

II./JG 77, managed to hold two Soviet air armies at bay at Voronezh for three months. In the Leningrad area in September 1942, VVS KBF, VVS Leningrad Front, and 14 VA lost their air superiority despite the fact that they enjoyed a two-fold numerical superiority. Due to the effective German fighter shield, the Soviet fighter pilots of 8 VA were almost completely unable to interfere even against the destruction of Stalingrad from the air on 23 August 1942. Shortly afterward, Stalingrad's skies became the scene where the famous Soviet stamina was actually broken due to this overwhelming superiority of the *Jagdwaaffe*.

Some of the numerical successes attained by German fighter pilots in the summer of 1942 were

absolutely unparalleled, surpassing even the astronomical achievements in the East during the previous summer. Prior to the German summer offensive on the Eastern Front in 1942, eleven *Luftwaaffe* fighter pilots had each surpassed the 100-victory mark; between July and October 1942, another eighteen pilots reached above a personal score of 100 victories, all on the Eastern Front. Moreover, *Geschwaderkommodore* JG 52 Major Gordon Gollob, became the first to achieve 150 victories in August 1942, and the next month, *Hauptmann* Hermann Graf of 9./JG 52 pushed the "limit" past 200. The important role that was played by the *Jagdwaaffe* is evident in the following *Luftwaaffe* statistics for the air war on the Eastern Front in the period July through November 1942:

Soviet Aircraft Losses

German Aircraft Losses*

Month	In Air Combat	By AAA	On the Ground	Total	In the Air	On the Ground	Total
July 1942	1,282	148	214	1,644	252	12	264
Aug 1942	2,256	593	119	2,968	269	40	309
Sept 1942	2,548	621	98	3,267	265	19	284
Oct 1942	892	150	32	1,074	106	14	120
Nov 1942	437	130	24	591	147	11	158
Totals	7,415	1,642	487	9,544	1,039	96	1,135

* Only aircraft totally destroyed or written off, and only due to hostile activity are included.

In the meantime, between 22 June 1942 and 18 November 1942, the Soviet air forces claimed to have destroyed 4,500 enemy aircraft.¹

During all of 1942, the *Jagdgeschwader* on the Eastern Front made the following victory claims:

<i>Jagdgeschwader</i> 3:	3,822 victories
<i>Jagdgeschwader</i> 5:	1,000 victories
<i>Jagdgeschwader</i> 51:	1,500 victories
<i>Jagdgeschwader</i> 52:	3,000 victories
<i>Jagdgeschwader</i> 53:	918 victories
<i>Jagdgeschwader</i> 54:	2,300 victories
<i>Jagdgeschwader</i> 77:	1,613 victories

CHAPTER 19: TRIUMPH AND DECLINE

Of course, a certain number of these victories were rather optimistic. According to *Luftwaffe* estimates, 17,313 Soviet aircraft were destroyed during 1942. The most commonly quoted modern Russian source regarding Red Army losses in World War II, *Grif Sekretnosti sniat*² gives the following loss figures for 1942:

Aircraft Category	Combat Losses	Losses to all Causes
Bombers	1,600	2,500
Ground-attack	1,800	2,600
Fighters	4,400	7,000
Miscellaneous	1,300	2,600
TOTALS	9,100	14,700

Even if the Soviet loss records include only aircraft totally destroyed (a large number of the damaged aircraft, particularly aircraft forced to belly land due to battle damage, must be regarded as "authentic" victory claims), it may be assumed that about half the German fighter pilots' victories on the Eastern Front in 1942 were optimistic. Nevertheless, at least 9,100 combat losses and 5,600 non-combat losses suffered by the VVS in 1942 must be regarded as very high. In return, the Soviet air forces claimed to have destroyed around 8,600 enemy aircraft during the period from 1 January 1942 through 18 November 1942³ which is a considerable exaggeration. Slightly above 2,500 German aircraft were lost due to hostile activity on the Eastern Front during the entire year of 1942.

Still, the *Jagdgeschwader* were also dealt some severe losses in combat with the VVS in 1942. Between June and November 1942, twenty German fighter aces each with 40 or more individual victories were lost on the Eastern Front, most of them in air combat. Three of them were "100-plus" aces – *Leutnant* Franz-Josef Beerenbrock (117 victories, PoW), *Oberleutnant* Max-Hellmuth Ostermann (102 victories, killed), and *Oberleutnant* Viktor Bauer (106 victories, severely injured); all three falling prey to Soviet fighter pilots. It is noteworthy that in August 1942, JG 51, the *Luftwaffe*'s most successful *Jagdgeschwader* by that time, suffered heavier losses than previously during the entire the war. And in the Far North, JG 5 lost its air superiority in the fall of 1942.

Taken as a whole, the Soviet aviation was much different in the summer and fall of 1942, compared to 1941 or even early 1942. The summer and fall of 1942 witnessed the breakthrough of the massive use of Il-2 *Shturmoviks*, which, from then on would increasingly characterize the air war on the Eastern Front. As has been seen, the relent-

less attacks by *Shturmoviks* constituted a growing problem for the German Army.

In early 1942 there were still only relatively few Il-2s in action, the German Summer offensive in 1942 was met by greater numbers of Il-2s. This is also reflected in the growing number of Il-2s claimed shot down by the Germans. Whereas only 5% to 6% of all Soviet aircraft claimed shot down by the Germans in January through June 1942 were ground-attack aircraft, this share rose to 14% in July 1942, 20% in August and 27% in September 1942.⁴ However, these German figures do not alone reflect an increase in the number of Il-2s that appeared over the front. It is natural that because this was a new aircraft often manned by inadequately trained pilots in new and inexperienced units, the losses in the *Shturmovik* units reached appalling levels during this first period. The loss rate in the *Shturmovik* units by this time generally oscillated between 10% and 20%.⁵

It is true that the gap between the accumulated experience among the *Luftwaffe* experts and the insufficiently trained Soviet novice pilots increased in 1942, but there also was a growing number of skillful Soviet fighter pilots, quite capable of challenging the German airmen. The two leading Soviet aces in 1942, 183 IAP's *Starshiy Leytenant* Mikhail Baranov with 21 personal victories, and VVS SF's *Podpolkovnik* Boris Safonov with 20 individual and six shared victories, both disappeared from front line service before the 1942 Summer battle had reached its climax; Baranov was shot down and severely injured in early August 1942, and Safonov went missing in late May 1942. But there were other able men to assume their places, such as *Mayor* Ivan Kleshchyov, *Mayor* Vasiliy Zaytsev, *Kapitan* Georgiy Kostylev, and *Leytenant* Pavel Grazhdaninov.

CHAPTER 19: TRIUMPH AND DECLINE

It is a fact that most German bomber missions on the Eastern Front in 1942 were carried out without encountering any fighter interception. Between 3 March 1942 and 31 December 1942, *Hauptmann* Hansgeorg Bätcher of I./KG 100 carried out 344 combat missions on the Eastern Front. Only on 25 of these occasions was his He 111 intercepted by Soviet fighters.⁸

Throughout the war on the Eastern Front, both the German and the Soviet bomber forces were used mainly for tactical purposes. Any true strategic operations that were aimed against the enemy's industrial potential, were seldom carried out. In the summer of 1942, the ADD dispatched a few small forces on night raids against Berlin, East Prussian towns, and against Warsaw. But due to the critical situation at the front, the bulk of the ADD missions had to be carried out in support of army operations.

Apart from the operations carried out by *Luftflotte 5* in the Far North and a few sporadic raids with limited forces, the German Air Force did not carry out any strategic operations in the true sense of the phrase on the

Eastern Front in 1942. This derived mainly from three factors: a) The *Luftwaffe's* predominant tactical doctrine from the onset of the war; b) The acute and almost constant need of close cooperation with the ground troops that were suffering from a severe shortage in artillery following the heavy materiel losses during the winter battle; and c) The erroneous assumption by senior commanders that the USSR was on the verge of collapse. As late as August 1942, *Luftwaffe Generalfeldmarschall* Erhard Milch expressed the view that "next spring Russia will no longer have any army. The Russians are finished."

This has led to the assumption that Germany could have won the war in the East if only its bombers had been dispatched against the key Soviet industries. Indeed, the increasing Soviet war production was a decisive factor to Germany's defeat in World War II. From a monthly average of 1,100 for the period January through March 1942 and 1,656 for the period April through June 1942, Soviet output of combat aircraft reached higher and higher figures during the latter half of 1942. The table below shows monthly Soviet combat aircraft output, compared with the monthly production figures from German aircraft industry.

Month	Soviet combat Aircraft Production	German Military Aircraft Production
July 1942	1,835	1,360
August 1942	1,835	1,345
Sept. 1942	2,286	1,310
Oct. 1942	2,462	1,444
Nov. 1942	2,268	1,302
Dec. 1942	2,464	1,548

Appendix I

Luftwaffe Order of Battle in the Southern Combat Zone ahead of Operation Blau

Luftflotte 4

Commander: Generaloberst Alexander Löhr

Fliegerkorps IV

Commander: General der Flieger Kurt Pflugbeil

Bomber units, close-support units, and fighter units

Unit	Aircraft	Total number of aircraft	Number of serviceable
Stab/KG 27 OTL Hans-Henning Freiherr von Beust	He 111 H	3	1
I/KG 27 Major Joachim Petzold	He 111 H	34	27
II/KG 27 Hptm Reinhard Günzel	He 111 H	27	25
III/KG 27 Major Erich Thiel	He 111 H	35	23
Stab/KG 51 Oberst Paul Koester	Ju 88 A	2	1
I/KG 51 Major Hans-Joachim Ritter	Ju 88 A	33	19
II/KG 51 Hptm Rudolf Henne	Ju 88 A and C	15	10
III/KG 51 Major Ernst Freiherr von Bibra	Ju 88 A	33	24
II/KG 54 Hptm Otto Köhnke	Ju 88 A	24	13
Stab/KG 55 OTL Benno Kosch	He 111 H	5	4
I/KG 55 Major Rudolf Kiel	He 111 H	29	20
II/KG 55 Major Ernst Kühl	He 111 H	32	25
III/KG 55 OTL Hermann Freiherr von dem Bongart	He 111 H	31	29
Stab/KG 76 Oberst Ernst Bormann	Ju 88 A	2	2
I/KG 76 Hptm Hanns Heise	Ju 88 A	27	18
II/KG 76 Hptm Volprecht Freiherr von und zu Eisenbach Riedesel	Ju 88 A	43 *	
III/KG 76 Hptm. Heinrich Schweikhardt	Ju 88 A and C	13	10
Stab/KG 77 OTL Hermann Schlüter	Ju 88 A	2	1
I/KG 77 Maj Ernst-Günther von Scheliha	Ju 88 A	30	11



Fliegerkorps VIII

Commander: Generaloberst Wolfram Freiherr von Richthofen

Bomber units, close-support units, and fighter units

	Aircraft Type	Total number of aircraft	Number of serviceable aircraft
Stab/KG 100 OTL Heinz von Holleben	He 111 H	1	1
I./KG 100 Major Paul Claas	He 111 H	38	28
II./StG 1 Hptm Johann Zemsky	Ju 87 B, D, R	50	44
Stab/StG 2 Major Paul-Werner Hozzel	Ju 87 D, Bf 110 E, Fw 189 A	14*	Data missing
I./StG 2 Hptm Bruno Dilley	Ju 87 D	34*	Data missing
II./StG 2 Hptm Dr Ernst Kupfer	Ju 87 D	39*	Data missing
III./StG 2 Hptm Gustav Pressler	Ju 87 D	31	28
Stab/StG 77 Oberst Clemens Graf von Schönborn	Ju 87 B and R, Bf 110 E	8	5
I./StG 77 Hptm Helmut Bruck	Ju 87 B, R, and D	37	24
II./StG 77 Major Kurt Huhn	Ju 87 B and R	32	21
III./StG 77 Hptm Helmut Bode	Ju 87 B and R	34	21
Stab/SchG 1 OTL Hubertus Hitschhold	Bf 109 E-7	4	4
I./SchG 1 Major Alfred Druschel	Bf 109 E-7	40	38
II./SchG 1 Hptm Paul-Friedrich Darjes	Hs 129 B, Hs 123 A-1	60	49
Stab/ZG 1 Major Ulrich Diesing	Bf 110 E and F	4	
I./ZG 1 Hptm Wolfgang Schenck	Bf 110 D, E and F	9	30
II./ZG 1 Major Günther Tonne	Bf 110 D, E and F	39	26
III./ZG 1 Major Roland Bohrt	Bf 109 E-7	24	17
Stab/ZG 2 OTL Ralph von Rettberg	Bf 110 E	4	4

APPENDICES

I./ZG 2	Bf 110 C,D,and E	34	29
II./ZG 2 Major Gerhard Weyert	Bf 110 C, D, and E	36	30
III./ZG 2 Hptm Wilhelm Hachfeld	Bf 109 E-7	28	23
Stab/JG 3 OTL Günther Lützow	Bf 109 F	4	3
I./JG 3 Hptm Georg Michalek	Bf 109 F	19	18
II./JG 3 Hptm Kurt Brändle	Bf 109 F	34	27
III./JG 3 Major Karl-Heinz Greisert	Bf 109 F	35	24
Stab/JG 52 OTL Herbert Ihlefeld	Bf 109 F	2	2
I./JG 52 Hptm Helmut Bennemann	Bf 109 F	31	22
II./JG 52 Hptm Johannes Steinhoff	Bf 109 F	27	24
III./JG 52 Hptm Hubertus von Bonin	Bf 109 F	26	20
15./JG 52 Potpukovnik Franjo Dzal	Bf 109 E	12	3
I./JG 53 Major Herbert Kaminski	Bf 109 F	35	33
Stab/JG 77 Major Gordon Gollob	Bf 109 F	6	4
II./JG 77 Hptm Anton Mader	Bf 109 F	34	19

Fliegerführer Süd Commander: Oberst Wolfgang von Wild

		Total number of aircraft	Number of serviceable aircraft
III./LG 1 - Hptm. Hermann Hogeback	Ju 88 A	33	18
II./KG 26 - Major Horst Beyling	He 111 H	31	13
Stab/SAGr 125 - OTL Gerhard Kolbe	He 114, Ar 196	3	2
3./SAGr 125	BV 138	8	4
III./JG 77 Hptm Kurt Ubben	Bf 109 F	36	12

Tactical reconnaissance units in Luftflotte 4

Unit	Aircraft	Total number of aircraft	Number of serviceable aircraft
5.(H)/11 / NAGr 1	Fw 189	9	9
3.(H)/31 / NAGr 1	Bf 110	9	5
3.(H)/11 / NAGr 3	Bf 110	10	7
3.(H)/14 / NAGr 3	Fw 189	9	6
6.(H)/13 / NAGr 4	Fw 189	8	8
2.(H)/41 / NAGr 4	Fw 189	9	9
1.(H)/10 / NAGr 7	Fw 189	9	6
4.(H)/10 / NAGr 7	Fw 189, Hs 126	11	4
3.(H)/13 / NAGr 8	Hs 126	20	11
4.(H)/31 / NAGr 8	Fw 189	11	7
1.(H)/21 / NAGr 9	Fw 189	9	9
7.(H)/32 / NAGr 9	Fw 189	7	4
2.(H)/31 / NAGr 10	Fw 189	9	5
5.(H)/32 / NAGr 10	Hs 126	12	9
7.(H)/LG 2 / NAGr 12	Bf 110	8	Data missing
6.(H)/41 / NAGr 12	Fw 189	9	8
2.(H)/32 / NAGr 14	Fw 189	7	7
5.(H)/41 / NAGr 14	Fw 189	8	8
3.(H)/12 / NAGr 16	Fw 189	7	6
5.(H)/12 / NAGr 16	Fw 189	6	6
4.(H)/13	Hs 126	7	7

Strategic Reconnaissance Units in Luftflotte 4

Unit	Aircraft	Total number of aircraft	Number of serviceable aircraft
2.(F)/ObdL	Ju 88 D	10	2
1./Nacht-aufklärungsstaffel 1	Do 17	14	7
3.(F)/10	Ju 88 D	10	6
2.(F)/22	Ju 88 D	10	6
2.(F)/11	Do 17 Z, Fw 189 A	19	12
3.(F)/121	Ju 88 D	14	7
4.(F)/122	Ju 88 D	10	5

Note: Aircraft strength figures refer to reports on June 20, 1942. Except * = Ju

Appendix II

VVS Order of Battle in the Southern Combat Zone, 28 June 1942

Bryansk Front

Army aviation:

Third Army - 876 OSAP Aircraft: U-2
 Thirteenth Army - 877 OSAP Aircraft: U-2
 Fortieth Army - 878 OSAP Aircraft: U-2
 Forty-eighth Army - 879 OSAP Aircraft: U-2

2 VA:

Commander: General-Mayor Stepan Krasovskiy

Diviziya	Aircraft	Number of service-able a/c	Number of non-serv-iceable a/c	Total no of aircraft	Base area
205 IAD Commander: Podpolkovnik Yevgeniy Savitskiy	LaGG-3 Yak-1 Il-2	13 3 14	4 5 4	17 8 18	Chernovo, Livny
207 IAD Commander: Polkovnik Mikhail Machin	LaGG-3 Yak-1 U-2	18 15 15	9 2 1	27 17 16	Plavsk, Belev
208 NBAD Commander: Podpolkovnik Feodosiy Kotlyar	Su-2 SB R-5 U-2 8	8 8 36 4	20 0 7 0	28 8 43 4	Plavsk, Yelets, Krasnaya Zarya, Kichen'
223 BBAD Commander: Podpolkovnik Leonid Yuzeyev	Pe-2	46	22	68	Yelets, Zadonsk, Michurinsk
225 ShAD Commander: Polkovnik Aleksandr Osadchiy	Il-2	27	13	40	Yefremov
227 ShAD Commander: Polkovnik Andrey Lozhechnikov	Il-2	39	11	50	Volovo
244 BAD Commander: General-Mayor Leonid Gorbatshevich 45 BAP 449 BAP 861 BAP 153 BAP	Douglas Boston Airacobra	60 40	0 0	60 40	Lipetsk, Voronezh
266 IAD Commander: Polkovnik Aleksandr Osadchiy	LaGG-3 Yak-1	4 13	1 14	5 27	Staryy Oskol
267 ShAD Commander: Polkovnik Boris Pleshivtsev	Il-2	11	16	27	Kastornoye, Zemlyansk
Totals		374	129	503	

Southwestern Front

Army aviation:

Ninth Army - 633 SAP
Twenty-first Army - 23 SAP
Twenty-eighth Army - 655 SAP
Thirty-eighth Army - 282 SAP

Frontal aviation:

164 IAP
929 IAP - Yak-1
826 SHAP - Il-2

8 VA:

Commander: General-Mayor Timofey Khryukin

206 IAD

Commander: Polkovnik Vladimir Sryvkin

Staff base: Urazov

31 IAP - LaGG-3
427 IAP - Yak-1
515 IAP - Yak-1
876 IAP - Yak-1

220 IAD

Commander: General-Mayor Aleksandr Borman

Staff base: Pokrovskoye

2 IAP - LaGG-3
248 IAP - Yak-1
296 IAP - Yak-1
9 GIAP - Yak-1

235 IAD

Commander: Podpolkovnik Ivan Podgornyy

Staff base: Novyy Oskol

46 IAP - Hurricane
180 IAP - Hurricane
191 IAP - Hurricane
436 IAP - Hurricane

268 IAD

Commander: Podpolkovnik Andrey Ryazanov

Staff base: Viktoropol'

273 IAP - Yak-1
512 IAP - LaGG-3
875 IAP - Yak-1

269 IAD

Commander: Polkovnik Il'ya Laryushkin

6 IAP - Yak-1
148 IAP - Yak-1
183 IAP? - Yak-1
254 IAP - LaGG-3
864 IAP? - LaGG-3

226 ShAD

Commander: Podpolkovnik Fyodor Bodrikhin

504 ShAP - Il-2
505 ShAP - Il-2

228 ShAD

Commander: Polkovnik Vasilii Stepichev

Staff base: Ilovskoye

211 ShAP- Il-2
285 ShAP- Il-2
431 ShAP- Il-2

221 BAD

Commander: Polkovnik Ivan Antoshkin

Staff base: Mitrofanovka

57 BAP - Douglas Boston
745 BAP- Douglas Boston
794 BAP- Douglas Boston

270 BAD

Commander: Polkovnik Aleksey Yegorov

Staff base: Lantratovka

52 BAP - Su-2
94 BAP - Pe-2
135 BAP - Su-2
826 BAP - Su-2

271 NBAD

Commander: Polkovnik Mikhail Borisenko

10 BAP - SB, Il-4, Pe-2

626 BAP - R-5

272 NBAD

Commander: Polkovnik Pavel Kuznetsov

596 NBAP - U-2
709 NBAP - U-2
714 NBAP
434 IAP

Commander: Mayor Ivan Kleshchyov

Aircraft: Yak-1

13 BAP - Pe-2

8 ORAP

Southern Front

Army Aviation:

Eighteenth Army - 718 SAP
Thirty-seventh Army - 446 SAP - U-2
Fifty-sixth Army - 750 SAP - U-2

4 VA:

Commander: General-Mayor Konstantin Vershinin

216 IAD

Commander: General-Mayor Vladimir Shevchenko

16 GIAP - Yak-1 and MiG-3

45 IAP - Yak-1

88 IAP - I-16

217 IAD

Commander: Polkovnik Dmitriy Galunov

40 IAP - I-16

131 IAP - LaGG-3

862 IAP - LaGG-3

230 ShAD

Commander: Podpolkovnik Semyon Get'man

Staff - U-2

7 GShAP - Il-2

590 ShAP - I-15bis, I-153

805 ShAP - Il-2

192 IAP - LaGG-3

218 NBAD

Commander: Polkovnik Dmitriy Popov

219 BAD

Commander: Polkovnik Ivan Batygin

8 GBAP - Pe-2

288 BAP - Su-2

366 BAP - SB

647 SAP**762 SAP**

889 SAP - U-2

North Caucasus Front:**Army Aviation:**

Forty-seventh Army - 931 SAP

Fifty-first Army - 932 SAP

Frontal aviation:

653 IAP - Yak-1

5 VA:

Commander: General-Mayor Sergey Goryunov

236 IAD

Commander: General-Mayor Ivan Klimov

237 IAD

Commander: General-Mayor Ivan Yeryomenko

265 IAD

Commander: Podpolkovnik Aleksey Minayev

68 IAP

483 IAP

805 IAP - LaGG-3

238 ShAD

Commander: General-Mayor Vladimir Naneyshvili

132 BAD

Commander: Polkovnik Afanasiy Karavatskiy

763 LBAP - U-2**742 ORAP - Pe-2****Transcaucasus Front****Frontal aviation:****84 IAP**

Commander: Mayor Yakov Antonov

Aircraft: I-153

790 IAP**862 IAP****863 IAP****926 IAP - LaGG-3****927 IAP****859 BAP****870 BAP****145 RAE****149 RAE****3 KAE****Other commands****PVO of Territory of Country****Southwestern Front:****101 IAD/PVO:**

Commander: General-Mayor Ivan Yevseyev

487 IAP - Yak-1

573 IAP - LaGG-3, MiG-3

826 IAP - Yak-1

Southern Front:**105 IAD/PVO:**

Commander: Polkovnik Leonid Rybkin

182 IAP

234 IAP

572 IAP

North-Caucasus Front:**268 IAP****Military Districts****North Caucasus Military District:****Krasnodar Diviziya Region of PVO:**

628 IAP - I-16

Grozny Diviziya Region of PVO:

738 IAP - I-16

Stalingrad Military District:**Stalingrad Corps Region of PVO:****102 IAD/PVO:**

Commander: Podpolkovnik Ivan Krasnoyurchenko

439 IAP - MiG-3

629 IAP - I-16

651 IAP

652 IAP

788 IAP

VVS ChF

Commander: General-Mayor Vladimir Yermachenkov

62 IABr	Polkovnik Aleksey Dushin	
3 IAP	Podpolkovnik Vasiliy Melekhov	I-16?
7 IAP	Podpolkovnik Aleksey Dushin	MiG-3, Yak-1, LaGG-3, I-15
32 IAP		LaGG-3
62 IAP	Mayor V.I. Vasiliyev	I-16, I-153
63 BABr	Polkovnik Georgiy Khatiashvili?	
5 GvMTAP		DB-3
40 BAP		Pe-2, SB
Sevastopol Group of VVS ChF (3 OSAG)	Polkovnik Dzyuba	
6 GIAP	Podpolkovnik Konstantin Yumashev	Yak-1
9 IAP	Mayor Konstantin Malinov	I-16, I-153
18 ShAP	Polkovnik A.M. Morozov	Il-2
23 ShAP	Kapitan Mikhail Akhalkin	Il-2
46 ShAP		UT-1b
27 RAE		Pe-2, Pe-3, DB-3
87 IAE		I-16, I-15
14 OShAE		Il-2
119 ORAP	Major Viktor Kanarev	MBR-2
82 ORAE		MBR-2
80 ORAE		GST, MBR-2
60 ORAE		MBR-2
8 UAE		Various aircraft types
18 TrO		TB-3
Special Black Sea Detachment		PS-84, PR-5, P-5, S-2, SP, U-2
Independent Reconnaissance Flight		MBR-2, KOR
Liason Flight of VVS ChF Staff		UT-2, UT-1, U-2

ADD forces:

Commander: General-Leytenant Aleksandr Golovanov

(Note: Below, all ADD units in service on 28 June 1942 are listed, and they were operationally divided along the entire front.)

3 AD DD

Commander: Polkovnik Nikolay

Novodranov

4 AP DD - Il-4

748 AP DD- Il-4

17 AD DD

Commander: General-Mayor Yevgeniy

Loginov

750 AP DD- Il-4

751 AP DD- Il-4

24 AD DD

Commander: General-Mayor Aleksey

Duboshin

749 AP DD- Il-4

752 AP DD- Il-4

36 AD DD

Commander: Polkovnik Vitaliy Dryanin

342 AP DD- Il-4

455 AP DD- Il-4

45 AD DD

Commander: Polkovnik Viktorin Lebedev

746 AP DD - Pe-8

890 AP DD - Pe-8

50 AD DD

Commander: Polkovnik Sergey Lebedev

21 AP DD- Il-4

81 AP DD- Il-4

943 IAP - MiG-3, I-16

53 AD DD

Commander: Polkovnik Ivan Georgiyev

1 AP DD - Pe-8

3 AP DD - Pe-8

7 AP DD - Pe-8

62 AD DD

Commander: Polkovnik Georgiy Tupikov

14 AP DD - PS-84

250 AP DD - PS-84

325 AP DD - TB-3

113 AD DD

Commander: Polkovnik Nikolay Ocheretnyy

836 AP DD- Il-4

840 AP DD- Il-4

1 TAD DD

Commander: Polkovnik Viktor Nestertsev

101 AP DD - PS-84

102 AP DD - PS-84

747 OTBAP

Commander: Podpolkovnik A. G. Gusev

Aircraft: Yer-2

2 ORAP GK KA;

4 OAP Dal'nikh Razvedchikov;

40 AP Razvedchikov GK KA

Appendix III Luftflotte 4 Order of Battle, 20 August 1942

Units		Aircraft		Bombers					
Larger Unit	Subordinated Unit	Aircraft type	Available	Serviceable					
<i>Nahaufklärer</i>					Fliegerkorps VIII	III./KG 4	He 111	24*	N.d.
NAGr 1	5.(H)/11	Fw 189 A	11	5	Fliegerkorps VIII	4. and 5./KG 26	He 111	22	4
NAGr 1	3.(H)/31	Bf 110	4	1	Gefechtsverband Nord	Stab/KG 27	He 111	1	1
NAGr 3	3.(H)/11	Bf 110	9	5	Gefechtsverband Nord	I./KG 27	He 111	31	14
NAGr 3	3.(H)/14	Fw 189 A	10	8	Fliegerkorps VIII	II./KG 27	He 111	18	13
NAGr 4	Stab/NAGr 4	Hs 126	1	1	Gefechtsverband Nord	III./KG 27	He 111	31	16
NAGr 4	6.(H)/13	Fw 189 A	8	5	Fliegerkorps VIII	Stab/KG 51	Ju 88	1	0
NAGr 4	2.(H)/41	Fw 189 A	7	6	Fliegerkorps VIII	I./KG 51	Ju 88	24	16
NAGr 7	Stab/NAGr 7	Hs 126	1	1	Fliegerkorps VIII	III./KG 51	Ju 88	28	11
NAGr 7	1.(H)/10	Fw 189 A	6	3	Fliegerkorps IV	Stab/KG 55	He 111	4	3
NAGr 7	4.(H)/10	Fw 189 A/Hs 126	9	3	Fliegerkorps VIII	II./KG 55	He 111	25	15
NAGr 8	3.(H)/13	Hs 126	13	10	Fliegerkorps VIII	III./KG 55	He 111	25	16
NAGr 8	4.(H)/31	FW 189 A	10	8	Fliegerkorps VIII	Stab/KG 76	Ju 88	3	3
NAGr 9	Stab/NAGr 9	Hs 126	2	2	Fliegerkorps VIII	II./KG 76	Ju 88	34	26
NAGr 9	1.(H)/21	Fw 189 A	9	8	Fliegerkorps VIII	III./KG 76	Ju 88	33	14
NAGr 9	7.(H)/32	Fw 189 A	9	7	Fliegerkorps IV	Stab/KG 100	He 111	1	1
NAGr 10	2.(H)/10	Fw 189 A	9	9	Fliegerkorps VIII	I./KG 100	He 111	29	21
NAGr 10	2.(H)/31	Fw 189 A	8	7	<i>Stukas and Schlachtflieger</i>				
NAGr 10	5.(H)/32	Hs 126	10	8	Fliegerkorps VIII	Part of II./StG 1	Ju 87 B, D, and R	26**	13**
NAGr 12	Stab/NAGr 12	Hs 126	1	1	Fliegerkorps VIII	Stab/StG 2	Bf 110, Ju 87, Fw 189	13	6
NAGr 12	7.(H) /LG 2	Bf 110	8	6	Fliegerkorps VIII	I./StG 2	Ju 87 D	27	14
NAGr 12	6.(H)/41	Fw 189 A	9	9	Fliegerkorps VIII	II./StG 2	Ju 87 D	26	13
NAGr 14	2.(H)/32	Fw 189 A	5	5	Fliegerkorps IV	ErgStaffel/StG 2	Ju 87 B	N.d.	N.d.
NAGr 14	5.(H)/41	Fw 189 A	6	5	Fliegerkorps VIII	I./StG 77	Ju 87 D and R	30	22
NAGr 16	3.(H)/12	Fw 189 A	5	4	Fliegerkorps IV	II./StG 77	Ju 87 B, D, and R	11*	N.d.
NAGr 16	5.(H)/12	Fw 189 A	7	3	Fliegerkorps VIII	III./StG 77	Ju 87	27	13
<i>Fernaufklärer</i>					Fliegerkorps VIII	Stab/SchG 1	Bf 109 E	7	4
FAGr 4	2.(F)/AufklObdL	Ju 88, Do 215	11	9	Fliegerkorps VIII	I./SchG 1	Bf 109 E	47	23
FAGr 4	3.(F)/10	Ju 88	7	4	Fliegerkorps VIII	II./SchG 1	Hs 123, Hs 129	33	21
FAGr 4	2.(F)/11	Do 17	11	7	Fliegerkorps VIII	III./SchG 1	Bf 109 E	N.d.	N.d.
FAGr 4	1. NachtaufklStaffel	Do 17, He 111	21	8	<i>Maritime aviation</i>				
Luftflotte 4	2.(F)/22	Ju 88	8	3	Fliegerkorps IV	Stab/SAGr 125	He 114, Ar 196	3	2
Luftflotte 4	3.(F)/121	Ju 88	11	5	Fliegerkorps IV	3./SAGr 125	BV 138	16	6
Luftflotte 4	4.(F)/122	Ju 88	9	6	<i>Luftflotte 4 Total Aircraft Strength on 20 August 1942</i>				
<i>Fighters</i>					Total number of				
Fliegerkorps VIII	Stab/JG 3	Bf 109 F-4	4	3	Type of aviation	available aircraft	Serviceable aircraft		
Fliegerkorps VIII	I./JG 3	Bf 109 F-4 trop	31	17	Nahaufklärer	177	130		
Fliegerkorps VIII	II./JG 3	Bf 109 F-4 trop and G-2	23	8	Fernaufklärer	78	42		
Fliegerkorps VIII	III./JG 3	Bf 109 F-4	21	12	Fighters	254	162		
Fliegerkorps IV	Stab/JG 52	Bf 109 G-2	4	3	Zerstörer	100	48		
Fliegerkorps VIII	II./JG 52	Bf 109 G-2	47	34	Schlachtflieger	87+	48+		
Fliegerkorps IV & VIII	III./JG 52	Bf 109 G-2	43	28	Bombers	334	174		
Fliegerkorps IV	15.(Kroat.)/JG 52	Bf 109 G-2	11	10	Stukas	160+	81+		
Fliegerkorps VIII	I./JG 53	Bf 109 G-2	35	22	Maritime aircraft	19	8		
Gefechtsverband Nord	II./JG 77	Bf 109 F-4	35	25	Grand totals	1209+	693+		
<i>Zerstörer</i>									
Fliegerkorps IV	Stab/ZG 1	Bf 110	2	1	* Figures from 31 August 1942.				
Fliegerkorps VIII	I./ZG 1	Bf 110	46	25	** Figures for the whole Gruppe.				
Fliegerkorps IV	II./ZG 1	Bf 110	52	22	N.d. = No data				

Appendix IV
Order of Battle for 8 VA and 102 IAD/PVO in Early September 1942

a) Order of Battle for 8VA on 1 September 1942
8 VA units on 1 September 1942

DIVIZIYA	POLK	AIRFIELD	AIRCRAFT
268 IAD			
Headquarters at Leninsk	9 GIAP	Zaplavnoye	LaGG-3
	11 IAP	Zaplavnoye	Yak-1
	126 IAP	Leninsk	P-40
	273 IAP	Sr.Akhtuba	Yak-1
	296 IAP	Leninsk	Yak-1, Yak-7B
	515 IAP	Leninsk	Yak-1
220 IAD			
Headquarters at Semyonovka	43 IAP	State farm	
	237 IAP	Stalingradskiy	Yak-1
	512 IAP	Semyonovka	Yak-1
	867 IAP	State farm	
		Stalingradskiy	Yak-1
269 IAD			
Headquarters at Zhitkur	6 IAP	Zhitkur	Yak-1, Yak-7B
	143 IAP	Zhitkur	Yak-1
	148 IAP	Zhitkur	Yak-7B
	864 IAP	Zhitkur	LaGG-3
287 IAD			
Headquarters at Verkhnyaya Akhtuba	27 IAP	Verkhnyaya Akhtuba	La-5
	240 IAP	Verkhnyaya Akhtuba	La-5
	297 IAP	Verkhnyaya Akhtuba	La-5
	437 IAP	Verkhnyaya Akhtuba	La-5
288 IAD			
Headquarters at Kirovo	4 IAP	Demodov	Yak-7B
	12 IAP	Demodov	Yak-7B
	287 IAP	Demodov	Yak-7B
	900 IAP	Kirovo	Yak-7B
206 ShAD			
Headquarters at Leninsk	621 ShAP	Zaplavnoye	Il-2
	686 ShAP	Leninsk	Il-2
	766 ShAP	Leninsk	Il-2
	811 ShAP	Solodovka	Il-2
226 ShAD			
Headquarters at Zhitkur	504 ShAP	Zhitkur	Il-2
	505 ShAP	Zhitkur	Il-2
228 ShAD			
Headquarters at State farm Stalingradskiy	618 ShAP	State farm	
		Stalingradskiy	Il-2
	688 ShAP	State farm	
		Stalingradskiy	Il-2
	694 ShAP	Novo-Giorgiyevka	Il-2
	783 ShAP	Semyonovka	Il-2
270 BAD			
Headquarters at Uchkhoz	52 BAP	Uchkhoz	Su-2
	86 BAP	Soldatskoye-Stepnoye	Pe-2
	135 BAP	Uchkhoz	Su-2
	140 BAP	Uchkhoz	Pe-2
	275 BAP	Soldatskoye-Stepnoye	Pe-2
	284 BAP	Rakhinskiy	Pe-2
	797 BAP	Soldatskoye-Stepnoye	Pe-2

DIVIZIYA	POLK	AIRFIELD	AIRCRAFT
271 NBAD			
Headquarters at Yel'ton	10 GBAP	Yel'ton	SB
	623 NBAP	Salkhin	R-5
	818 DBAP	Salkhin	DB-3
272 NBAD			
Headquarters at Novo-Nikol'skoye	596 NBAP	Novo-Nikol'skoye	U-2
	621 NBAP	Novo-Nikol'skoye	U-2
	709 NBAP	Lugo Vodyanoye	U-2
	765 NBAP	Lugo Vodyanoye	U-2
(Independent units)			
	8 ORAP	State farm	
		Stalingradskiy	Pe-2
	109 GAP	Rudnya	—
	40 OAES	Rudnya	U-2

8 VA Aircraft strength on 1 September 1942

Type of aviation	Serviceable aircraft	Not serviceable aircraft
Fighters	57	138
Day bombers	37	49
Night bombers	51	22
Shturmoviks	32	77
Reconnaissance	2	7
Liaison	13	9
Grand totals	192	302

b) 102 IAD/PVO Order of Battle on 5 September 1942

Polk	Airbase	Aircraft type	Aircraft Servicable	Aircraft Not serviceable	Pilots on Hand
439 IAP	Sr.Akhtuba	MiG-3	3	19	6
572 IAP	MTF	-	-	-	24
629 IAP	MTF	I-16	6	9	36
651 IAP	Sr.Akhtuba	Yak-1	-	4	25
		I-15	2	-	
		Hurricane	2	1	
652 IAP	Astrakhan	I-16	2	-	12
		I-15	6	-	
731 IAP	MTF	P-40 Kittyhawk	10	5	17
788 IAP	MTF	Yak-1	2	21	23
926 IAP	Sr.Akhtuba	I-153	2	4	20
	MTF	I-153	-	4	
Grand totals			35	67	163

Notes for chart on page 239:
 "Transport and miscellaneous" includes all transport aircraft combat losses on the Eastern Front, and all other Ju 52 combat losses on the Eastern Front. Liaison aircraft are not included.
 "(H) Aufkl" = *Heeresaufklärungs* units.
 "(F) Aufkl" = *Fernaufklärungs* units and nocturnal reconnaissance units.
 "K406, 906" = *Küstenfliegergruppe* 406 and *Küstenfliegergruppe* 906.
 The *Luftwaffe* standard for the classification of damage to aircraft was divided as follows:
 Below 10%: Minor damage that can be repaired by the aircraft's ground crew.
 10% - 24%: Medium damage that can be repaired at small unit repair works.
 25% - 39%: Damage that requires a major overhaul at the unit.
 40% - 44%: Damage to that requires whole replacements of landing gears or other systems, such as hydraulic systems.
 45% - 59%: Severely damaged aircraft where large parts of the aircraft needed to be replaced.
 60% - 80%: Write-off category. Certain parts could be used as spare parts for other aircraft.
 81% - 99%: Totally destroyed, crashed on German-controlled area.
 100%: Totally lost, crashed or disappeared over enemy-controlled area or over sea.

Appendix V:

Luftwaffe Aircraft Losses in Combat on the Eastern Front July through November 1942

The following table is a compilation of available *Luftwaffe* unit loss records, mainly the daily loss reports to *Generalquartiermeister der Luftwaffe*. It should be noted that most of these files are not one hundred percent complete. The actual *Luftwaffe* losses on the Eastern Front in the period below undoubtedly were higher than the figures below indicate. But it is clear that the majority of the aircraft combat losses of the *Luftwaffe* units below are included here. The figures relate to aircraft totally lost or written off — damage degrees of 60% or higher, according to *Luftwaffe* terminology, due to either enemy activity or "unknown reasons."

The period dealt with is July through November 1942, which is the period which is described in detail in this volume of *Black Cross/Red Star*. A similar loss table for the previous period, January through June 1942, is to be found in Volume 2 of *Black Cross/Red Star*. A similar loss table for the subsequent period will be found in next volume of *Black Cross/Red Star*. The authors would like to express their particular gratitude to historian Mr. Matti Salonen for his extensive assistance regarding much of the material below.

	July 1942		August 1942		September 1942		October 1942		November 1942		Totals July - December 1942		
	Air	Ground	Air	Ground	Air	Ground	Air	Ground	Air	Ground	Air	Ground	Totals
Transport/misc	11	1	4	10	3	7	1	1	13	2	32	21	53
JG 5	6	0	7	3	7	0	1	0	3	0	24	3	27
JG 51	5	2	22	12	9	4	2	0	5	0	43	18	61
JG 52	8	0	12	1	17	1	5	1	6	1	48	4	52
JG 53	1	10	0	12	0	0	0	0	0	0	23	0	23
JG 54	3	0	10	0	7	2	2	0	2	0	24	2	26
JG 77	9	2	9	0	6	0	1	0	0	0	25	2	27
JG 3	16	0	15	0	13	0	7	0	12	1	63	1	64
KG 1	6	0	8	0	6	0	12	0	14	0	46	0	46
KG 3	20	0	10	1	15	0	6	0	6	0	57	1	58
KG 4	6	2	6	5	4	0	2	0	0	0	18	7	25
KG 26	5	0	1	0	21	0	0	4	0	31	0	31	31
KG 27	5	1	5	0	6	1	4	0	7	0	27	2	29
KG 30	4	0	3	0	3	0	1	0	1	0	12	0	12
KG 40	1	0	1	0	0	0	0	0	0	0	2	0	2
KG 51	10	0	15	0	7	0	3	5	9	0	44	5	49
KG 53	3	0	9	3	6	0	6	1	6	0	30	4	34
KG 54	1	0	1	0	4	0	1	0	0	0	7	0	7
KG 55	5	0	5	0	4	0	7	0	10	0	31	0	31
KG 76	12	1	13	0	19	0	3	0	5	0	52	1	3
KG 77	1	0	0	0	0	0	0	0	0	0	1	0	1
KG 100	2	0	0	0	4	0	1	0	2	0	9	0	9
KLG 1/KG 6	1	0	1	0	1	0	1	0	0	0	4	0	4
(H)Aufkl	15	0	13	0	17	0	4	3	6	0	55	3	58
(F)Aufkl	16	0	15	2	15	1	6	2	6	0	58	5	63
K 406, 906	1	0	0	0	5	0	1	0	0	0	7	0	7
StG 1	7	0	12	0	9	2	4	0	4	0	36	2	38
StG 2	19	1	19	1	14	0	11	0	9	0	72	2	74
StG 5	4	0	2	0	0	0	0	0	1	0	7	0	7
StG 77	9	0	3	0	4	0	3	0	4	0	23	0	23
SchG 1	21	2	17	0	6	1	2	0	9	7	55	10	65
ZG 1	15	0	17	0	14	0	5	0	4	0	55	0	55
ZG 2	5	0	0	0	0	0	0	0	0	0	5	0	5
Behelfskampfst. /Störkampfst.	0	0	0	0	0	0	0	0	1	0	1	0	1
Totals	253	12	265	38	258	19	102	13	149	11	1,026	93	1,119
Grand Totals	265		303		277		115		160		1119		1119