



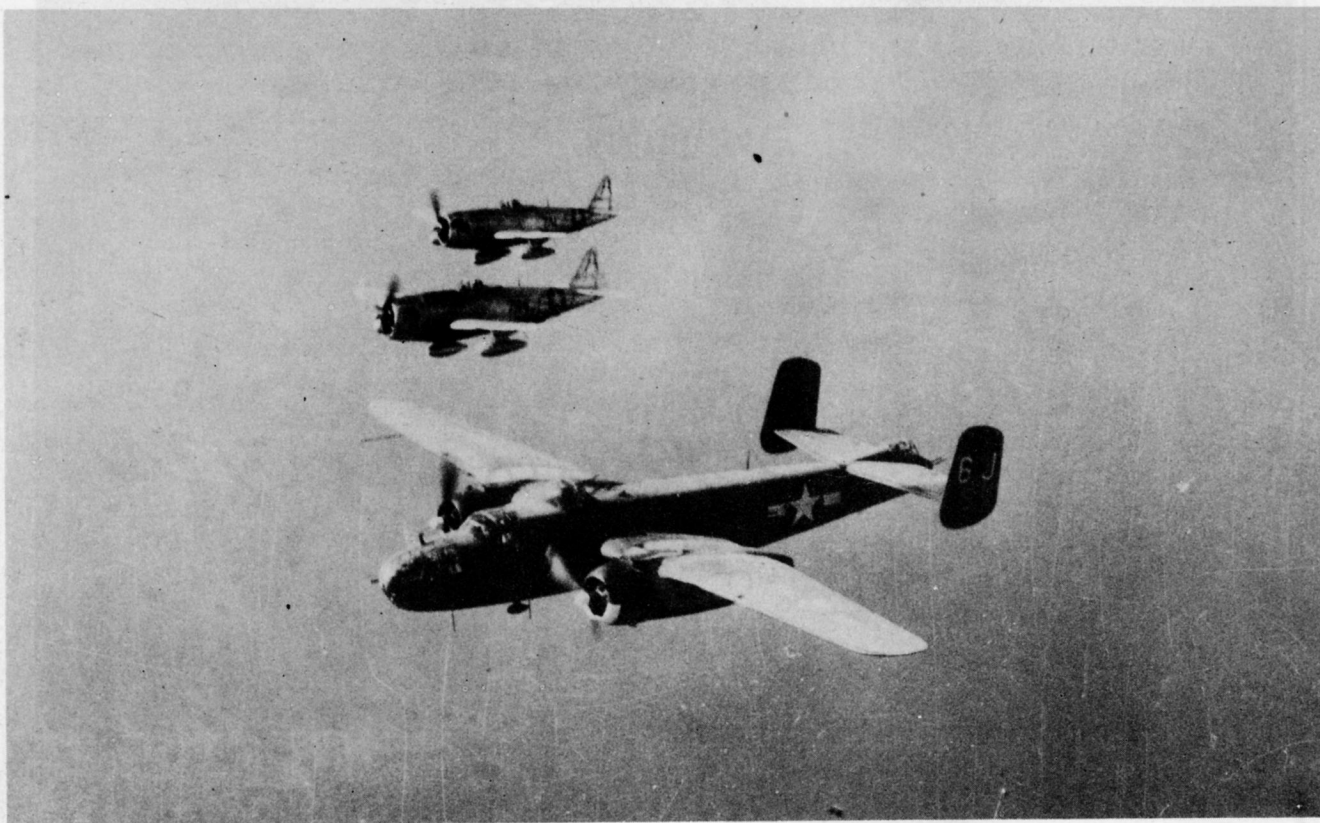
A Pictorial and Statistical Summary

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For eight months prior to the opening of the Battle of the Brenner, B-25s of 57 Wing had been engaged in bombing bridges. During that period tactics and training methods appropriate to bridge bombing had been developed and refined. As a result, B-25s came into the Battle of the Brenner well trained and experienced for the precision bombing that would be required for the successful isolation of the Italian battlefield.

Before and during the Battle of the Brenner all the groups of 57 Wing carried out extensive training programs despite the heavy operational effort. Perfect pilot-navigator-bombardier team work was necessary and it was only reached through long hours of training on the bomb trainer and practice bombing range, P.D.I. runs, and in target recognition and simulated missions. This training, keen competition between groups and good staff work, had its effect on the Wing bombing accuracy, percentage of bombs within a 600-foot radius of the target.

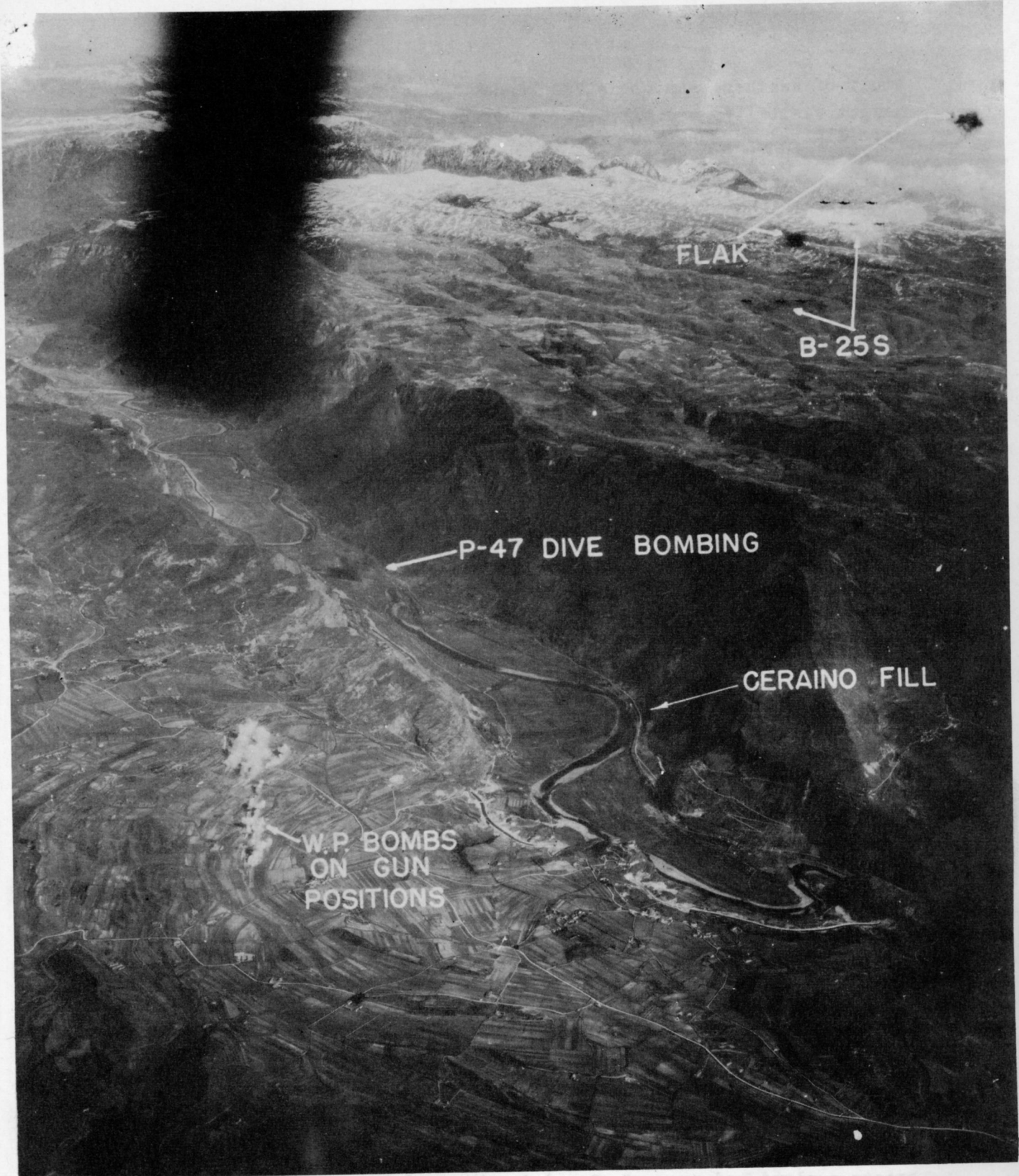
In the spring and summer preceding the Battle of the Brenner this bombing accuracy was doubled and finally maintained at a level consistently over 80 per cent.



Close cover, area cover and anti-flak bombing was provided by fighters of XXII Tactical Air Command.

Despite the high standard of training and the experience gained in bombing bridges in the Po valley, it was found that Brenner targets demanded even more thorough planning and a high degree of skill in execution than had previously been required. The three major factors to be considered in Brenner attacks were terrain, weather, and enemy defenses.

The limitations imposed by weather and terrain were closely allied with the targets themselves and have already been discussed at some length earlier in this report. Routes to and from the target, as well as the bomb run itself, could be planned only after a careful



This photograph shows phosphorus bombing of gun positions defending the target. Although there was a total of 18 heavy guns within range of the target, no planes were lost and the bombing cut the line in three places. Anti-flak bombing by fighters and bombers was effective.

study of weather, sun angle and shadow, possible turbulence and haze, target visibility and terrain. Approaches to almost all Brenner targets were limited to a narrow sector due to terrain. This required point-to-point navigation, a method which was made difficult by changes in terrain appearance with heavy snows and thaws. Terrain also made target identification difficult as some targets did not come into view until the formation was within two to four miles from the dropping point. This was further aggravated by shadow and extremely small targets. These problems all complicated the bombing problem and in turn had to be balanced against the third major consideration, the enemy's defenses.

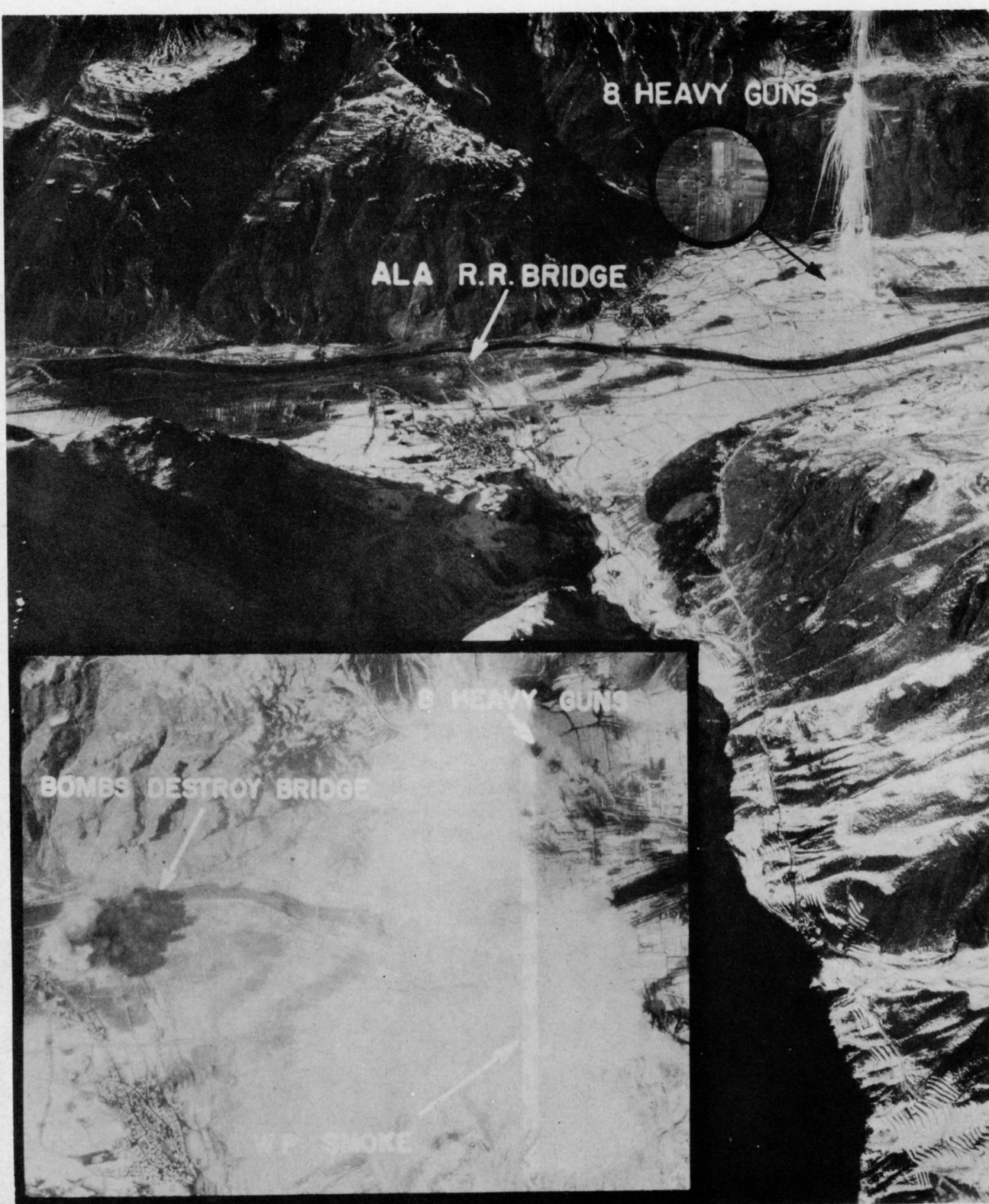
Though normal evasive action was taken on the breakaway from defended targets, pinpoint bombing precludes even moderate evasive action on the bomb run. Protection for the formation on the bomb run was provided by anti-flak bombing.

Counter flak defense measures were first employed by 57 Wing in the summer of 1944 but saw their greatest development and employment in the Battle of the Brenner. At first only chaff was dispensed by the bombing formation. Later an anti-flak element was sent in ahead of the main formation, both to dispense chaff and to drop fragmentation clusters on the gun positions. M-17 500-pound incendiary clusters and GP bombs were also tried. But after early experimentation, the combination of the M-47 100-pound white phosphorous bomb and chaff was found to be the most satisfactory.

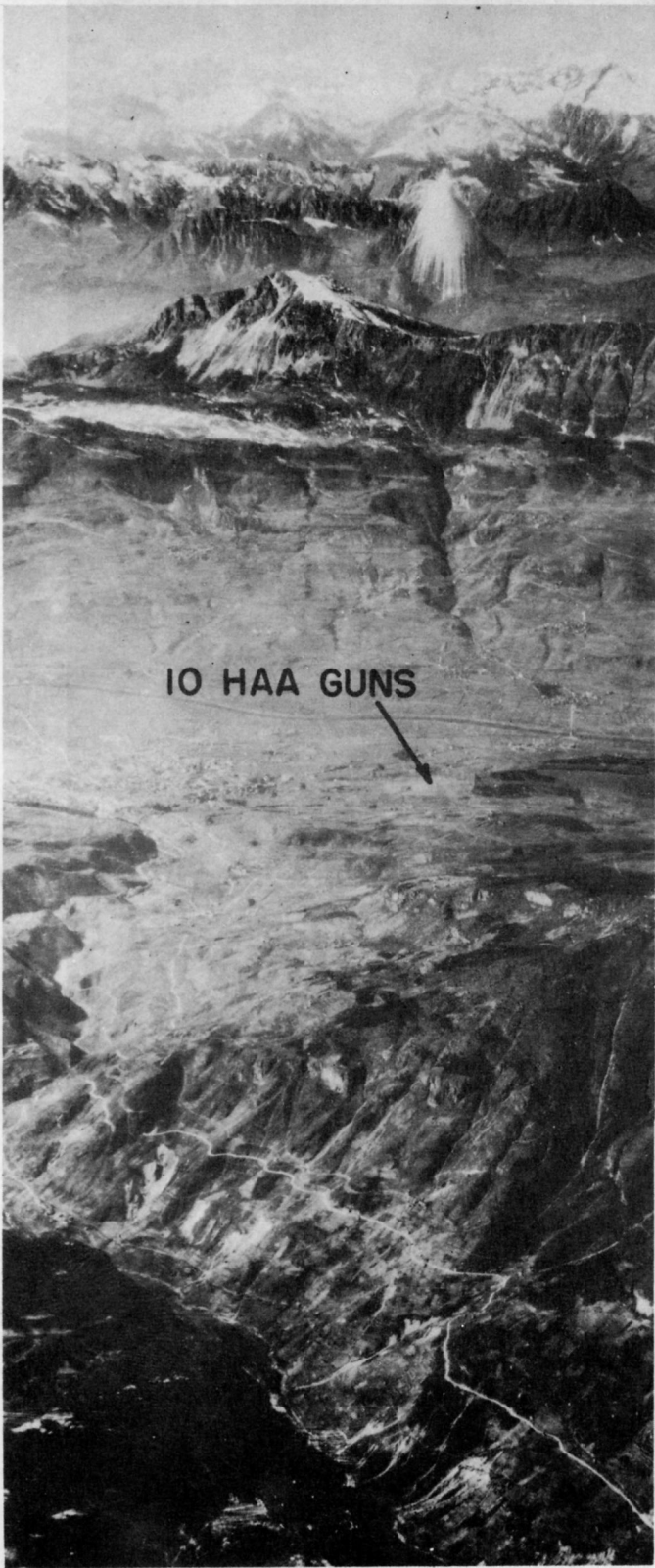
Phosphorus, which is primarily a smoke producing agent, seemed to give better results than frag bombs, and by the middle of February all of the groups were using it exclusively. Direct hits were not necessary since the billowing effect of the smoke between gun emplacements and the formation affected visual fire control. The smoke is not dangerous to breath nor will it damage any material with which it comes in contact. However the burning particles of phosphorus cause a body burn which is extremely painful and lasting. Therefore, the gun crews were forced to put on gas masks and other protective clothing which hindered operations.

Because of the screening effect of the phosphorus bombs, the position of the gun battery in relation to the axis of attack was always considered in planning the aiming point so that smoke would shield the approaching aircraft. Wind also affected the selection of the aiming point. Both ground burst and air burst fuses were employed. The air burst type was set to go off at 300 to 600 feet above the target. This type formed a quicker and more effective screen cloud but had a lower lasting quality.

Anti-flak measures were designed to accomplish two results ; to create a cloud and prevent visual tracking of the approaching aircraft formation, and to dispense chaff in such a way that it was impossible to locate the formation accurately on the radar scopes. Hence the prime consideration was not the destruction of the battery but rendering



Although defended by 16 HAA, only scant and inaccurate flak was encountered in this 12 February attack on the Ala railroad bridge, which was destroyed by the pattern of bombs shown in the inset. The above picture, an approach photo taken from the nose of a B-25 in the bombing formation, shows the aerial-burst type of WP bomb completely covering the eight guns to the north of the target. Inset picture shows fuller development of the phosphorus bombs, which effectively obscured the bombing formation from the gun crews.



Air burst WP bombs covering a Rovereto flak battery are seen in two stages of development.

its fire ineffective. The tactics and number of aircraft employed in anti-flak bombing varied according to the situation prevailing at each individual target. In general an element of three aircraft was assigned to each separate battery within effective range of the bombing formation while on its bomb run. A four-gun battery on the approach to the target required more attention than a 12-gun battery emplaced three miles beyond the target.

Generally, whenever only one battery was involved, it was possible to have a single element combine both phosphorus and chaff functions. But if two or more batteries required neutralization, two or more elements were used to carry phosphorus bombs. The element whose course was closest to, or upwind from, the bombers' axis of attack also dispensed chaff. Occasionally a separate chaff element was required, as, for example, when the guns were downwind and strong winds prevailed at right angles to the bomb run. We know from experience and the statements of a German radar officer that when properly dispersed, chaff served its purpose quite effectively, though in many cases on the Brenner the enemy favored visual data because of the many false echoes produced on radar scopes by the mountains.

The placing of the anti-flak element or elements in the formation varied with the individual mission and the different groups. Whenever there was only one anti-flak element it was usually attached as a third element in the lead box of six aircraft. When more than one element was used, they normally made up their own box and flew as the rear box or boxes in the first flight. The anti-flak elements return to their normal position in the formation as soon as possible after completion of dispensing and bombing.

Since the timing of the chaff dispensing and phosphorus bombing must be perfect in order to achieve the maximum effectiveness, the approach of the anti-flak formation and its distance ahead of the bombers had to be carefully planned and efficiently executed. The anti-flak flight was sent in about six miles ahead of the main formation; this amounted to a time spacing of about two minutes. This distance was selected because the maximum range of the German 88-mm gun is estimated to be approximately seven miles. This spacing was usually gained at the bombers' initial point by cutting off a corner of the formation's briefed course. When that was not possible, a dog-leg was arbitrarily established for the main formation on the route just prior to the I.P. in such a manner that the chaff flight continued on course, gaining the required spacing. This latter method also gave the bombardier an opportunity to work a double drift in the close vicinity of the target. When more than one anti-flak element was employed, the elements separated at the I.P. and proceeded directly to their assigned individual targets, joining up as soon as possible after the breakaway. When the timing was correctly executed, the white phosphorus bombs burst just before the main formation came within range of the guns.



Effective anti-flak operations increased bombing accuracy.

Chaff-dispensing was begun at a minimum distance of eight miles prior to reaching the gun defended area. This distance, plus the six mile interval from the main formation, made a total distance of about 14 miles from the maximum effective range of the guns, or about 19 miles from the actual gun positions. Often chaff was also dispensed by the first element in the formation of 18 aircraft, and in larger formations, in order to cover succeeding flights of 18 or 24 planes, chaff was dispensed from the rear element of each preceding flight. Because of chaff's slow rate of descent, it was important to consider the direction and velocity of the winds.

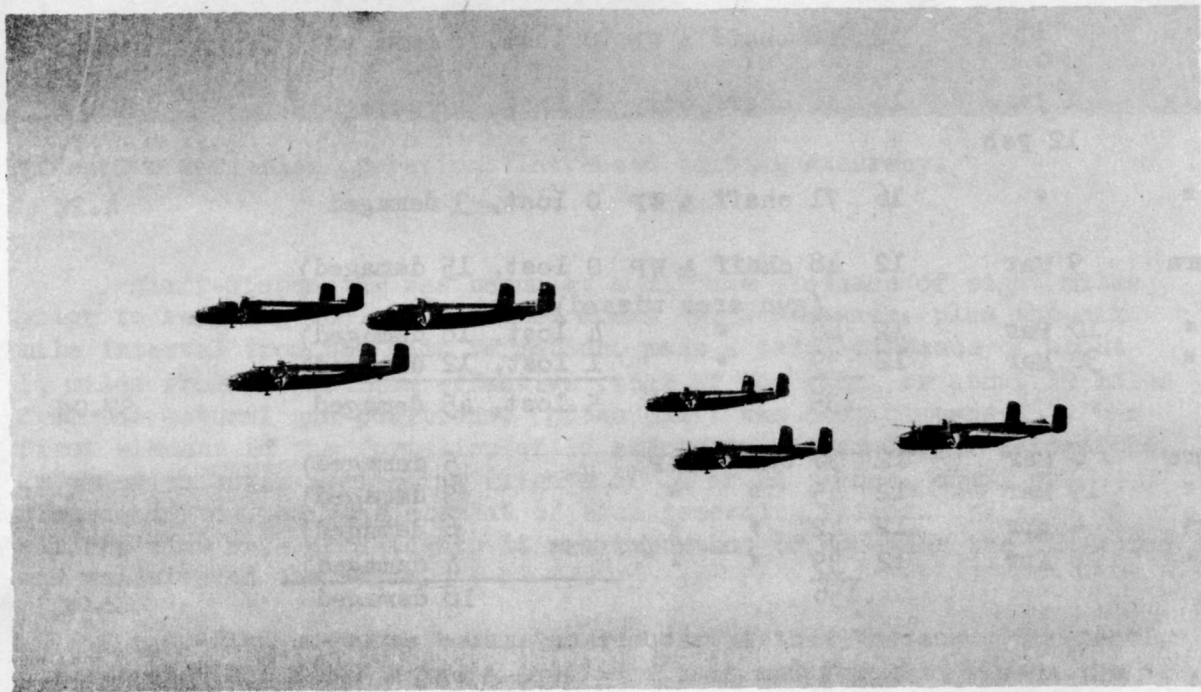
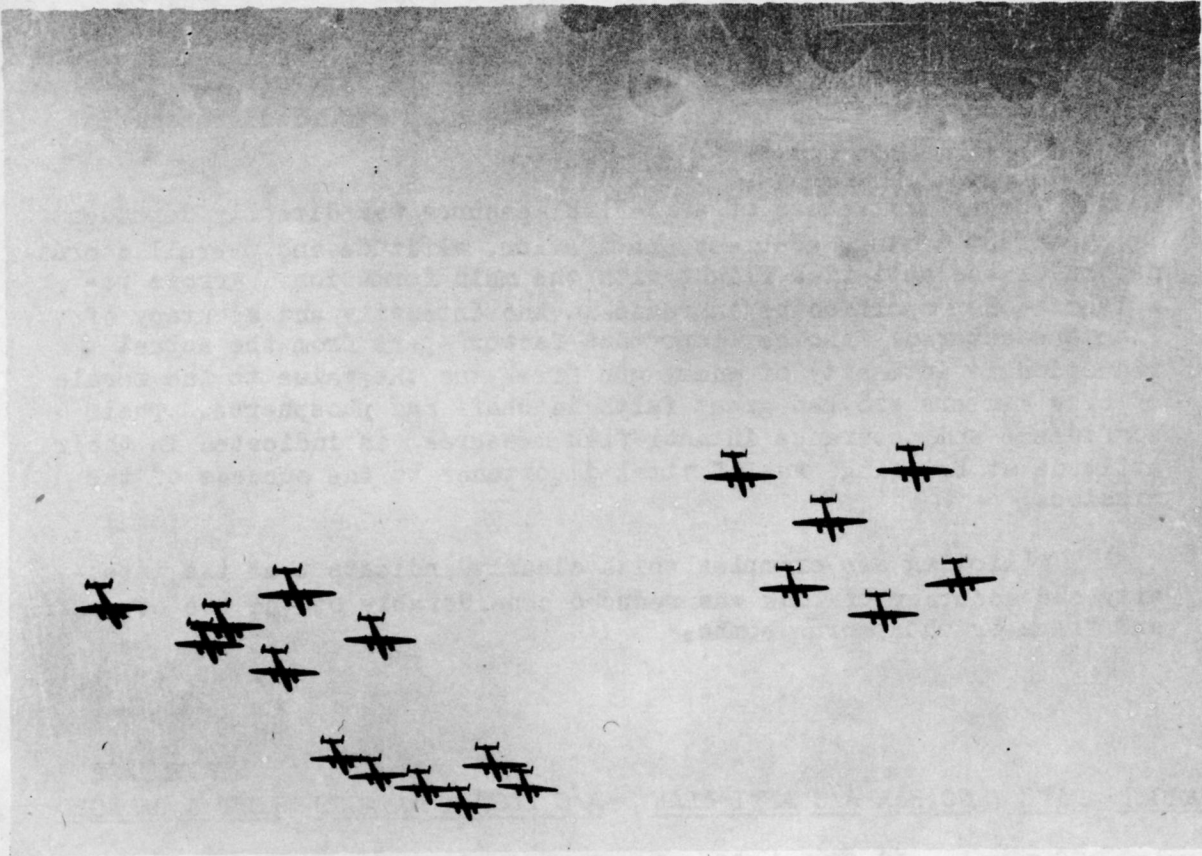
Anti-flak measures became so successful that the enemy frequently concentrated his fire on the anti-flak flight and for this reason the anti-flak aircraft flew a very loose formation. There were numerous missions on which the anti-flak aircraft received intense and accurate fire, whereas the main formation encountered only scant and inaccurate flak. This condition necessitated the employment of defensive tactics

by the anti-flak aircraft, usually taking the form of mild evasive action which, coupled with the dispersion of the aircraft and the protection of the widening chaff trail, usually afforded reasonable protection.

The effectiveness of anti-flak measures was directly dependent upon correct timing, accuracy, navigation, altitude and overall coordination of the anti-flak flight with the main formation. Errors resulted in a proportionate increase in the intensity and accuracy of flak encountered. Another important factor apart from the actual reduction in intensity of enemy gun fire, was the value to the morale of crew members who had great faith in chaff and phosphorus. Their confidence and assurance in anti-flak measures, as indicated in their attitude at briefing, was of vital importance to the success of the mission.

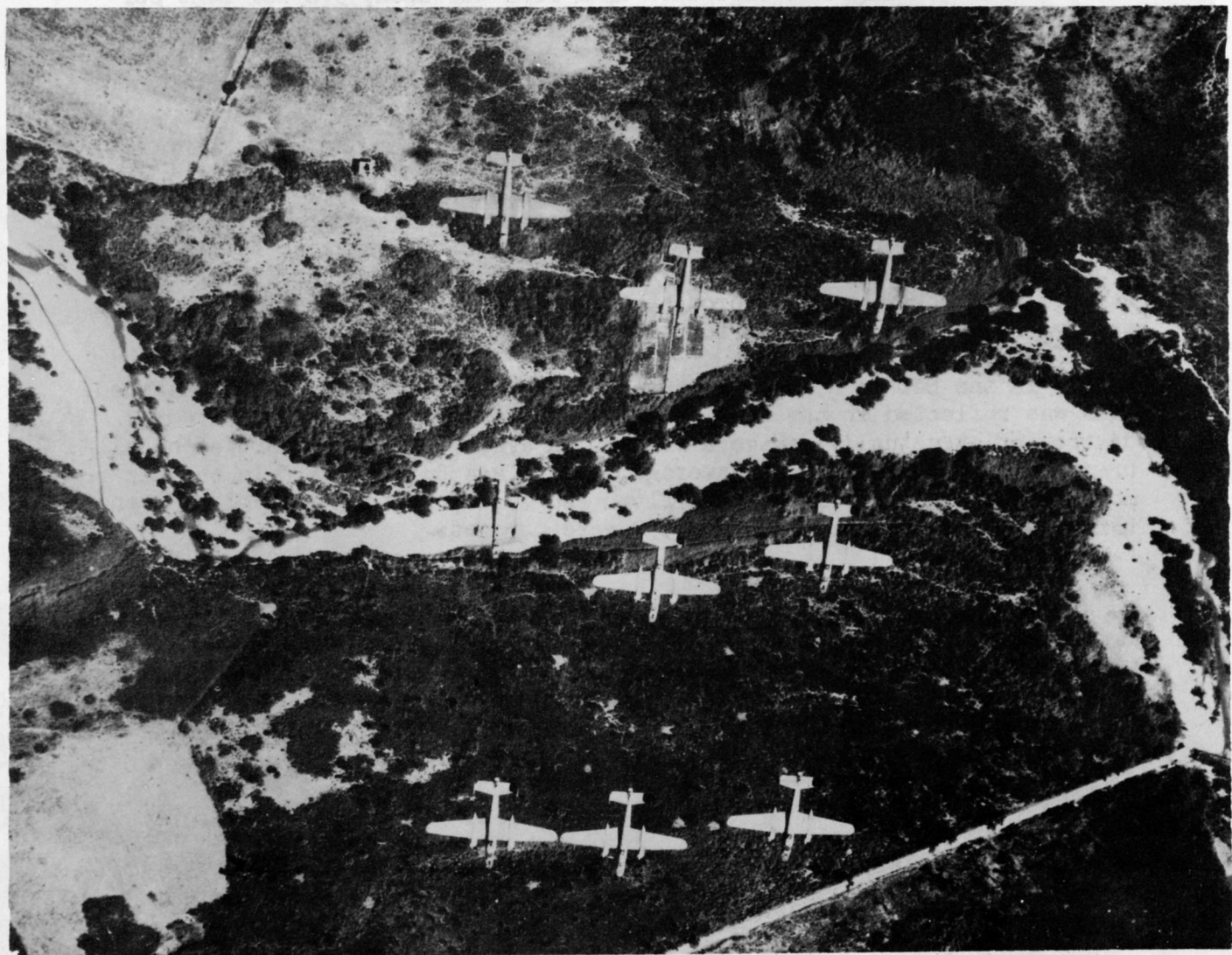
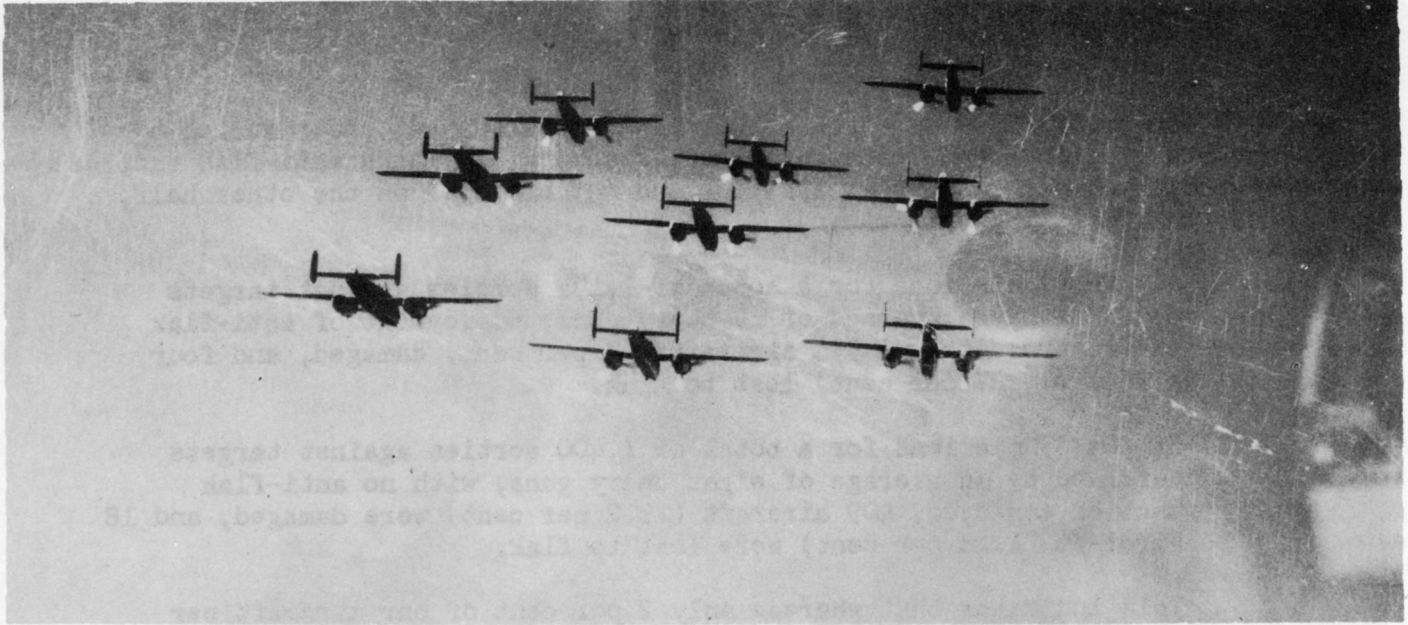
Following are examples which clearly indicate that the intensity and accuracy of flak was reduced considerably by the use of chaff and frags or phosphorus bombs:

TARGET	DATE	NO.HAA	A/C ANTI-FLAK	A/C LOST & DAMAGED	PERCENTAGE LOST & DAMAGED
Lavis	29 Dec- 18 Feb	12	326 chaff only	3 lost, 80 damaged	25.5%
"	"	12	48 chaff & WP	0 lost, 6 damaged	12.5%
Ala	4 Jan- 12 Feb	16	40 chaff only	0 lost, 17 damaged	42.5%
"	"	16	71 chaff & WP	0 lost, 3 damaged	4.2%
Ora	9 Mar	12	48 chaff & WP (gun area missed)	0 lost, 15 damaged)	
"	10 Mar	12	48 "	4 lost, 18 damaged)	
"	30 Mar	12	39 "	1 lost, 12 damaged)	
			135	5 lost, 45 damaged	37.0%
Ora	6 Mar	12	30 chaff & WP	5 damaged)	
"	19 Mar	12	45 " "	3 damaged)	
"	4 Apr	12	42 " "	6 damaged)	
"	19 Apr	12	39 " "	4 damaged)	
			156	18 damaged	12.0%



...aircraft flew a very loose formation. There were numerous
mistakes on which the anti-aircraft received intense and accurate
fire, whereas the main force of the anti-aircraft was directed
towards the main force of the anti-aircraft. This condition indicated the
...of definite tactics.

Boxes of Six



Boxes of Nine

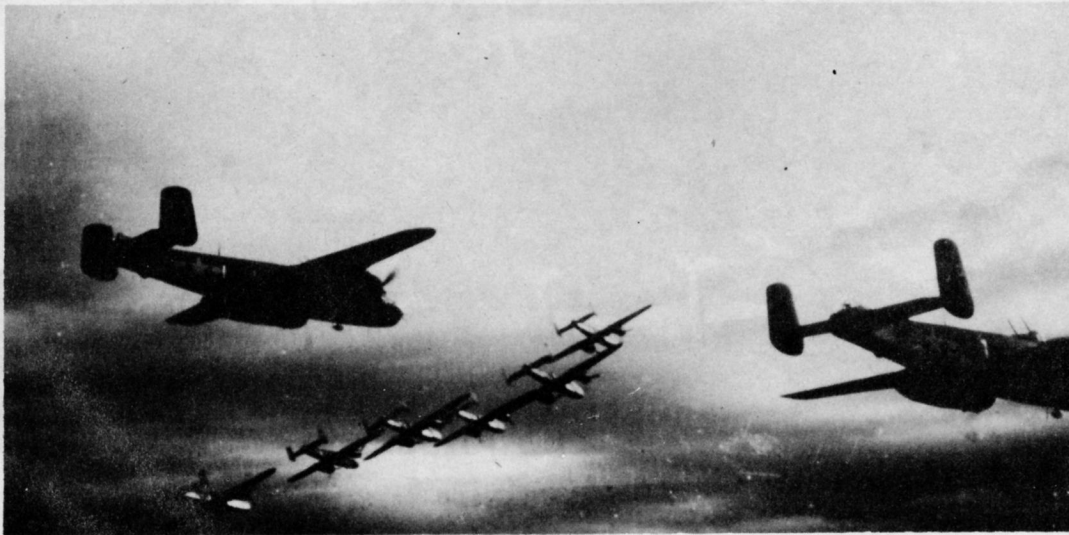
An analysis of a total of 114 missions throughout Italy during a five month period from September through January, in which anti-flak tactics were employed on half of the missions and not employed on the other half, shows the following comparisons:

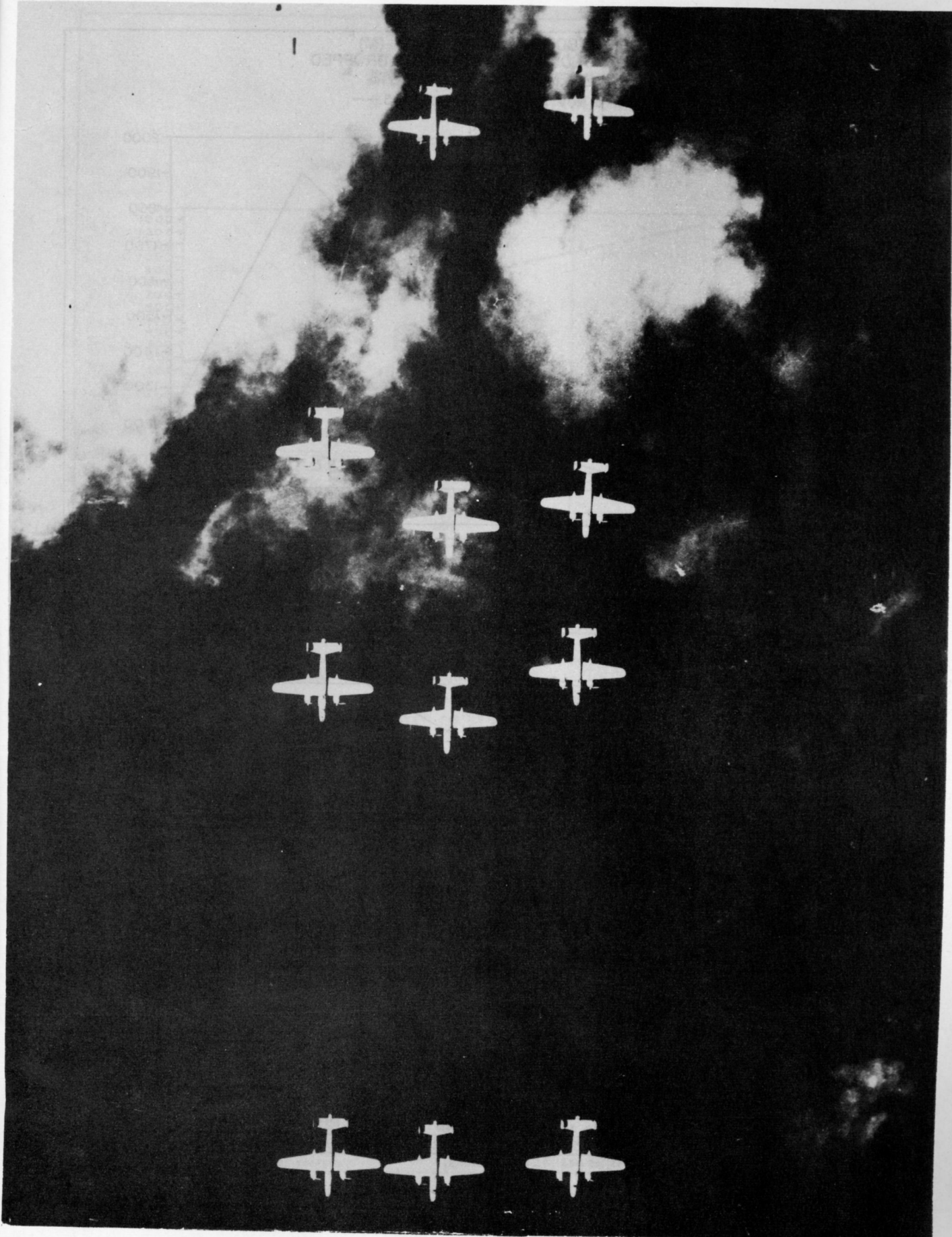
- a. On 57 missions for a total of 1,477 sorties against targets defended by an average of 12 heavy guns, employment of anti-flak tactics resulted in 354 aircraft (24 per cent) damaged, and four aircraft (.27 per cent) lost to flak.
- b. On 57 missions for a total of 1,400 sorties against targets defended by an average of eight heavy guns, with no anti-flak tactics employed, 409 aircraft (29.2 per cent) were damaged, and 18 aircraft (1.28 per cent) were lost to flak.

This indicates that whereas only 2 per cent of our aircraft per heavy gun were damaged or lost when anti-flak was used, 3.6 per cent per heavy gun were damaged or lost when no anti-flak was employed.

Aircraft formations used on the Brenner varied because latitude was given each group in developing and selecting its own methods of attack. In the case of the six-ship box the formation was made up of three boxes in a staggered V. Formations employing the nine-ship box staggered each box alternately high and low following the lead nine. Both formations were well-suited to Brenner missions for they proved free enough for route formation flying and were well adapted to the close formation required for a compact bomb pattern. In addition, in either formation maximum fire power could be brought to bear against attacking aircraft and evasive action was easily performed.

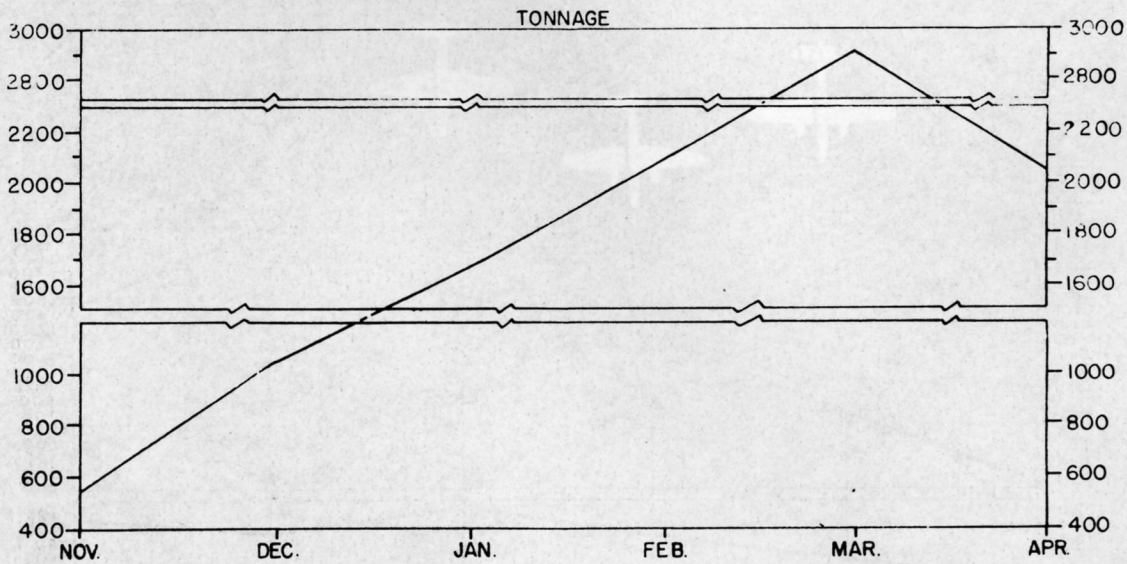
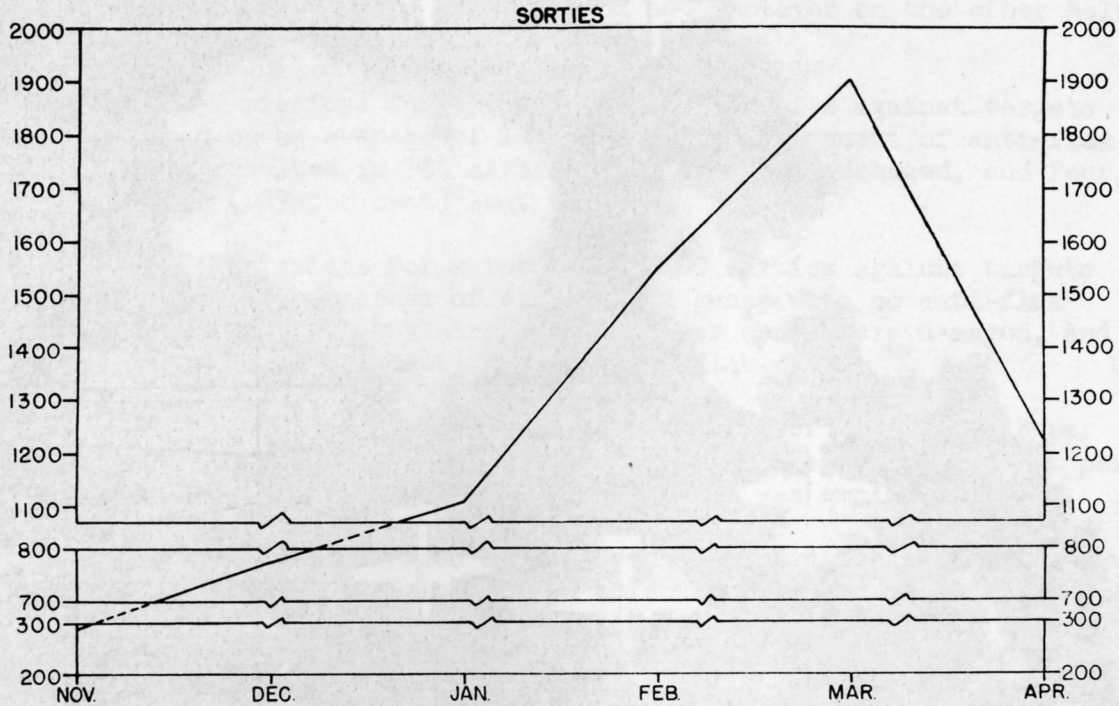
In the Battle of the Brenner a high bombing accuracy was maintained. This was reflected in the consistently low number of sorties required to destroy or structurally damage a bridge, an average of 58.82 sorties on all Brenner bridge attacks. The average tonnage was 86.72 tons. In the six months period 6,839 sorties were flown and 10,267.52 tons dropped on Brenner targets. 46 B-25s were lost and 532 were damaged.





**57TH BOMBARDMENT WING (M)
SORTIES FLOWN AND TONNAGE DROPPED
ON BRENNER PASS TARGETS**

— 6 NOV 1944 — 25 APRIL 1945 —

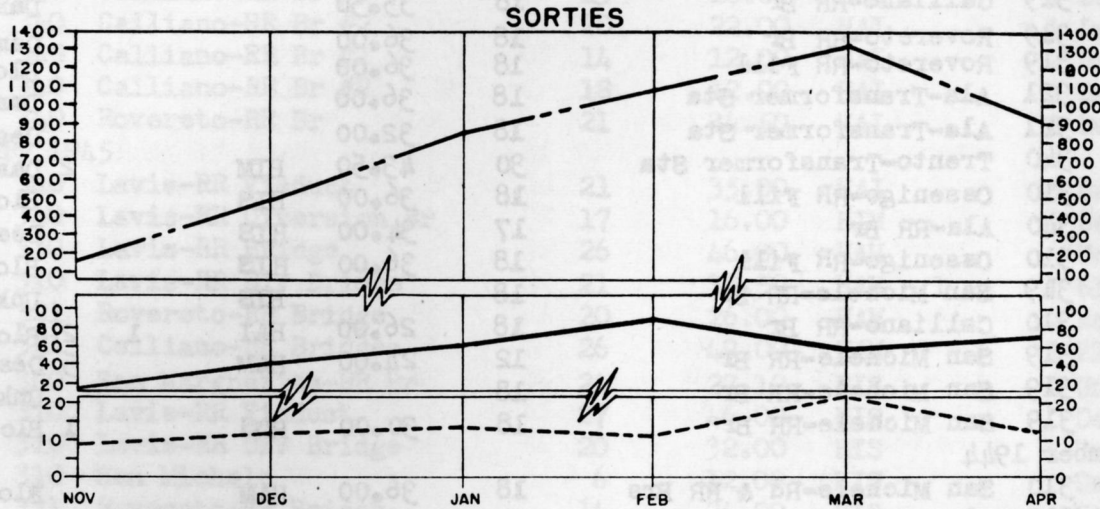


	NOV.	DEC.	JAN.	FEB.	MAR.	APRIL	TOTAL
SORTIES	293	771	1107	1549	1901	1218	6839
TONNAGE	476.75	1023.85	1702.45	2103.25	2916.66	2044.55	10,267.51

PREPARED BY 57TH B.W.
STATISTICAL CONTROL

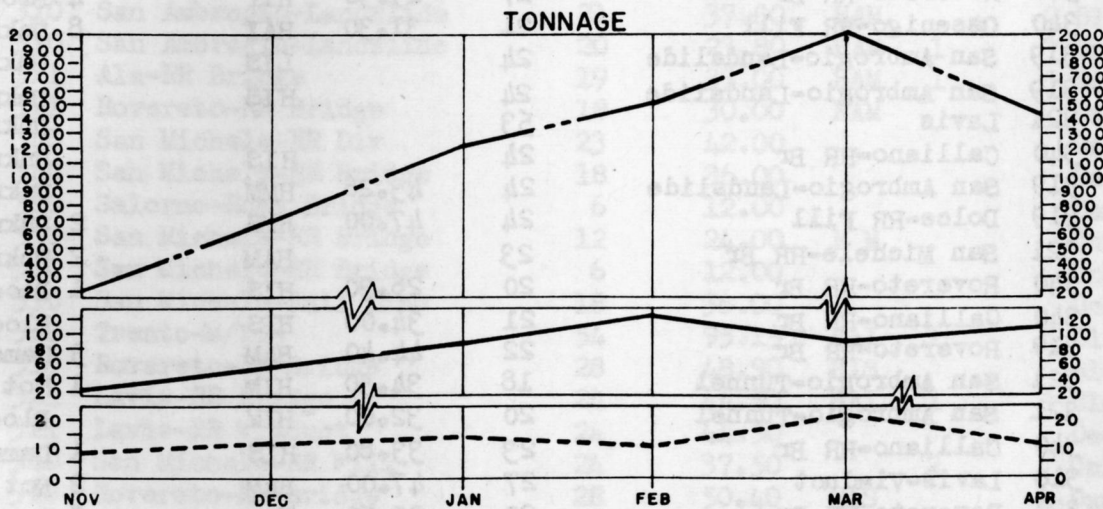
**57TH BOMBARDMENT WING (M)
BRENNER PASS OPERATIONS
6 NOV. 1944-25 APRIL 1945**

**EFFECTIVE & NON EFFECTIVE SORTIES PER
BRIDGE DESTROYED OR STRUCTURALLY DAMAGED**



LEGEND	NOV	DEC	JAN	FEB	MAR	APR	AVG.
————— SORTIES PER BRIDGE DESTROYED OR STRUCTURALLY DAMAGED	18.55	41.25	61.21	90.33	60.32	72.31	58.82
----- BRIDGES DESTROYED/STRUCTURALLY DAM	9	12	14	12	22	13	8.2
----- SORTIES	167	495	857	1084	1327	913	484.3

**BOMB TONNAGE DROPPED PER BRIDGE
DESTROYED OR STRUCTURALLY DAMAGED**



LEGEND	NOV	DEC	JAN	FEB	MAR	APR	AVG.
————— TONNAGE PER BRIDGE DESTROYED OR STRUCTURALLY DAMAGED	24.05	58.22	88.48	125.92	91.64	109.99	86.72
----- BRIDGES DEST./STRUCTURALLY DAM.	9	12	14	12	22	13	8.2
----- TONNAGE DROPPED	216.50	698.59	1238.80	1511.00	2016.06	1429.95	7110.90

PREPARED BY 57TH BM. WG.
STATISTICAL CONTROL

BRENNER RAIL LINE DAILY SUMMARY OF OPERATIONS

Date	Group	Target	Sorties	Tons Bombs Dropped	Flak	Losses	Dam	Results
November 1944								
6	310	Domegliara-Transf Sta	18	35.75	HIS			Damaged
6	310	Domegliara-Transf Sta	18	36.00	HIS			Damaged
6	319	Calliano-RR Br	18	35.50				Damaged
6	319	Rovereto-RR Br	18	36.00				Damaged
6	319	Rovereto-RR Fill	18	36.00				Blocked
6	321	Ala-Transformer Sta	18	36.00				Damaged
6	321	Ala-Transformer Sta	18	32.00				Destroyed
6	340	Trento-Transformer Sta	30	43.50	HIM		2	Damaged
7	310	Ossenigo-RR Fill	18	36.00	HIS			Blocked
7	340	Ala-RR Br	17	34.00	HIS			Destroyed
8	310	Ossenigo-RR Fill	18	36.00	HIS			Blocked
9	319	San Michele-RR Br	18		HIS			Unknown
11	310	Calliano-RR Br	18	26.00	HAI		1	2 Blocked
11	319	San Michele-RR Br	12	24.00	HAM		5	Destroyed
13	319	San Michele-RR Br	18					Unknown
16	319	San Michele-RR Br	18	30.00	HMS		1	Blocked
December 1944								
2	310	San Michele-Rd & RR Brs	18	36.00	HAM			Blocked
2	310	Ala-RR Br	21	28.38	HIS			Not Hit
2	340	Rovereto-RR Br	12	13.65	HVAI		6	Not Hit
2	340	Calliano-RR Br	11	12.00	HAI		1	Unknown
10	310	Dolce-RR Fill	20	37.20	HAM		2	Blocked
10	310	San Ambrogio-Tun & Fill	20	55.20	HIM			Blocked
10	319	San Ambrogio-Landslide	24	55.26	HMS		8	Unknown
10	319	Ala-RR Br	18	34.00	HMI		7	Blocked
10	319	San Michele	18	31.50	HIS		1	4 Blocked
10	340	Calliano-RR Track	29	41.80	HIS			Blocked
10	340	Rovereto-RR Br	17	29.50	HII		4	Blocked
10	340	Ossenigo-RR Fill	21	31.30	HAI		8	Unknown
13	319	San Ambrogio-Landslide	24		LIS			Unknown
14	319	San Ambrogio-Landslide	24		HIS			Unknown
14	321	Lavis	53					Unknown
14	340	Calliano-RR Br	24		HIS			Unknown
26	319	San Ambrogio-Landslide	24	43.26	HMM			Unknown
26	319	Dolce-RR Fill	24	47.00	HMS		2	Unknown
26	321	San Michele-RR Br	23		HAM		2	Unknown
26	340	Rovereto-RR Br	20	26.30	HIS		1	Blocked
26	340	Calliano-RR Br	21	34.00	HIS			Blocked
27	319	Rovereto-RR Br	22	44.40	HAM		3	Damaged
27	321	San Ambrogio-Tunnel	18	34.50	HIM		1	Not Hit
27	321	San Ambrogio-Tunnel	20	32.00	HIM			Blocked
27	340	Calliano-RR Br	23	33.80	HIS		1	Damaged
29	310	Lavis-Viaduct	27	47.00	HAM		2	Not Hit
29	321	Rovereto-RR Br	20	33.50	HAM		5	Damaged
30	310	Dolce-RR Fill	20	34.00	HAM		5	Blocked
30	319	Ala-RR Br	24	30.13	HMM		9	Destroyed
30	319	San Margherita-RR Br	12	24.00	HIS		1	Blocked
30	319	San Margherita-RR Br	12	16.42	HIS		3	Not Hit

Date	Group	Target	Sorties	Tons Bombs Dropped	Flak Losses	Dam	Results
December 1944 - Cont'd							
30	321	Rovereto-RR Br	21	37.25	HAM		3 Damaged
30	340	Calliano-RR Br #3	13	20.00	HAM		1 Destroyed
30	340	Calliano-RR Br #2	20	22.00	HAI		1 Damaged
30	340	Calliano-RR Br #1	14	12.00	HAI		2 Damaged
31	340	Calliano-RR Br #2	18	12.00	HAI		1 Damaged
31	340	Rovereto-RR Br	21	34.50	HAI		2 Destroyed
January 1945							
3	340	Lavis-RR Viaduct	21	35.00	HAI		3 Damaged
3	340	Lavis-RR Diversion Br	17	16.00	HIM		Destroyed
4	310	Lavis-RR Bridge	26	46.00	HAM		Unknown
4	310	Lavis-RR Div Bridge	21	35.50	HAM	1	1 Blocked
4	321	Rovereto-RR Bridge	20	26.00	HAM		7 Not Hit
4	321	Calliano-RR Bridges	26	49.00	HAM		2 Bl & Dest
4	340	San Margherita-RR Br	24	27.10	HIS		1 Unknown
15	310	Lavis-RR Viaduct	27	46.00	HIS		Destroyed
15	310	Lavis-RR Div Bridge	20	32.00	HIS		1 Unknown
15	310	San Michele	6	12.00	HIS		Destroyed
15	321	Rovereto-RR Bridge	14	24.00	HIS		Not Hit
15	321	Rovereto-Sta/Yard	26	49.00	HIM		Blocked
15	340	San Margherita-S. RR Br	5	10.00	HAM		Blocked
15	340	Ala-RR Bridge	18	25.00	HIS		Blocked
17	321	Ora-RR Bridge	18	36.00	HAI		3 Not Hit
17	321	Ora-RR Bridge	15	19.00	HAI	1	5 Blocked
17	321	San Michele-RR Fill	18	36.00			Unknown
17	340	Calliano-RR Br #2	20	22.00	HMS		1 Blocked
17	340	Calliano-RR Br #1	16	28.00	HAS		Blocked
17	340	Rovereto-RR Bridge	20	25.80	HAS		4 Not Hit
18	310	San Ambrogio-Landslide	21	37.80	HAM		2 Blocked
18	310	San Ambrogio-Landslide	20	23.80	HAM	1	3 Unknown
18	321	Ala-RR Bridge	19	33.00	HAM	1	5 Destroyed
18	321	Rovereto-RR Bridge	18	30.00	HAM		2 Damaged
18	340	San Michele-RR Div	23	42.00			Damaged
18	340	San Michele-RR Bridge	18	36.00			Destroyed
18	340	Salorno-Road Bridge	6	12.00			Damaged
20	310	San Michele-RR Bridge	12	24.00	H M		Damaged
20	310	San Michele-RR Bridge	6	12.00			Unknown
20	310	San Michele-Rail Line	18	36.00			Unknown
20	340	Trento-M/Yds	54	95.15	HAI	1	6 Blocked
21	310	Rovereto-RR Bridge	28	48.90	HIS		Blocked
21	321	Lavis-RR Bridge	24	44.50	HAI	1	8 Blocked
21	321	Lavis-RR Viaduct	24	44.50			Destroyed
21	340	San Michele-RR Fill	24	37.50		2	Unknown
22	310	Rovereto-RR Bridge	28	50.40	HAS		1 Damaged
22	321	Lavis-Rail Diversion	9	14.00	HIM		2 Unknown
22	321	San Michele-RR Tracks	4	6.00			Unknown
22	340	San Michele-RR Div.	12	12.00			Blocked
27	340	Rovereto-RR Bridge	27				Unknown

Date	Group	Target	Sorties	Tons Bombs Dropped	Flak	Losses	Dam	Results
January 1945 - Cont'd								
28	321	Lavis-Rail Diversion	26	47.00	HAM		4	Unknown
28	340	Rovereto-RR Bridge	27	43.80	HIS		1	Blocked
28	340	San Michele-RR Bridge	18	28.00				Damaged
29	321	Ala-RR Bridge	20	4.00	HIS			Unknown
29	321	Lavis-M/Y	3	6.00	HIM			Unknown
29	340	Calliano-RR Bridge #3	8	10.00	HAI		2	Blocked
29	340	Rovereto-RR Bridge	16	23.80	HAI		3	Blocked
30	310	Trento-M/Y	40	62.40	HAM		11	Unknown
30	321	Calliano-RR Bridge Fill	20	32.00	HIS			Blocked
30	321	Rovereto-Station Yards	20					Unknown
30	321	Rovereto-Rail Bridge	18					Unknown
30	340	Lavis-RR Br. Diversion	18	35.00	HIM			Unknown
30	340	Lavis-RR Station Yards	20	29.50				Unknown
31	321	Lavis-RR Div. Bridge	20	38.00	HAM		4	Unknown
31	340	San Michele-RR Bridge	18	36.00				Unknown
31	340	Rovereto-RR Bridge	24	36.00	HAI		3	Blocked
31	340	Rovereto-Station Yards	18	32.00	HAI		1	Unknown
February 1945								
2	310	Rovereto-RR Bridge	17	24.60	HAM		1	Blocked
2	321	Calliano-RR Bridge #3	20	25.00	HAM			Unknown
2	340	Lavis-RR Bridge	20	18.00				Blocked
4	321	San Michele-RR Div. Br.	18	36.00				Blocked
4	340	Ala-Station Yards	24	35.00	HIS		1	Blocked
4	340	Ala-RR Bridge	18	28.00	HIS			Not Hit
4	340	Lavis-RR Bridge	18	36.00	HAS		1	Destroyed
5	310	San Ambrogio-Landslide	21	33.00	HIM			Blocked
5	310	San Ambrogio-Station Yd.	18					Unknown
5	310	San Michele-RR Fill	18	36.00				Blocked
5	340	Calliano-RR Bridge #3	24	31.20	HMM		1	Blocked
5	340	Calliano-RR Bridge #2	18	32.00	HAM		3	Blocked
6	310	Ala-RR Bridge	22	38.20	HAM		10	Unknown
6	310	San Ambrogio-M/Yds	15	25.55	HAM		4	Unknown
6	321	Rovereto-M/Y	10	8.00	HAI		3	5 Unknown
6	321	Rovereto-RR Bridge	20	28.50	HAI		2	Destroyed
6	321	Mori-RR Fill	20	28.50	HAI		7	Not Hit
6	340	Lavis-RR Viaduct	21		HAS		2	Unknown
6	340	Lavis-RR Div.	18		HIS			Unknown
6	340	Lavis-Station Yard	18		HIS			Unknown
7	321	Lavis-Div. Bridge	18	30.00	HAM		1	Unknown
7	321	Lavis-Viaduct	11	20.00	HAI		1	7 Destroyed
7	321	Lavis-Sta Yard	18	36.00				Unknown
7	340	San Michele-RR Div	18	36.00				Blocked
8	321	Calliano-RR Bridge #3	21	22.50	HAI		1	6 Unknown
8	321	Calliano-RR Bridge #2	21	22.50	HAI		1	6 Unknown
12	340	Ala-RR Bridge	24	38.60	HIS			Destroyed
13	321	San Michele-RR Div Br	18	32.00				Unknown
13	321	Lavis-RR Div Bridge	24	25.60	HIM		1	Unknown
13	340	San Ambrogio-Landslide	15	21.00	HAI		2	5 Unknown

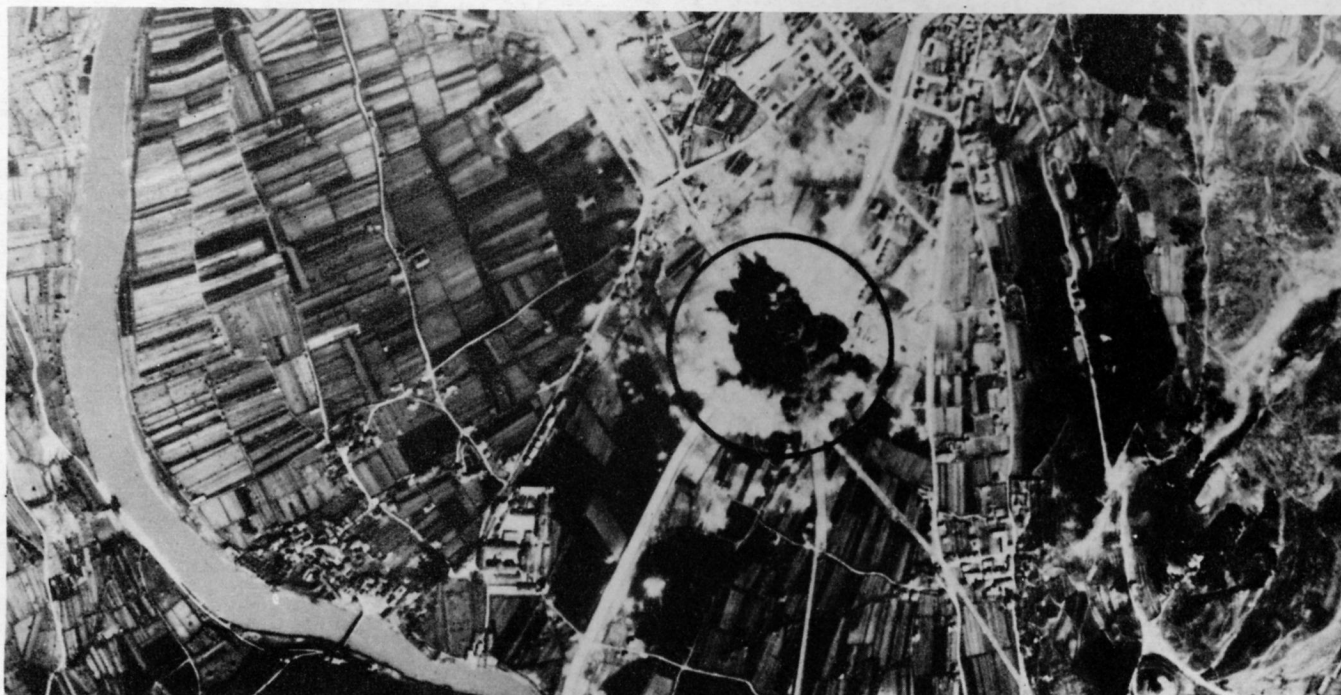
Date	Group	Target	Sorties	Tons Bombs Dropped	Flak Losses	Dam	Results
February 1945 - Cont'd							
13	340	San Ambrogio-Sta Yard	11	14.30	HAM		1 Unknown
14	310	Ponte Colle Isarco-S RR Br	24	3.60	HIS		2 Unknown
14	310	Bressanone-S RR Bridge	24	39.60	HIS		3 Blocked
14	321	Lavis-RR Div Bridge	24	24.40	HAM		3 Not Hit
14	321	San Michele-RR Div Br	17	34.00			Blocked
14	340	San Michele-RR Bridge	24	34.00			Blocked
17	340	Bressanone-RR Bridge	30	43.10			Unknown
17	340	Lavis-Rail Div	15	12.00	HAM		3 Unknown
18	310	Lavis-RR Div Br	42	34.00	HIS		4 Destroyed
18	321	Bressanone-S RR Br	27				Unknown
18	321	Lavis-RR Bridge	24	23.00	HIM		Unknown
18	340	Ala-M/Yds	24	27.30	HAI		Unknown
18	340	Ala-RR Bridge	17	30.00	HAI		3 Unknown
20	321	Calliano-RR Br #3	26	28.80	HAI		4 Unknown
20	321	Rovereto-RR Bridge	27	55.40	HAM		4 Unknown
21	340	Bressanone-RR Bridge	24		HIM		Unknown
22	310	Ala-Sta M/Yds	18	34.00	HIS		Blocked
22	310	Ala-RR Bridge	24	39.60	HAI		3 Damaged
22	321	Lavis-RR Bridge	38	65.00	HAM		Destroyed
22	340	Bressanone-RR Bridge	24	33.70	HAI		3 Blocked
22	340	Lavis-Sta Yds	21	32.00	HAM		6 Unknown
23	321	Campo-S RR Bridge	24	39.60	HIS		Unknown
23	321	Campo-N RR Bridge	18	35.50	HAI		1 Blocked
23	340	San Felice-RR Fill	17	29.00	HAS		5 Blocked
24	310	Lavis-RR Div Br	21	24.00	HAI		7 Blocked
24	310	San Felice-RR Fill	6	12.00	HIS		1 Blocked
24	321	Ala-Rail Bridge	19	41.20	HAM		Unknown
24	321	Rovereto-Road Bridge	3	6.00			Unknown
24	321	Mori-Rail Fill	3	6.00	HIM		Unknown
24	340	San Michele-Rail Junc	18	34.00	HIM		Blocked
25	310	San Margherita-RR Br	18	25.80	HAM		1 Blocked
25	310	Ala-RR Bridge	12	24.00	HIM		Blocked
25	321	Campo-S RR Bridge	24	33.80	HAM		7 Blocked
25	321	Campo-N RR Bridge	18	30.00	HIS		4 Damaged
25	321	San Felice-Rail Fill	18	34.00	HAI		7 Blocked
25	340	Vipeteno-RR Bridge	21	32.80	HAI	3	2 Destroyed
26	310	Ala-RR Bridge	18	27.60	HAM		3 Blocked
26	321	San Michele-RR Div Br	18	32.00			Blocked
26	321	San Michele-RR Bridge	24	48.00	HAM		1 Destroyed
27	310	Bressanone-S RR Br	30		H S		Unknown
27	310	Ala-RR Bridge	24	27.00	HIS		7 Blocked
27	321	San Michele-RR Div Br	18	36.00			Destroyed
27	321	Lavis-RR Div Br	23	37.80	HAM	2	7 Blocked
28	321	Ala-RR Bridge	18	36.00	HAI		1 Blocked
28	321	San Margherita- N & S RR	23	33.00	HAS		Blocked
28	340	San Michele-RR Bridge	21	36.00			Destroyed
28	340	Salorno-RR Emb	21	26.00			Unknown
March 1945							
3	310	Salorno-RR Emb	18	24.00			Unknown

Date	Group	Target	Sorties	Tons Bombs Dropped	Flak	Losses	Dam	Results
March 1945 - Cont'd								
3	310	Salorno	5	9.50				Unknown
3	310	San Michele	5	10.00				Unknown
3	321	Salorno-Rail Emb	19	36.00				Unknown
3	321	San Michele-Br & N Div	24	33.75	HIS			Unknown
3	340	Ala-RR Bridge	15	27.30				Blocked
3	340	San Margherita-RR Br	9	9.30				Blocked
4	310	Salorno-RR Emb	18	24.00	H S			Blocked
4	310	Salorno-RR Emb	12	12.00	H S			Unknown
4	321	Ala-RR Bridge	30	49.80	HIS			Blocked
4	340	Staz di Ceraino-RR Fill	27	49.30	HAM		3	Blocked
4	340	San Ambrogio-Overpass	17	20.00				Blocked
6	310	Ossenigo-RR Fill	29	51.00	HAM		4	Blocked
6	321	San Ambrogio-RR Bridge	18	34.00	HIM			Damaged
6	340	Ora-RR Bridge	15	8.00	HIS			Destroyed
6	340	Ora-RR Div Bridge	15	23.30	HAM		2	Blocked
7	310	San Michele	9	18.00				Unknown
7	310	Staz di Ceraino-RR Fill	27	46.30	HAM		8	Blocked
7	340	Ossenigo-RR Fill	25	32.00	HII		3	Blocked
8	321	Rovereto-RR Br	24	39.60	HAM		2	Destroyed
8	321	Mori-RR Fill	27	43.80	HAI		3	Blocked
8	340	Ala-RR Br	21	15.30				Not Hit
8	340	San Margherita-Gun Pos	21	3.30	HAM		3	Unknown
9	310	Ora-M/Yds	18	27.60	HAS		10	Unknown
9	310	Ora-RR Div Br	18	24.00	HAS		3	Blocked
9	321	San Michele-N Div Br	19	24.00				Blocked
9	321	San Ambrogio-RR Br	18	36.00				Blocked
9	340	Ala-RR Br	29	28.60				Damaged
9	340	San Margherita-RR Br	18	36.00				Blocked
10	310	Ora-RR Bridges	24	40.76	HAM	1	6	Blocked
10	310	Ora-RR Div Br	36	36.00	HAI	3	3	Not Hit
10	321	San Michele-New Div Br	24	36.00				Blocked
10	321	Staz di Ceraino-RR Fill	21	33.80	HAM	1		Blocked
11	310	San Michele-RR Div Br	18	36.00				Blocked
11	321	Ossenigo-RR Fill	24	32.40	HAM		1	Blocked
11	321	Peri-RR Fill	9	16.00	HAS		4	Unknown
11	340	Volargne-RR Fill	27	39.30	HAM		1	Blocked
11	340	Staz di Ceraino-RR Fill	18	36.00	HIM		2	Unknown
12	321	Ala-RR Br	21	35.80				Destroyed
12	321	San Margherita-S RR Br	12	24.00	HIS			Damaged
12	321	San Margherita-N RR Br	12	22.00	HIS			Blocked
12	340	San Michele-RR Div Br	18	36.00				Destroyed
12	340	Aldeno-RR Fill	21	36.00	HAI		4	Blocked
13	310	Salorno-RR Emb	18	35.50				Blocked
13	321	Vo Sinistro-RR Br	18	31.75				Blocked
13	321	Vo Sinistro-RR Fill	12	23.50	HIS			Blocked
14	310	San Margherita-N RR Br	18	36.00	HIS			Blocked
14	310	San Margherita-S RR Br	21	35.50	HAS		3	Damaged
14	321	Vipiteno-RR Br	27	35.30	HIS			Destroyed
14	321	Campo-N RR Br	12	24.00	HAI			Blocked

Date	Group	Target	Sorties	Tons Bombs Dropped	Flak	Losses	Dam	Results
March 1945 - Cont'd								
15	340	Mori-RR Fill	27	45.90	HIM			Blocked
15	340	Rovereto-RR Br	18	36.00	HIS			Destroyed
16	310	Campo-N RR Br	24	15.60	HAM		13	Unknown
16	310	Campo-S RR Br	18	29.00	HAM		3	Blocked
16	340	San Ambrogio-RR Br	13	24.00				Damaged
17	310	San Michele	18	36.00				Not Hit
17	340	Aldeno-RR Fill	21	34.00	HAI	1	10	Blocked
17	340	Aldeno-RR Br	9	12.00	HAI		2	Not Hit
17	340	Aldeno-RR Fill	7	14.00	HII			Blocked
18	321	Bronzolo-RR Br	27					Unknown
18	340	Salorno-RR Fill	18	36.00				Blocked
19	310	Vo Sinistro-RR Fill	18	22.00	HIM		5	Unknown
19	310	Vo Sinistro-RR Br	18	24.00				Unknown
19	310	Rovereto-RR Line	8	10.00	HAI	1	13	Unknown
19	321	Bronzolo-RR Br	12	23.00				Blocked
19	321	Ora-RR Div Br	27	37.25	HAM			Unknown
19	321	Ora-RR Br	18	36.00				Blocked
19	340	San Michele-RR Div	18	34.00				Blocked
20	321	LeCave-Sta Yds	24	31.00	HAM			Unknown
20	321	San Ambrogio-RR Br	15	30.00				Destroyed
20	340	Vipiteno-RR Br	17	34.00				Destroyed
20	340	Campo-N RR Br	17	20.00	HAI	3	8	Damaged
20	340	Campo-RR Br	15	27.30	HAI		9	Not Hit
21	310	Salorno-S RR Fill	18	22.00				Unknown
21	310	San Michele-RR Div Br	18	36.00				Unknown
21	321	Campo-S RR Br	18	25.80	HIM			Unknown
21	321	Campo-N RR Br	12	22.00	HAI	1	5	Destroyed
21	321	Vipiteno-RR Sidings	21	37.45	HAI	1	2	Unknown
21	340	Brennero-M/Yds	26	37.50	HIS			Blocked
22	310	Salorno-RR Emb	18					Unknown
22	310	Steinach-RR Br	18	36.00				Blocked
22	310	Matrei-RR Br	18	36.00				Not Hit
22	340	Volargne-RR Fill	21	15.30	HIS			Not Hit
23	310	Salorno-RR Emb & Dr Cam	12	24.00				Blocked
23	310	San Michele-N RR Br	12	24.00				Damaged
23	321	Matrei-S RR Br	18	24.00				Blocked
23	340	Vo Sinistro-RR Fill & Br	39	68.00	HII			Unknown
24	310	Steinach-RR Fill	12	22.00				Not Hit
24	310	Steinach-RR Br	18	36.00				Damaged
24	321	Ora-RR Div Br	6	3.05	HFS			Unknown
25	310	Ala-RR Br	21	51.30	HIS		3	Not Hit
25	321	Volargne-RR Fill	21	13.45	HAM		1	Unknown
25	340	Steinach-RR Fill	18	24.00				Not Hit
25	340	Vo Sinistro-RR Br	21	36.00	HIS			Destroyed
30	310	Rovereto-RR Bridge	33	51.60	HAI	1	15	Blocked
30	310	San Ambrogio-RR Br	21	39.30	HIS			Damaged
30	340	Ora-RR Div Br	21	37.30	HAI	1	1	Unknown
30	340	Ora-Main RR Br	12	8.00	HAM	1	1	Unknown
31	310	Steinach-RR Br	6	12.00				Destroyed

Date	Group	Target	Sorties	Tons Bombs Dropped	Flak	Losses	Dam	Results
March 1945 - Cont'd								
31	340	Salarno-RR Fill	12	22.00				Blocked
31	340	San Michele-RR Div Br	12	16.00				Destroyed
31	340	San Michele-RR Br	18	36.00				Destroyed
April 1945								
1	340	Colle Isareo-E RR Br	12	24.00				Blocked
1	340	San Ambrogio-RR Overpass	6	12.00				Unknown
2	310	San Michele-RR Div Br	18	36.00				Blocked
2	321	Matrei-S RR Br	18	33.00				Damaged
2	321	Matrei-N RR Br	18	36.00				Blocked
2	340	Steinach-S RR Br & Tun	18	36.00				Damaged
2	340	Colle Isarco-E RR Br	8	12.00	HIM		1	Blocked
2	340	Vo Sinistro-RR Fill	10	20.00	HIM			Blocked
4	321	Ora-RR Br	17	19.80	HIM		2	Blocked
4	321	Salorno-RR Emb & Dr Can	7	14.00	HIM			Unknown
4	321	Ora-RR Div Br	18	36.00	HFM		1	Blocked
4	340	Calliano-RR Br #3	17	32.00	HAI			Blocked
4	340	Rovereto-RR Br	24	30.10	HAI		1	9 Destroyed
5	310	Matrei-S RR Br	18	36.00				Damaged
5	310	Steinach-S RR Br	18	34.00	H S			Unknown
5	340	Salorno-Sta RR Br	18	34.00				Blocked
5	340	San Michele-N RR Br	18	34.00				Destroyed
8	310	San Michele-RR Div Br	24	43.50				Damaged
8	321	Salorno-Sta RR Br	18	34.00				Destroyed
8	321	Salorno-RR Fill & Can	17	34.00	HIS			Blocked
8	340	Vo Sinistro-RR Br	15	24.00	HIS			Blocked
8	340	Vo Sinistro-RR Fill	6	12.00	HIM			Blocked
11	321	San Ambrogio-RR Culvert	21	37.80	HIS			Blocked
11	321	Volargne-RR Fill	18	36.00				Blocked
11	340	San Margherita-N RR Br	18	22.00	HIS			Blocked
11	340	Ala-RR Br	21	29.30	HIS			Damaged
12	310	Vo Sinistro-RR Fill	18	36.00	HAS		5	Blocked
12	310	Vo Sinistro-RR Br	18	36.00	HAS		4	Blocked
14	310	San Ambrogio-RR Br	18	36.00				Blocked
14	310	San Ambrogio-RR Br	18	36.00				Blocked
14	321	Salorno-RR Emb	18	36.00				Blocked
14	321	Steinach-S RR Br & Tun	18					Unknown
15	321	Steinach-S RR Br & Tun	18					Blocked
15	321	Matrei-S RR Br	18					Unknown
17	321	Steinach-S RR Br & Tun	18	36.00				Blocked
17	321	Steinach-RR Fill Br	9	18.00				Blocked
17	340	Matrei-N RR Br	18	36.00				Not Hit
17	340	Matrei-S RR Br	18	32.50				Damaged
18	321	Volargne-RR Fill	18	36.00				Blocked
18	321	San Ambrogio-RR Br	18	22.50				Blocked
18	340	Staz di Ceraino-RR Br	18	34.00				Blocked
18	340	Dolce-RR Fill	21	17.30				Blocked
19	310	Rovereto-RR Br	24	29.50	HAI		3	18 Blocked
19	310	Calliano-RR Br #1	18	36.00	HIM			Blocked
19	340	Ora-RR Div Br	18	24.00	HIS			Blocked

Date	Group	Target	Sorties	Tons Bombs Dropped	Flak	Losses	Dam	Results
April 1945 - Cont'd								
19	340	Ora-Main RR Br	21	38.30	HAM			Destroyed
20	321	San Michele-RR Div Br	18	36.00				Blocked
20	321	Salorno-S RR Fill	18	34.00	LIS			Blocked
20	321	Salorno-Sta RR Br	15	30.00				Blocked
20	340	Volargne-RR Fill	18	35.00	HIS			Blocked
20	340	San Ambrogio	12	12.00	HAI	1	2	Unknown
20	310	San Ambrogio-RR Fill	18	36.00	H S			Blocked
21	310	Steinach-N RR Br	18					Unknown
21	340	Matrei-N RR Br	18	34.00				Blocked
23	310	Salorno-RR Emb	18					Unknown
23	310	Dolce-RR Fill	18	36.00				Blocked
23	310	Staz di Ceraino-RR Fill	18	36.00				Blocked
23	321	Volargne-RR Fill	17	34.00				Blocked
23	321	San Ambrogio-RR Br	18	34.50				Blocked
24	310	Osemigo-RR Fill	18	36.00				Blocked
24	310	Peri-RR Fill	18	36.00				Blocked
24	321	Ala-RR Br	24	38.85				Destroyed
24	321	Vo Sinistro-RR Br	21	37.80	HIS			Blocked
24	340	Calliano-RR Br #1	21	36.80				Blocked
24	340	Rovereto-RR Br	18	36.00				Blocked
25	310	Calliano-RR Br #3	18	36.00				Unknown
25	310	Rovereto-RR Br	18	36.00				Blocked
25	321	San Michele-RR Div Br	18	36.00				Damaged
25	340	Steinach-N RR Br	12	20.00				Damaged
25	340	San Ambrogio-RR Br	6	12.00				Unknown
25	340	Steinach-RR Br & Tun	7	12.00				Blocked
25	340	Volargne-S RR Fill	11	22.00				Blocked



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