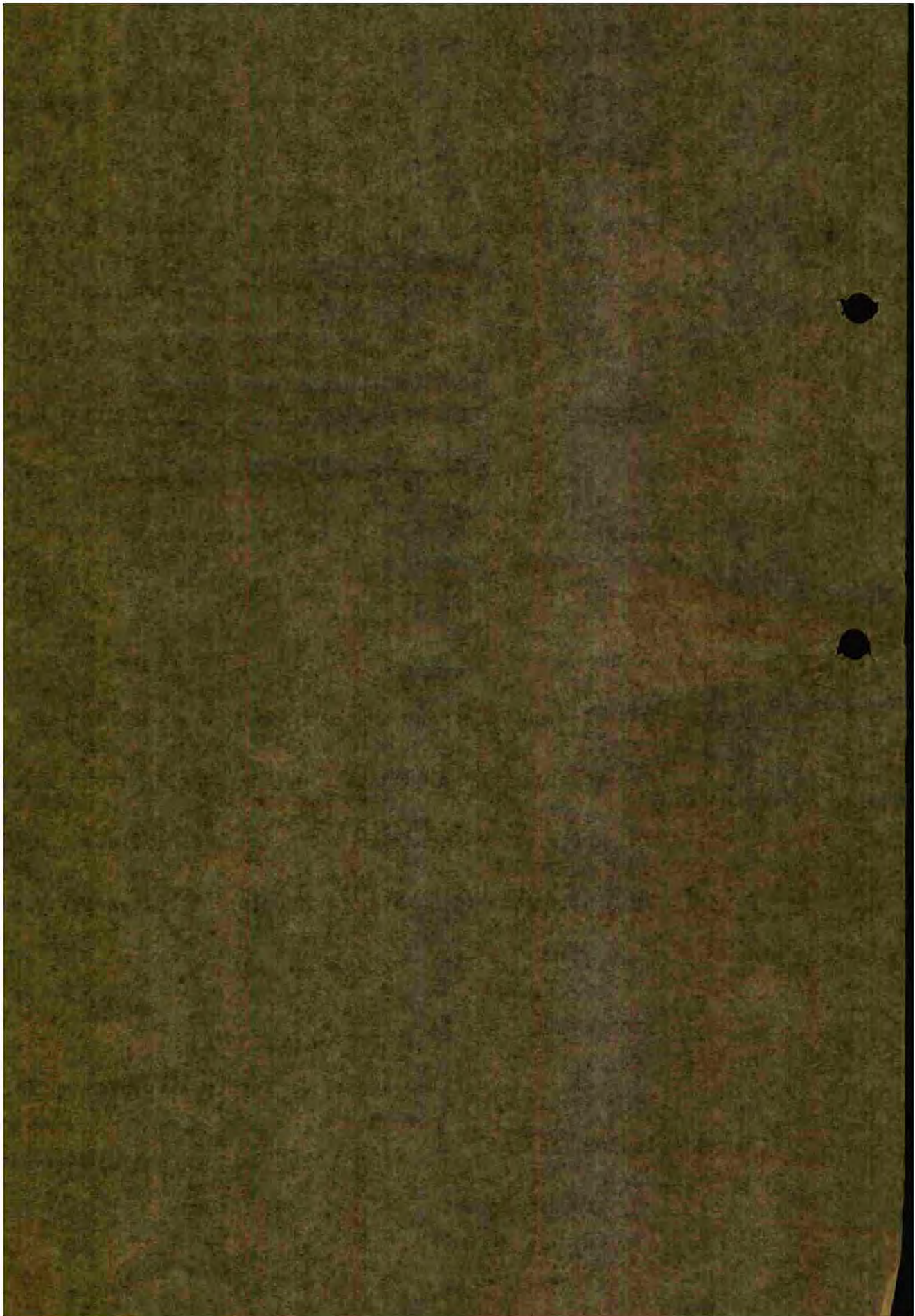
In the forefront in combat on the ground and at the point of their units in the air they led their troops and their wings forwards and boldly, flexibly and with initiative exploited every situation without hesitation and without waiting for orders.

9. Concerning Enemy Air Losses.

Since 4 June the enemy air forces suffered the following losses:

In air combat	383 aircraft
By AAA fire	<u>155</u> "
Forward	538







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Enemy aircraft losses--Continued

Carried Forward	538 aircraft
Destroyed on ground	239 "
Downed by AAA fire or in air combat (uncertain)	<u>15</u>
Total	792 aircraft

plus 26 barrage balloons and one anchored balloon.

One twin-engine fighter group shot down its 101st enemy plane by 14 June, and one single-engine fighter group its 50th enemy plane by 11 June.

10. Concerning Results achieved in attacks against Seaborne Targets:

Units of the German Air Force since 5 June have destroyed the following ships:

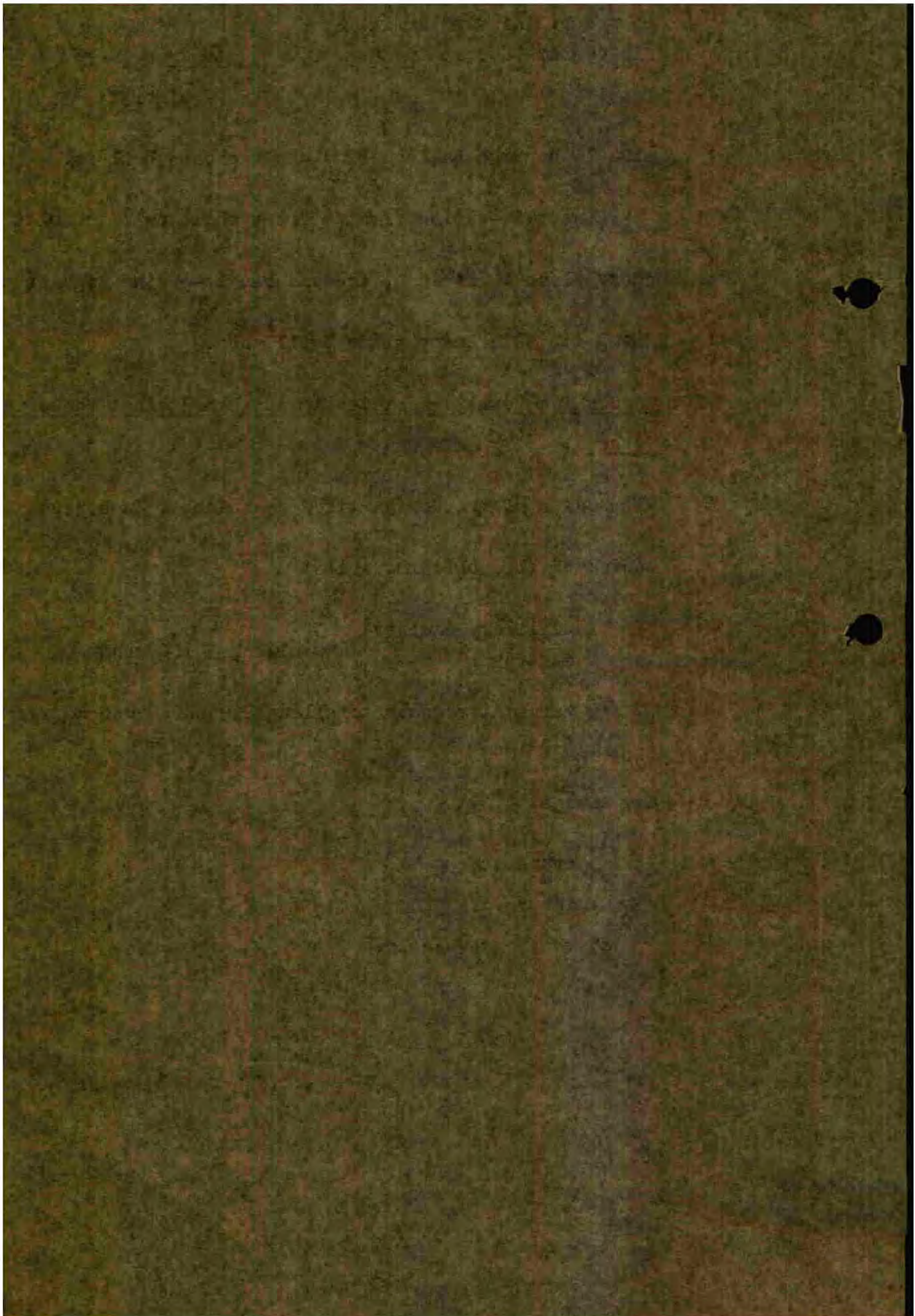
1 auxiliary cruiser	} totalling 5 100 tons
1 destroyer	

40 merchant vessels totalling 299 000 Gross Register tons,

and damaged

3 cruisers  
1 destroyer  
25 merchant vessels.







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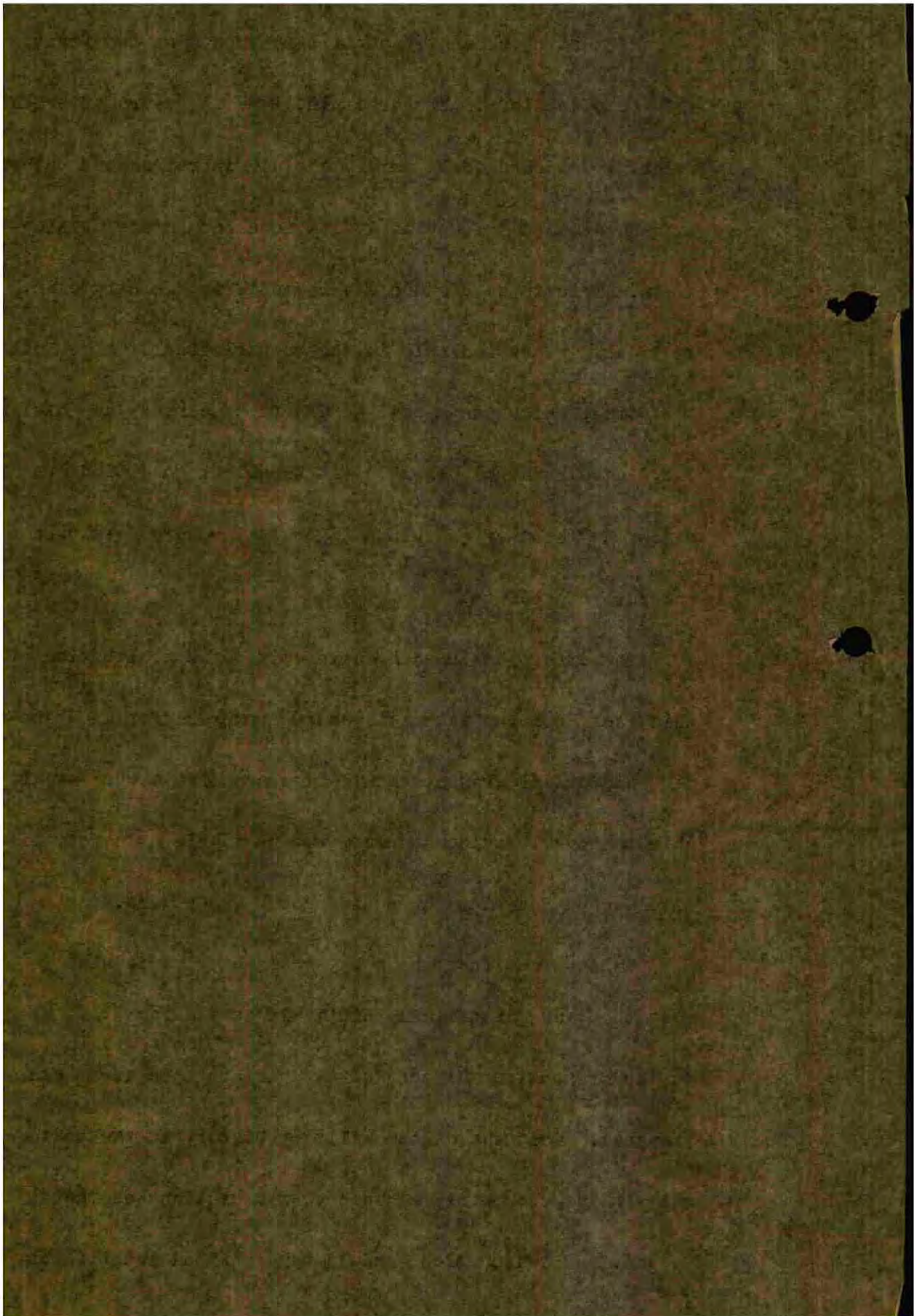
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EPILOGUE

This study on the commitments of the operational arm of the German Air Force in the 1940 campaign in the West is an effort to present the military events of the first air war of history. Prepared almost twenty years after the event, it appears to be merely a study in retrospect rather than an attempt to provide indications for future developments. This is so because developments in the strategic, tactical, and particularly in the technological fields, since that time, which can almost be described already as "historical," have rendered obsolete all ~~essential~~ conditions on which the theories and plans of that time were developed and put into effect.

The effort has been made in spite of a realization of this fact, because authentic source material for an objective historical presentation, which has always been available to cover previous periods, was available on a very limited scope covering the period under study here.

Quite apart from these external complications what made the task particularly difficult is the fact that up to the present no "History of Air Warfare" has even been prepared. What was called military history in the past has always been merely a history of operations on the ground. Such operations could be described intelligibly







and presented in maps. The maps prepared clearly showed success or failure of an operation.

New methods had to be devised for a presentation of air operations. In theory the solution seemed easy to find, insofar as genuine air operations, in the conduct of strategic air warfare, were involved. In actual fact, however, the employment of air power included all possible fields, from that of genuine air operations as such to that of the use of air power in local tactics as a substitute for artillery. Within this wide pattern emphasis in German air operations shifted steadily to cooperation with the Army.

One essential of the form of historical presentation resulting from this development was necessarily an effort to correlate the air and ground operations involved. The results of this effort are embodied in the present study, which necessarily is but an effort in that direction.

Apart from the form adopted, however, the whole meaning of this new method of research in military history could only be one of ascertaining what actually happened (Was es eigentlich gewesen ist).

Two methods have been used here to achieve this object: on the one hand an objective study of the historical events on the basis of the available source material; on the other hand the exploration of subjective recollections reflected







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in after-the-event appraisals by those who participated in the events at the time. Such a combined method of study naturally obscures the actual picture, but, after all, combinations of this type have often in the past resulted in the compilation of historical works.

This effort to "see things as they actually were" can only serve the purpose of creating a first basis for later historical research. Such future research, however, will be carried out without any regard for continuing technological progress, which appear to defeat all efforts to appraise the past.

Although all theories appear problematical in the field of the constantly changing forms of air warfare, certain elementary factors remain permanently valid, such as tactical planning, strategic thought, technological capability, and personal devotion. The problems of organization and improvisation also are independent of current problems.

From this viewpoint and in this sense, a study in retrospect will in spite of all continue to be of some importance.

Of importance are those who inherit the spirit.