

BOMBER COMMAND REPORT ON NIGHT OPERATIONS

1/2nd OCTOBER, 1943.

H A G E N: Witten.SUMMARY.

1. Hagen. Despite 10/10ths cloud, 229 Lancasters attacked the steel centre of Hagen in the eastern Ruhr with devastating effect. Mosquitoes groundmarked the target accurately on OBOE, and were well supported by Lancaster backers-up. Reconnaissance showed that 39 factories were hit, including the largest accumulator works in Germany, which was seriously affected. Railway and commercial property also suffered severely. Few fighters were seen, and only one aircraft was lost.

2. Witten. 12 OBOE Mosquitoes were detailed to attack the steel works at Witten, for training purposes, at the end of the main attack on Hagen. 8 completed their task, and 2 of those which failed joined the main force and bombed Hagen by the light of the fires. 2 other sorties were abortive. All aircraft returned safely.

WEATHER FORECAST.

3. Midnight frontal positions:- (1) cold from 59°N.04'E. to Wash to S.W. England (2) warm from 59°N.04'E. to 56°N.10'E. to 56°N.13'E. becoming (3) cold to 57½°N.20'E. thence (4) warm to Stettin to Kaszel.

Bases:- Belt of rain and low cloud in vicinity of cold front; cloud will break and lift to the N., but will be low and heavy to the S. At dusk, operational areas will have much strato-cumulus, base 1,500', tops 5,000', with moderate visibility. A few patches at 800', especially later. Most areas should keep cloud base at 1,000-1,500' throughout operational period.

Germany:- Sheet of strato-cumulus will cover the whole of Germany for most of the night; some breaks are likely, but their position cannot be forecast. Belt of continuous cloud along warm front (4), not above 12,000'. Stuttgart: probably 10/10ths strato-cumulus, 2,000' thick, with a chance of small amounts; layers of stratus and strato-cumulus below 5,000' en route, with medium cloud above Ruhr: 8-10/10ths strato-cumulus in layers between 1,000' and 5,000' with a few patches of medium cloud above; similar conditions en route. Winds over Ruhr: 280°/25 n.p.h., possibly increasing to 35 n.p.h. at 13,000'.

W. France:- Lorient, Nantes: 10/10ths strato-cumulus, base about 1,000', with risk of patches of stratus below, possibly 10/10ths in N.

Frisians:- 10/10ths strato-cumulus, base below 1,000', local fog patches.

HAGEN.PLAN OF ATTACK.

4. Route: 525°N. 0330E. - Egmond - 514.5N.0800E - HAGEN - 5030N.0730E - 5020N. 0132E - Beachy Head.

5. Tactics. OBOE Mosquitoes were to mark the exact aiming point with T.I. red. Backers-up were to maintain this marking with T.I. green, aimed at reds if visible, otherwise at the estimated centre of those greens already dropped, overshooting in either case by 4 seconds. Supporters and Main Force aircraft were to aim at reds at the centre of greens. Reds were to cascade from 6,000' and 10,000'. Green

....were especially

the factories in the valleys of the Eusepe and Volme rivers. The important Accumulatoren Fabrik, the largest factory of its kind in Germany (priority 1+), and Fahrradteilefabrik Wipperman (priority 2) suffered extensively. At least 37 other factories were hit, including 2 steelworks, 11 manufacturers of specialized steel or iron, a glassworks and a paper factory. The gas and electricity works at Altenhagen, the Guildhall, the Town Hall, the Slaughterhouse, the Municipal Offices, the Telegraph Office and the Savings Bank were destroyed or partly demolished. Railway property sustained severe damage at several points; the Bahnhof Delstera in the S.E. was gutted, a bridge carrying Gas Strasse across the railway junction of the main station was demolished, and 3 large railway buildings adjoining the main station, including the goods despatch sheds, were destroyed or badly damaged. Business and residential property suffered on a similar scale, and Altenhagen, Wehringhausen and the S.E. were virtually devastated.

DAMAGE ASSESSMENT.

13. A report issued by the Ministry of Home Security (Research and Experiments Department) estimates that 4,600 people in Hagen lost their homes, that a total of 18,400 suffered damage to their homes as a result of the raid; and that 7.6 million industrial man-hours were lost, an average of 20 days per industrial worker in Hagen. These figures are very approximate.

ALTERNATIVE TARGETS.

14. 5 aircraft resorted to alternative targets, in the areas of Cologne, Munster, Koblenz, Hagen and Berg Neustadt. A sixth aircraft jettisoned an H.E. bomb live near Altenahr on its way back from the target.

SPECIAL EQUIPMENT

15. OBOE 5 OBOE Mosquitoes were detailed to mark the target, with 3 aircraft in reserve. One Mosquito had an OBOE failure, and the reserve, although called, did not bomb until after the attack should have finished. The timing of the other 4 aircraft was good, but this failure led to a gap of 5 minutes between the second and third aircraft. The marking appears to have been very accurate.

16. GEE The Eastern Chain operated on the Wyoming frequency throughout and on the Arizona from 1930 to 2300 hours. The interference was of the usual types, but was very light on the Zanesville frequency over Holland. The Arizona signals were the weakest. Excellent ranges were obtained on Zanesville on the outward route, several navigators receiving fixes over the target. The average range was 310 miles.

ENEMY DEFENCES

17. Flak and Searchlights Moderately intense flak was encountered from Hagen and also from Dortmund. Some crews believed that an attempt was being made to select individual targets for unseen fire; but most of the time a barrage was put up. Searchlights were rendered useless by the cloud. Outside the Ruhr, opposition was met from the guns of Amsterdam, Munster, Hamm, Amiens and Charleroi. 33 returning aircraft were hit by flak.

18. Fighters For the first time for many weeks, fighters took second place to flak as a method of defence. No flare lanes were reported, and only 3 bombers were attacked. None of the usual activity was evident over the target and the early part of the return route. Cloud covering the target and most of the route must have caused the enemy serious fears that his fighters would be unable to see any visual aids to navigation; and the whole attack was planned to be completed in 15 minutes, which gave the running commentator little time to pass his fighters over Hagen. R/T traffic showed that such fighters as were active operated under G.C.I. direction or the double Benito system. No fighter damage was reported.

CASUALTIES

19. No. of aircraft missing..... 1 (0.4%)
 " " " damaged {flak..... 33}
 {fighter..... 0}.....36 (14.3%)
 {other causes..... 3}

...../One Lancaster of 5 Group

One Lancaster of 5 Group was missing; it is believed to have been shot down by flak over Munster 5 minutes before zero hour. The rate of loss on this night (0.4%) is exceptionally low for a Ruhr target. Another Lancaster was washed up on the Welsh coast; none of the crew was found.

WITTEN

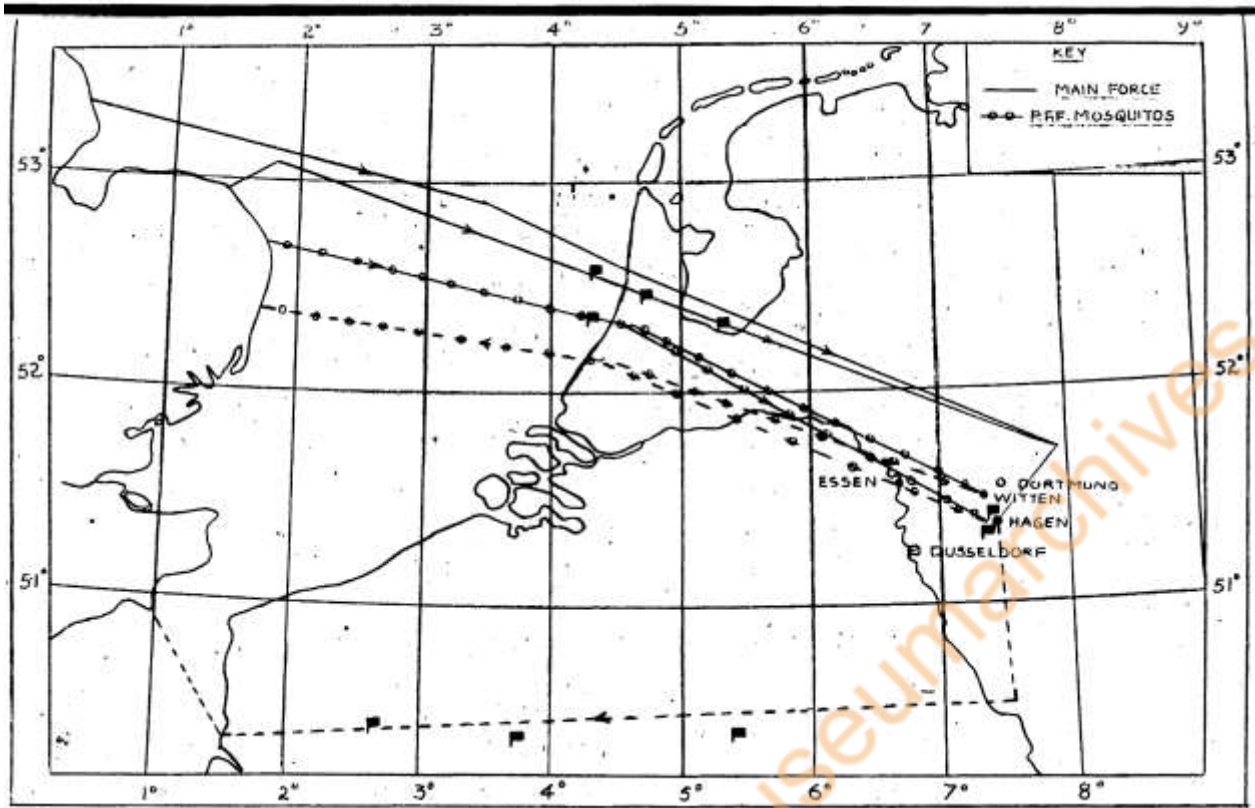
20. 12 OBQE Mosquitoes were detailed to attack the steelworks at Witten for training purposes after the end of the main effort. 8 aircraft bombed the primary which was covered with 10/10ths. cloud to 6,000'; 2 aircraft experienced technical difficulties and attacked Hagen visually. The remaining 2 aircraft returned early with GEE and engine failure. Accurate flak was encountered, which damaged 3 bombers, but no fighters were seen, and no losses were sustained.

MLM/JT.
BC/S.26342/1/ORS3,
25th. November, 1943.

TARGET	GROUP	AIRCRAFT TYPE	SORTIES	A/C REPORTING ATTACK ON		AGGRESSIVE SORTIES		MISS-ING	DAMAGE				DIVERSIONS		RESULTS Tons of Bombs H. E. Inc.
				PRIM. AREA	ALT. AREA	OVER R. T.	NOT OVER R. T.		FLAK	FIGHTER	MISC. IN FLIGHT	OTHER CAUSES	ATTACK-ED	NOT ATTACK-ED	
HAGEN	8 PPP	Mosq. IX	5	3	-	2*+1	-	-	-	-	-	-	-	-	P. 555.7 A. 13.8 H. 1.7
		Mosq. IV	2	2	-	-	-	-	-	-	-	-	-	-	590.6 13.1 2.3
		Lanc. III	9	9	-	-	-	-	1	-	-	-	-	-	-
	1 M.P.	Lanc. III	19	18	1+1 ^o	-	-	-	5	-	1	-	-	2	Heavy Bombs 4000 lb.
		Lanc. I	10	10	-	-	-	-	-	-	-	-	-	-	P. 224
		Lanc. III	80	76	1	-	3	-	8+1AD	-	-	-	1	2	A. 4 H. 1
5	Lanc. I	23	22	-	-	-	1	3+1AD	-	2	-	1	4	Tons of Bombs	
	Lanc. III	102	94	3	-	4	-	11+3AD	-	18*+1AD	-	1	1	H. E.	
HAGEN TOTAL			251	234	5	4	7	1	5,028		18+1AD		3	9	
WITTEN	8 PPP	Mosq. IX	1	-	1	-	-	-	-	-	-	-	-	-	P. 6.2
		Mosq. IV	11	8	1	-	2	-	3	-	-	-	-	-	A. 1.6
TOTAL			263	242	7	4	9	1	5,031		18+1AD		3	9	

* Washed up on Welsh Coast.
Result unknown.

* Reserve a/c not required.
o also attacked primary.

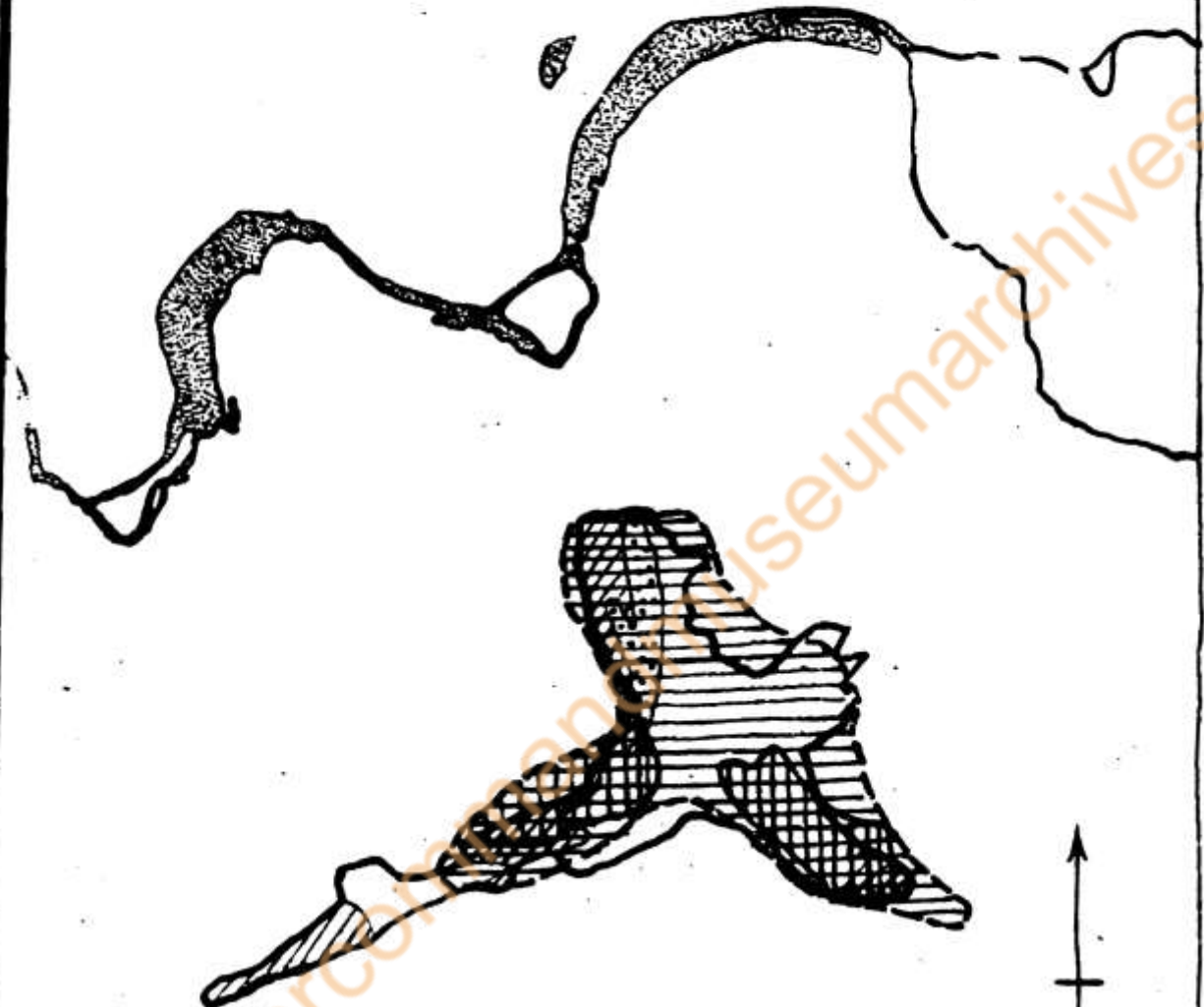


BOMB PLOT NOT AVAILABLE

www.bombercommandmuseumarchives.ca

SECRET

DIAGRAM SHOWING LOCATION OF ATTACK
AS INDICATED BY DAMAGE
HAGEN 1/2nd OCTOBER 1943.



-  Main Area of Damage
-  Area of Heavy Damage
-  Mainly Residential
-  Industrial
-  Rail Area
-  Water

1 2 3 miles

Scale: 1 inch = 1 mile

ORS BC
Date 21 1143 Tracer East
Ref N1B-1582bkj R.H.C.

BOMBER COMMAND REPORT ON NIGHT OPERATIONS

2/3rd OCTOBER, 1943.

MUNICH : GELSENKIRCHEN : COLOGNE : MINELAYING : LEAFLETS.SUMMARY

Munich. 266 Lancasters delivered a damaging attack against the southern and eastern districts of Munich in cloudless weather. The blow was aimed at the north of the town, but undersheeting by the blind-markers caused the bombing to drift back along the line of approach. Nevertheless, military and industrial establishments suffered heavily. Many fighters were active in the target area, but for the most part they failed to contact our bombers, and only 7 (2.4%) were shot. 4 fighters were destroyed.

Gelsenkirchen : Cologne. 8 Mosquitoes carried out harassing raids on Gelsenkirchen and Cologne, without loss.

Minelaying. 117 aircraft were detailed to lay mines in areas ranging from the French Atlantic coast to Sassnitz. 92 reached their target, and 8 others dropped mines in useful areas. Altogether, 292 mines were laid. One aircraft was lost; and one enemy fighter was destroyed.

Leaflets. 17 aircraft from Training Groups dispersed leaflets over various areas in Northern France; 4 others returned early. No losses were sustained.

OTHER FORECAST

Midnight frontal positions: Cold from 60° N. 15° E. to 55° N. 14° E. to Hannover 49½° N. 05° E. to a wave on the front over N.W. France.

Bases:- Variable amounts of cumulus and cumulo-nimbus at dusk, base 2,000' to 8-10,000', in S., possibly 12,000 ft. in N. Scattered showers and good visibility. Fog return (from S. Germany), all areas will have nearly clear skies, and visibility 2-4 miles, falling to 1 mile in smoky localities after 2300 hrs. Patches of mist and fog will form in low-lying areas by dawn.

Germany:- Continuous cloud along front, with tops below 10,000 ft. Broken section cloud N. of the front; variable amounts of strato-cumulus to S. and E., with some good clearances. Munich will probably be in a clear area. Route to Munich: cloud will increase to 10/10ths inland from French coast, base 1,000 ft. to 8-10,000 ft., with well broken layers of medium cloud to 12-15,000 ft., along coastal belt, which should lie from Aachen to Nantes at 2200 hours. Strato-cumulus will probably persist to 08° E. with tops falling to 7,000' or lower. Slight risk of thin strato-cumulus at target, but this should not be more than 600' thick and will be at very low levels. Visibility moderate to poor. Cloud will break W. of 05° E. on return.

France:- Lorient, Nantes: probably little cloud after 2200 hours, though strato-cumulus cloud, base 1,500 ft., may persist for a while at Nantes.

Frisians and W. Baltic:- 5-8/10ths., over North Sea, base 1,500-2,000 ft., generally below 15,000 ft., except in Central North Sea, lowering gradually towards, and breaking in W. Baltic after passage of cold front, which should be well clear by 2100 hours. Visibility good, moderate in showers.

Winds at Munich: at 750 mbs., 250°/15 m.p.h.: at 500 mbs., 250°/25 m.p.h.: at 300 mbs., 220°/40 m.p.h.

/.....MUNICH.

MUNICH

PLAN OF ATTACK

6. Route. P.F.P.: 4862N. 0745E - 4728N. 1052E - 4800N. 1120E - MUNICH - 1151E - 4746N. 1200E - 4806N. 0733E.

Other Groups: 5125N. 0230E - 4950N. 0310E - 4826N. 0745E - 4758N. 1120E - MUNICH - 4810N. 1147E - 4749N. 1119E - 4806N. 0733E - Cayeux - Beachy Head.

7. Route Marking: 7 blind-markers and 11 backers-up (Y aircraft) were to drop T.I. yellow on track at 4826N. 0745E (12 miles S. of Strasbourg). The other blind-markers (about 23 aircraft) were each to release a bundle of white flares over the centre of the Wurm Sec. 9 backers-up other than those already mentioned were each to release a bundle of white flares in salvo with one red spot fire, the latter to hit the ground on the northern tip of the Wurm Sec; aircraft were to bomb by the light of the white flares of the blind-markers. Main Force crews were to regard the red spot fires as aids to identification not as exact beacons. On return, the first track-markers were to drop T.I. at 4800N. 0751E (4 miles /105° Freiburg).

8. Target-marking. Blind markers were to mark the aiming point with T.I. yellow on H2S₂ after a carefully timed run from the centre of the Wurm Sec. aircraft was also to release a string of flares. If positive of their position they might revert to visual identification and drop their T.I. and flares using the Mk. XIV bombsight; but crews were to understand that blind-marking was the primary intention. Visual markers were to mark the exact aiming-point with T.I. red and green; if unable to identify visually, they were only to drop green aiming at the centre of yellows with 2 secs. overshoot. Each visual marker was to carry one bundle of white flares, to be used at the Captain's discretion. Backers-up were to keep the aiming-point marked with T.I. green, aiming at, in order of preference, (1) reds (2) centre of yellows with 2 secs. overshoot (3) centre of greens with 2 secs. overshoot. Supporters were to bomb visually if possible; otherwise at the centre of yellows or at reds. Main Force aircraft were to aim at reds if visible, otherwise at the centre of greens with 1 sec. overshoot.

9. Timing Zero Hour: 2230 hours. Duration of attack: 2226-2244

Blind-markers: 30 Lanc. at zero - 4.

Visual Markers: 10 Lanc. at zero - 3.

Backers Up: 3 Lanc. at zero.
15 Lanc. from zero + 1 to zero + 10.
(alternately 2 per min. and 1 per min.)
1 Lanc. at zero + 11.
1 Lanc. at zero + 12.

Main Force: Supporters: 26 Lanc. at zero - 4.
1st wave: 111 Lanc. from zero + 2 to zero + 6.
2nd wave: 87 Lanc. from zero + 6 to zero + 9.
3rd wave: 80 Lanc. from zero + 9 to zero + 12.

10. Marker Loads.

Blind Markers: 7 Lanc.: 4x4 white flares + 4 T.I. yellow (3LB)
23 Lanc.: 5x4 white flares + 2 T.I. yellow (1 LB)

Visual markers: 10 Lanc.: 1x4 white flares + 10 T.I. red (5LB) + 1 T.I. green

Backers-up: 9 Lanc.: 1x4 white flares + 4 T.I. green (2 LB) + 1 red
11 Lanc.: 4 T.I. green (2 LB) + 2 T.I. yellow (LB).

11. Tactics

1. Tactics (a) WINDOW was to be dropped at the rate of one bundle every 2 minutes from 0222E. to 0910E.; one bundle every half-minute from 1114E. to target to 1124E.; and one bundle every minute from 0836E. to 0129E.

(b) All blind-markers were to transmit between zero - 40 and zero - 30 the best reliably estimated wind velocity. H.Q. No. 8 Group was to broadcast this information to 1 and 5 Group controllers by telephone at zero 20.

(c) All Y-aircraft of P.F.F. (including crews under training, but not visual markers) were to retain 1x1,000 H.C. to drop on Freiburg on the day here for training purposes.

SORTIES.

12.	(a) No. of aircraft despatched.....	206	(90.5%)
	(b) " " " reporting attack on primary area.....	3	(1.0%)
	(c) " " " " " alternative area.....	18	(5.1%)
	(d) " " abortive sorties (tech. defect or manipulative error, 16) (crew failure..... 1) (cause unknown - crashed on takeoff. 1)	7	(2.4%)
	(e) " " aircraft missing.....		

(plus 16 aircraft which also bombed the primary).

3 Portresses of U.S.B.C. accompanied the force; 2 reported attacking the primary and the third returned early. None was lost.

WEATHER EXPERIENCE

13. Basos: Little cloud. Moderate to good visibility. Very local mist.

Route:- Cloudless over Channel. Broken layer cloud, base 2,000 ft., tops 10,000 ft., inland over Franco. Feeble front encountered at 49°N. 05°E. running ENE-WSW, 50-70 miles wide; 10/10ths cloud, base 2,000 ft., tops 10-12,000 ft.; with light rain or drizzle in cloud, S.E. of front there was still much cloud, breaking locally to 1-2/10ths. Visibility moderate.

Munich:- Cloudless. Ground haze. Large patches of layer cloud near the target. No moon. Visibility good.

Winds at 20,000': - To Channel coast: 260-270°/50 m.p.h.
 Channel to 05°E : 260-270°/60-55 m.p.h.
 05°E. to Munich : 250°/40 m.p.h.
 Munich : 250°/30 m.p.h.

NIGHT PHOTOGRAPHIC STATISTICS.

14.	No. of photographs showing ground detail (plotted within 3 miles.....)	47
	(" " " " " outside 3 miles.....)	55
	(unplotted.....)	8
	" " " " " fire tracks (plotted within 3 miles.....)	83
	(" " " " " outside 3 miles.....)	15
	(unplotted.....)	8
	" " aircraft reporting attack.....	266
	" " " " " estimated to have bombed within 3 miles of aiming-point...	179

NARRATIVE OF ATTACK

15. The blind-markers, who opened the attack, successfully illuminated and marked the target, and the first 2 visual markers dropped their rods accurately on the aiming point at zero - 1 and zero + 1 respectively. One minute later, however, 2 salvos of rods cascaded almost simultaneously 2 miles S. and 4 miles S.S.E. of the aiming-point; and the former of these, being the first along the line of approach, attracted most of the attention of the backers-up and main force.

/At zero + 5, another salvo

At zero + 5 another salvo of rods fell 3 miles S.E., and these were soon picked up by greens and bombed by many aircraft. The bulk of the attack was, therefore, concentrated around the 3 salvos of rods to the S. and S.E. of the aiming-point, which was fortunately situated in the N.E. of the town. 5 Group aircraft bombing on D.R., tended to drift away to the S.S.W.

DAY RECONNAISSANCE.

16. Reconnaissance photographs taken on 3rd and 21st October showed the results of 2 major night raids on Munich, carried out on 6/7th September and 2/3rd October, and of 2 daylight attacks by aircraft of the U.S.A.A.F. based in North Africa. It is impossible to estimate exactly how much of the damage was due to the operation under review.

17. Severe if scattered damage was revealed throughout the town, especially in the southern and eastern districts. Most of the incidents were due to fire. Military establishments suffered grievously, including 5 battalions, 4 barracks and the arsenal at Neuhausen. I.G. Farbenindustrie Cameraworks (instrument workers, priority 2) sustained a number of direct hits. Flottweg Motorenwerke (motorcycles) was almost completely destroyed, and a suspected munitions factory, built to resemble a housing estate in Haidhausen, was largely gutted. W. Bussman, gear manufacturer in Ramersdorf, was 75% devastated, the adjacent railway store yards were laid waste, and the extensive store yards and iron forge of B. Kustermanns were heavily damaged. 5 breweries were hit, including the Lowenbrau with its notorious cellar and boergarden. The last of the 3 gasholders in the Zandorf Gasworks, damaged in a previous raid, was destroyed, and the Residenz Museum, where party meetings were held, was partly demolished. Residential property was nowhere devastated, but numerous groups of buildings were blasted and burnt out.

ALTERNATIVE TARGETS

18. 17 Y-aircraft dropped bombs on Freiburg on the return journey according to plan; one of these dropped all its bombs on this target, since they had failed to release over Munich. 2 other aircraft failed to reach the primary and jettisoned their bombs in the areas of Ostend and Bonfold.

SPECIAL EQUIPMENT.

19. H2S. 79 Y-aircraft were despatched - 30 blind-markers and 49 main force aircraft. 28 blind-markers reported attack; 18 dropped T.I. on H2S, 3 dropped T.I. visually, and 7 released bombs only. The timing was good and the standard of accuracy high. 48 Y-aircraft of the main force reached the target, and 4 of these bombed blindly. All Y-aircraft returned safely.

20. GEE. The Eastern Chain operated on the Wyoming frequency and the Southern Chain on the Carolina frequency throughout the raid. The Eastern Chain also transmitted on the Arizona and Zanesville frequencies from 2000 to 0100 hours. The Wyoming frequency was mainly used on the outward route and the Carolina on the return, the average ranges being 270 and 300 miles respectively. Zanesville is the better of the two target frequencies. The A and B signals were both weaker than usual on all Eastern Chain frequencies, but B was the strongest on the Carolina frequency. Jamming was of the usual types, and railings giving a multiple pulse effect were most evident on the Zanesville frequency.

TRIPLY DEFENCES.

21. Flak and Searchlights. Slight to moderate heavy flak was fired from the target defences in the form of a barrage up to 20,000 ft. Many searchlights were active, but operated without any apparent purpose, making little attempt to form cones, except in the later stages of the raid, when the flak becomes considerably quieter. En route, coastal defences were active between Ostend and Dunkirk with moderate heavy flak; but little opposition was reported inland, except at Strasburg, Augsburg, Amiens and Abbeville. 4 returning aircraft were slightly damaged by flak.

/22. Fighters.

Fighters. R/T traffic showed that fighters were operating under the G.C.I. system of Double Bonito, with a running commentary. 8 patrols were overheard using G.C.I. and although they attempted 4 interceptions, they apparently failed to make any contacts. The running commentator guessed Munich as the probable target 30 minutes before zero hour, and 3 minutes after the first markers had gone down, fighters were warned to collect outside Munich, but not to run over the target until 2 minutes later. Shortly afterwards, a flak ceiling of 13,000 ft. was announced. Munich was definitely identified as the main target 6 minutes after zero hour, when the main force began to bomb, but some confusion arose 5 minutes later, when a new wave of bombers was reported to be approaching from the north - presumably referring to the sharp dog-leg taken by the bombers on their return journey. It appears that almost the whole defensive effort on this night was directed towards placing a large fighter force over the target area; searchlights were employed to aid this, and many illuminating flares were dropped.

Despite the intensity of the enemy's fighter effort, only 5 returning aircraft reported damage from this cause. Factors which probably reduced the effectiveness of the enemy's system were (1) the brief duration of the attack; (2) but 30 aircraft were off the target within 30 minutes of the controller's announcement that Munich was the chief objective (2) the diversion of the fighter force when the control was deceived, as a result of the angled homeward route, (3) announcing that bombers were approaching in a direction different to that of the first arrivals (3) the height of attack (most of the force were Lancasters and bombed from above 19,000 ft., where the illumination of flares and searchlights was less effective.)

Our crews claimed the destruction of 4 enemy fighters - an He.109, a D.217, a Ju.88 and an unidentified single-engined aircraft, all to Lancasters in the target area.

CASUALTIES

No. of aircraft missing.....	7 (2.4%)
" " " damaged (flak.....)	4
" " " (fighters.....)	5)..... 13 (4.4%)
" " " (misc. in flight.....)	3)
" " " (on take-off.....)	1)

One aircraft was seen to be destroyed S. of Strasbourg on the outward journey, probably by a fighter. 5 others are believed to have been shot down in the target area, 4 of these after the attack had been in progress for 10 minutes. Earlier loss may have been due to flak. There is no evidence to account for the seventh loss. A Lancaster stalled immediately after taking-off and crashed with the loss of all its crew.

GELSENKIRCHEN : COLOGNE

4 P.F.F. Mosquitoes were despatched on a harassing raid against Gelsenkirchen and a similar number to Cologne. All attacked their targets, which were covered with 10/10ths, cloud to 12,000 ft., on D.R. runs from GEE fixes. All returned undamaged.

MINELAYING

RESULTS

(a) Ho. of aircraft despatched.....	117
(b) " " " reporting mines laid in primary area.....	92 (78.6%)
(c) " " " " " " " " alternative area.....	8* (5.8%)
(d) " " abortive sorties (weather.....)	9)
" " " (tech. defect.....)	5)..... 16 (13.7%)
" " " (late.....)	1)
" " aircraft missing.....	1 (0.9%)

* (4 aircraft laid 8 mines in the Kattogat)
(4 aircraft laid 8 mines off Aalborg)

WEATHER EXPERIENCED

28. Orient:- Little cloud. Good visibility.

St. Nazaire:- 6-9/10ths, base 2-3,000', tops 10,000', clearing later to small amounts. Good visibility.

Frisians and Heligoland:- 4-8/10ths, base 2-3,000', tops 12-15,000' with local showers. Good visibility. Much lightning to north.

Baltic:- 0-6/10ths, base 2,500', tops 6-8,000', with a few showers. Visibility moderate to good. Much thunder-cloud over Central North Sea on route with frequent thunder-storms, lightning and clear ice in cloud. Very bumpy. Cloud broke to small amounts over Danish coast.

No moon over target areas.

RESULTS

29. 117 aircraft were despatched to lay mines in areas ranging from the French Atlantic coast to Sassnitz. 92 reached their targets, and 8 others dropped their mines in useful areas. Altogether, 292 mines were laid. Active opposition was encountered from night fighters and coastal guns, 5 aircraft sustaining damage from each cause. One Halifax did not return from the Sound; there is no evidence of the cause or place of loss. Another Halifax claimed to have shot down a Ju. off the W. coast of Denmark.

LEAFLETS.

30. 17 Wellingtons and Whitleys dispersed leaflets over various towns in Northern France; 4 other aircraft returned early. No losses or casualties were sustained.

LLM/JT/PVD.
BC/S. 26342/1/GRS3,
28th November, 1943.

MUNICH - GELSENKIRCHEN. COLOGNE. Mine laying - Leaflets. 2/3 October 1943.

TARGET	GROUP	AIRCRAFT TYPE	SORTIES	A/C REPORTING ATTACK ON		ABORTIVE SORTIES		MISS-ING.	DAMAGE				ATTACK-ED	NOT ATTACK-ED	RESULTS Tons of Bombs H.E. Inc.
				PRIM. AREA	ALT. AREA	OVER E.T.	NOT OVER E.T.		FLAK	FIGHTER	MISC. IN FLIGHT	OTHER CAUSES			
MUNICH	8 P.P.F.	LANC. III.	68	58	1+10 ^o	-	1	-	-	1AC+1	2AC+1	-	4	-	(P) 285.1 448.3 (A) 16.1 2.2 (M) 12.5 16.8
		LANC. III.	28	26	1+6 ^o	-	1	-	-	-	-	-	-	-	
	1	LANC. I.	9	6	-	1	1	1	-	-	-	-	-	1	Heavy Bombs 8000 4000 (P) - 24 (A) - 3 (M) - 7
		LANC. III.	84	75	-	1	6	2	2	2	2	-	2	-	
	5	LANC. I.	23	21	-	-	2	-	1	-	-	-	2	4	(P) - 24 (A) - 3 (M) - 7
LANC. III.		90	80	1	-	5	4	1	1	1	1E	4	3		
MUNICH TOTAL			294	266	3+16 ^o	2	16	7	4	4AC+1	2AC+1	1E	12	13	
U.S. B.C.		PORTUGAL	* 3	* 2	-	-	* 1	-	-	-	-	-	-	-	
GELSENKIRCHEN	8 P.P.F.	MOS. IV.	4	4	-	-	-	-	-	-	-	-	-	-	Tons of Bombs H.E. F. 3.1
COLOGNE	8 P.P.F.	MOS. IV.	4	4	-	-	-	-	-	-	-	-	-	-	Tons of Bombs H.E. F. 3.1
BOMBING TOTAL			302	274	3+16 ^o	2	16	7	4	4AC+1	2AC+1	1E	12	13	

* Not included in Total. ^o Also Attached Primary.

MUNICH - GELSENKIRCHEN - COLOGNE. Mine laying - Leaflets. 2/3 October 1943 (Cont.)

TARGET	GROUP	AIRCRAFT TYPE	SORTIES	A/C REPORTING ATTACK ON		ABORTIVE SORTIES		MISS-ING.	DAMAGE				ATTACK-ED	NOT ATTACK-ED	RESULTS
				PRIM. AREA	ALT. AREA	OVER E.T.	NOT OVER E.T.		FLAK	FIGHTER	MISC. IN FLIGHT	OTHER CAUSES			
BOMBING TOTAL			302	274	3+16 ^o	2	16	7	4	4AC+1	2AC+1	1E	12	13	
MINE LAYING															
LARSEN	1	WELL. X.	7	7	-	-	-	1	-	-	-	-	-	-	14 mines
ST. HUBERT	1	WELL. X.	9	8	-	-	1	1	-	-	-	-	-	-	16 mines
KATZBACH	3	STIR. III.	32	32	-	-	-	-	-	-	-	2	-	-	95 mines
AALSBORG	3	STIR. III.	6	6	-	-	-	-	-	-	-	1	-	-	18 mines
FRISLAND	3	STIR. I.	2	1	-	-	1	-	1AC	-	-	-	-	-	6 mines
		STIR. III.	16	15	-	-	1	-	-	-	-	-	-	-	77 mines
		LANC. II.	1	1	-	-	-	-	-	-	-	-	-	-	6 mines
PROLON CHANNEL	4	HALL. Ia.	7	6	-	-	1	-	1AC	-	-	1	-	-	12 mines
THE SOUND	4	HALL. II.	1	1	-	-	-	-	-	-	-	-	-	-	2 mines
		HALL. Ia.	7	5	-	-	1	1	1	1B+1	-	-	2	-	10 mines
KIDEL HARBOR	4	HALL. II.	1	1	-	-	-	-	-	-	-	-	-	-	2 mines
		HALL. Ia.	4	2	1+	-	1	-	1	-	-	-	2	-	4 mines
SALSHITZ	6	HALL. V.	10	1	2+4 ^o	-	3	-	-	-	-	2	-	-	2 mines
		HALL. Ia.	2	1	1+	-	-	-	-	-	-	-	-	-	2 mines
HELGOLAND	6	WELL. X.	12	5	-	-	7	-	1AC	-	-	-	-	-	10 mines
MINE LAYING TOTAL			117	92	4+4 ^o	-	16	1	2AC+1	1B+1AC+3	-	-	11	-	276 + 16 ^o mines.
BOMBING & MINE LAYING TOTAL			419	366	11+16 ^o	2	32	8	2AC+7	1B+2AC+4	2AC+1	1E	23	13	

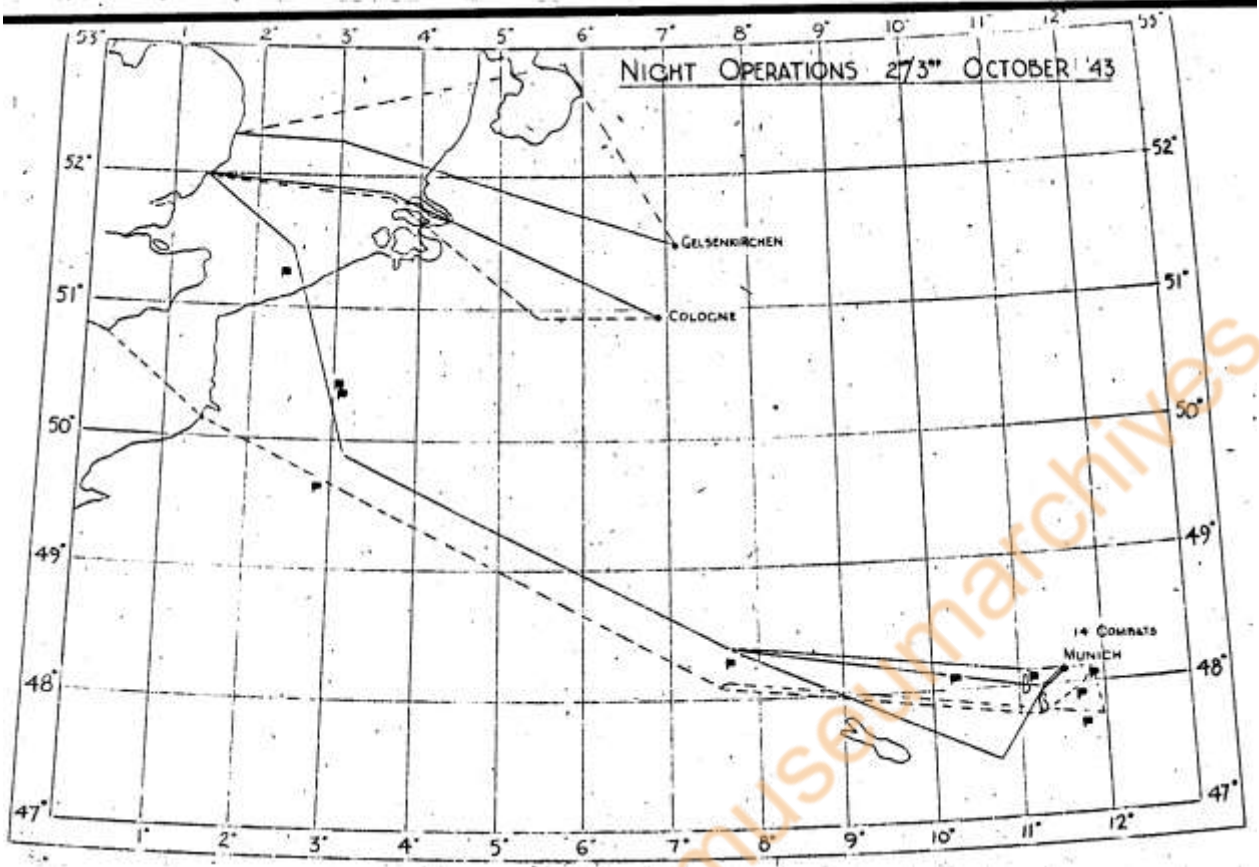
+ Alternative Area Estegat Total Mines Dropped by 4^o A/C - 0
* Alternative Area Aalborg Total Mines Dropped by 4^o A/C - 8

MUNICH - GELSENKIRCHEN - COLOGNE. Mine laying - Leaflets. 2/3rd. OCTOBER, 1943 (Contd.)

TARGET	GROUP	AIRCRAFT TYPE	SORTIES	A/C REPORTING ATTACK ON		ABORTIVE SORTIES		MISS-ING.	DAMAGE				INTERCEPTIONS		RESULTS Tons of Bombs H.E. Inc.
				PRIM. AREA	ALT. AREA	OVER E.T.	NOT OVER E.T.		FLAK	FIGHTER	MISC. IN FLIGHT	OTHER CAUSES	ATTACK-ED	NOT ATTACK-ED	
BOMBING - MINE LAYING TOTAL			419	366	11+16 ^o	2	32	8	2AC+7	1B+2AC+4	2AC+1	1E	23	13	
LE FLANS N. FRANCE	91	WELL. IC	7	6	-	-	1	-	-	-	-	-	-	-	
N. FRANCE	93	WELL. IC	2	2	-	-	-	-	-	-	-	-	-	-	
		WELL. III	5	3	-	-	2	-	-	-	-	-	-	-	
		WELL. X Whit.	4 3	4 2	-	-	-	-	-	-	-	-	-	-	-
LEAFLET TOTAL			21	17	-	-	3	-	-	-	-	-	-	-	
TOTAL			440	383	11+16 ^o	3	35	8	2AC+7	1B+2AC+4	2AC+1	1E	23	13	

91 Group to CHARENTAIS - ANNEVILLE - ALENCON - ROUEN - PARIS - STAFFES - PONS-DEBIEUX

93 Group to AMIENS - LILLE - BEAUVAIS - ST. QUENTIN - COMPIEGNE - ARGES - ARBEVILLE

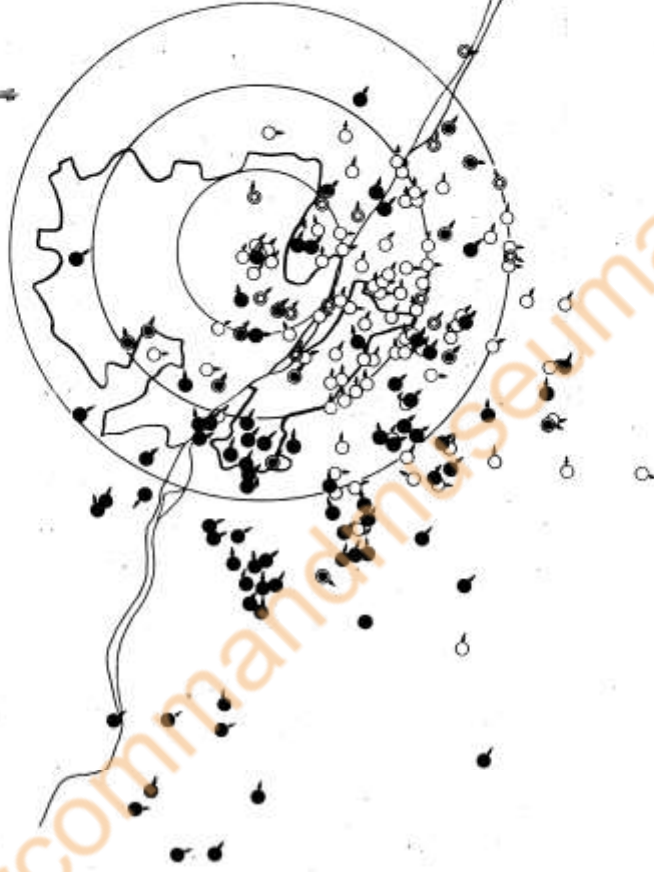


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FINAL PLOT OF NIGHT PHOTOGRAPHS
 TAKEN 2/3 OCTOBER 1943. TARGET: MUNICH

106

SECRET



Scale: 1 inch = 1 mile

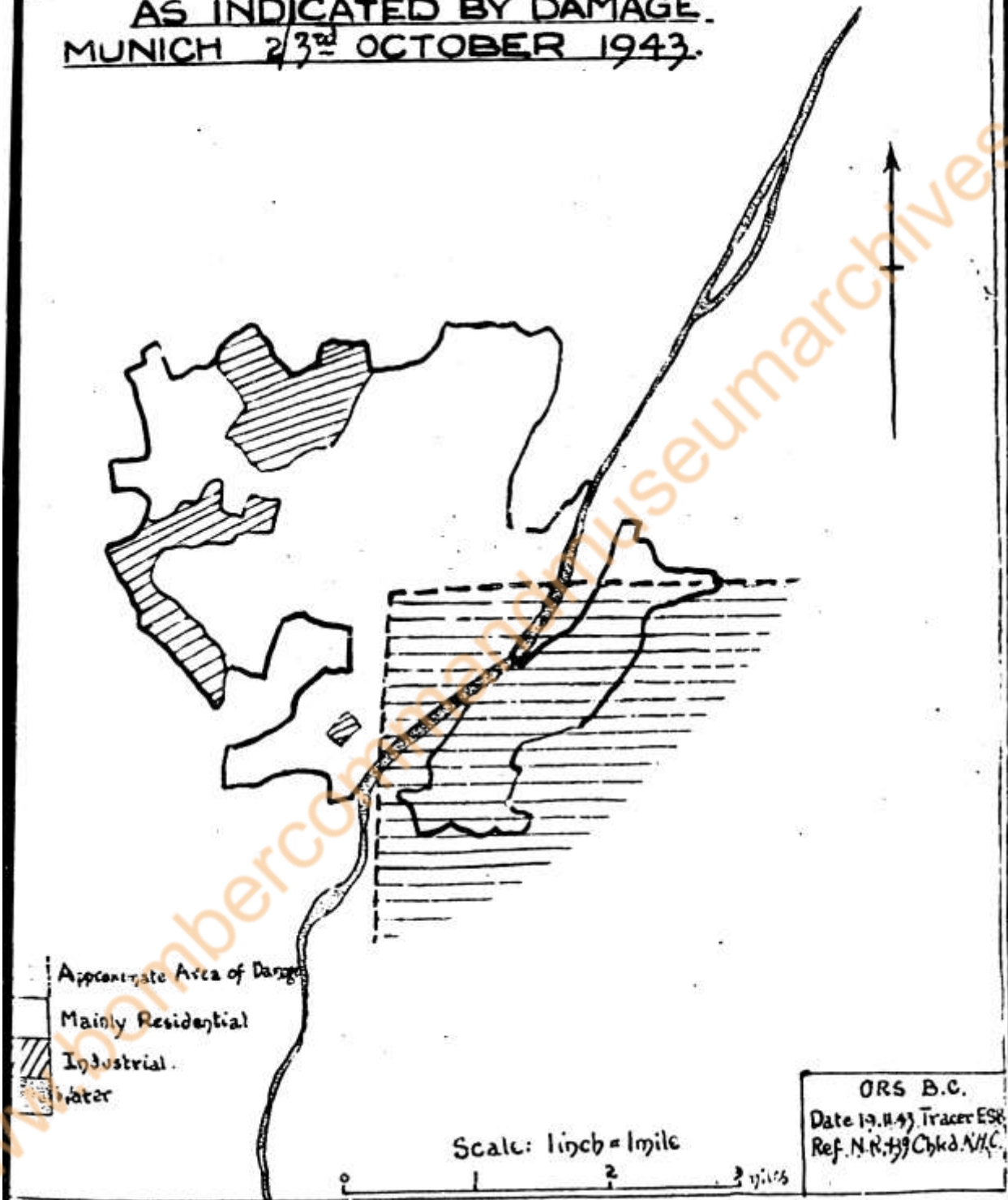
Photographs taken with bombing		
	PFF marker aircraft	Man force aircraft
Plotted by ground detail	●	●
Plotted by jets	○	○
Plotted	By ground detail	By jets
Within 3 miles	47	83
Outside 3 miles	55	15
Unplotted	8	8
Number of prints (with bombing) examined:		210

ORIGIN 307 B
 8-14-43. Form 12
 Adj. Major AM:CC.

www.bombercommandmuseumarchives.ca

SECRET

DIAGRAM SHOWING LOCATION OF ATTACK
AS INDICATED BY DAMAGE.
MUNICH 2/3rd OCTOBER 1943.



ORS B.C.

Date 19.11.43 Tracer ESK
Ref. N.R.49 Chkd. N.H.C.

Scale: 1 inch = 1 mile

0 1 2 3 miles

BOMBER COMMAND REPORT ON NIGHT OPERATIONS

3/4th OCTOBER, 1943

KASSEL ; HANNOVER ; COLOGNE ; AACHEN ; MINELAYING ; LEAFLETSSUMMARYKASSEL

1. A force of 540 heavy bombers, with 7 OBOE Mosquitoes as route-markers, were despatched to bomb Kassel. The Y-type aircraft which acted as blind-marker, overshoot the aiming-point to the S.E. and E, with the result that the outlying district of Bettenhausen was heavily damaged, the nearby village of Sandershausen half destroyed. A later shift to the N, damaged the villages of Wolfsanger and Ihringhausen severely. Much industrial damage was done outside the fully built-up area, the most important being to the locomotive and armament factories of Henschel and Sohn; a large ammunition depot W. of Ihringhausen was 75% destroyed. 24 bombers were lost and 3 enemy fighters destroyed.

HANNOVER

2. 10 Mosquitoes were despatched to drop bombs and T.I. on Hannover as a diversion for the main attack. 9 completed the attack, making timed runs from T.I. red dropped as route-markers for the Kassel raid. All returned undamaged.

COLOGNE (KNAPSACK)

3. 8 of 12 OBOE Mosquitoes bombed Knapsack using their special equipment, and one bombed on D.R. The 3 other aircraft dropped their loads on Cologne city. All the Mosquitoes returned safely.

AACHEN

4. An operational trial of Mk.II OBOE was made by 4 Mosquitoes, one of which made a successful run. The other 3 attacked Aachen on D.R., and all returned undamaged.

MINELAYING

5. 7 Stirlings laid 42 mines off the Frisian Islands without incident.

LEAFLETS

6. 6 of 7 aircraft despatched by Training Groups scattered leaflets over towns in northern France, all returning safely.

WEATHER FORECAST

7. Estimated midnight position of fronts: (i) warm 58°N. 03°E. to Tynemouth to the brake Dook; (ii) cold over continent from 50°N. 20°E. to Stuttgart to Limoges. Masses: iit for take-off, with well-broken strato-cumulus, tops 6,000 ft., base 2,000 ft., and 6-9/10ths medium cloud above. On return, well-broken strato-cumulus and cumulus, increasing to 6-9/10ths in N., with medium cloud above.

Continent: N. of a line Brno - Mannheim - Tours, small amounts of cloud and good visibility, except for broken layer cloud on N. coastal strip, over Denmark and Baltic Sea.

Route: medium cloud extending to 5° or 6°E, with only patches below.

Targets: only small amounts of cloud below cirrus levels, though strato-cumulus may form. Visibility moderate to good.

Winds:

<u>Winds:</u>	<u>750 nb.</u>	<u>500 nb.</u>	<u>300 nb.</u>	to OBO
Bases N. of 53°-2'E.	280°/40 mph	280°/65 mph	280°/85 mph	<u>WEATHE</u>
" S. of 53°N-2°E.	280°/35 mph	280°/55-60 mph	300°/55 mph	13.
2°S - Hannover	270°/35 mph	270°/55-60 mph	270°/50 mph	affect
Hannover - Kassel	260°/20-25 mph	280°/30 mph	300°/35 mph	inside
Kassel - Abbeville	270°/20-25 mph	270°/30 mph	300°/35 mph	Small
Abbeville - N.Bases	280°/25-35 mph	280°/40-55 mph	300°/40-50 mph	patch

KASSEL

PLAN OF ATTACK

8. Route: East Coast - 53°20'N. 04°00'E. - North end of Texel Island - 52°09'10"E. - 51°47'N. 08°40'E. - TARGET - 51°12'N. - 09°38'E. - 50°30'N. 07°20'E. - 50°18'N. 01°32'E. - Beachy Head.

9. Method of attack (a) All blind markers were to drop T.I. red at 52°28'N 09°12'E. (3 miles W. of Steinhuder Meer). Blind markers and backers up were to release T.I. white on Padorborn (43 miles, 310° Kassel). 7 Mosquitoes were to drop T.I. red at 50°23'N. 06°05'E. and T.I. green at 50°34'N. 06°20'E. (10 miles S. and N. of the track passing S. of Aachen) on the return route.

(b) Blind markers were to release T.I. yellow and strings of flares over the target, either blindly on H2S, or visually if certain of identification. Visual-markers were to drop 10 reds + 1 green in salvo on the aiming-point if identified. Otherwise they were to aim T.I. green to overshoot the estimated centre of the T.I. yellow by 3 seconds. Backers up were to maintain the marking by aiming at (i) T.I. red, or to overshoot by 3 seconds the estimated centre of (ii) T.I. yellow or (iii) T.I. green.

(c) Supporters were to bomb visually if possible. Otherwise they were to aim at T.I. red or the estimated centre of T.I. yellow. The main force were to aim at T.I. red or the estimated centre of T.I. green.

(d) All Mosquito aircraft with qualified crews were to carry 1 release-point flare (red with green stars) for use if cloud conditions made it necessary.

10. Timing Zero hour: 2115 hours. Duration of attack: 2111-2138 hours

Pathfinder Force

24 blind markers	(6 Hal. + 18 Lanc.)	at Z-4
11 visual markers	(2 Hal. + 9 Lanc.)	at Z-3
4 backers up	(2 Hal. + 2 Lanc.)	at Z.
2 " "	(1 Hal. + 1 Lanc.)	at Z+1
19 " "	(4 Hal. + 15 Lanc.)	from Z+2 to Z+20, one per minute

11. Tactics WINDOW was to be dropped at one bundle per 2 minutes from 04°00'N 09°10'E.; at 2 bundles per minute from 09°10'E. to target to 09°38'E.; at one bundle per minute from 09°38'E. to 01°32'E.

After the aircraft detailed for Kassel had turned south from the point of Hannover, 10 Mosquitoes were to make a timed run from the T.I. red route-markers, drop T.I. green and bombs on Hannover.

SORTIES

12. No. of aircraft despatched.....	500
No. of aircraft reporting attack on primary area	477 (83%)
No. of aircraft reporting attack on alternative area	6 (1.2%)
No. of abortive sorties (technical and manipulative defect	29
(navigational error	1
(late take-off	1
(attacked by fighter	1
(crashed soon after take-off	1
No. of aircraft missing	24 (4.8%)

1/6 of the 7 route-markers ...

6 of the 7 route-markers completed the task; one sortie was abortive owing to OBOE failure.

WEATHER EXPERIENCED

13. Home bases: fit all night except for some light rain or drizzle which affected Yorkshire from midnight onwards.
Route: much layer cloud, base 3-4,000 ft. tops 5-6,000 ft. to 50 miles inside enemy territory; mainly 9-10/10ths., but occasionally breaks to 4-6/10ths. Small patches of medium cloud above. Cloud then broke to nil, with a few local patches of 4-6/10ths layer cloud. Visibility moderate.
Kassel: cloudless. Visibility moderate with some haze. Wind at 20,000 ft. 260°/35-40 m.p.h. No moon during attack.

NIGHT PHOTOGRAPHIC EVIDENCE

14. No. of photographs with bombing examined	147	
No. of photographs showing ground (plotted within 3 miles ..95)	} 132	
" " outside 3 miles..27)		
" " unplotted		10)
No. of photographs showing fire-tracks	} 315	
" " (plotted within 3 miles ..20)		
" " outside 3 miles..7)		10)
No. of aircraft estimated from the photographic evidence to have bombed within 3 miles of the aiming point		360

NARRATIVE OF ATTACK

15. The T.I. yellow and white flares dropped by the blind markers were fairly well concentrated, but overshot the aiming point by distances up to 3 miles, the majority of the markers falling in the Bettenhausen district. Owing to haze and glare the visual markers could not identify the aiming point, and brought back all their T.I. red. The T.I. yellow were well supported by T.I. green dropped by the backers up and 6 of the visual markers, and 2 main concentrations of T.I. green developed, one at Bettenhausen and the other 2 miles N.E. of the aiming point round a single T.I. yellow. The main force was at first divided between these concentrations, which merged into one approximately circular fire area, about 3 miles in diameter and centred 1 1/2 miles N.E. of the aiming point, by Z+7. The last T.I. yellow burnt out at about this time, and the attack spread back to the N.W., partly owing to undershooting by late backers-up and partly, it is believed, to red and green pyrotechnic decoys in action 3 to 4 miles N. of Kassel, which attracted some of the bombing.

AIR RECONNAISSANCE

16. Photographs revealed that the greater part of the damage was outside the built-up area of the town, concentrations of damage to property and craters being found in the S.E. industrial area of Bettenhausen and in villages N. and S. of the town. Business and residential property in the village of Wolfsanger, about 1 1/2 miles N.E. of Kassel, and in Sandershausen and Ihringhausen, 2 miles and 3 miles to the E. and N. respectively, were severely damaged; Wolfsanger and Sandershausen were at least half destroyed.

Chief of the many important industries of Kassel are the large locomotive and armament factories of Henschel and Sohn, which are in 3 associated groups in the N. of the town. Several buildings of the original works (werke 1) producing locomotives, lorries and probably A.F.Vs. were destroyed or damaged. Among other works in this area which sustained damage is a factory producing machinery and other making rolling stock. The most important industries besides Henschel and Sohn, however, are in the district of Bettenhausen, S.E. of Kassel. Among others are the plant of Spinnfaser A.G., producing textile yarns from staple fibre, reputed to be the largest of its kind in Europe, the works of Salzmam and Co., with weavers and large suppliers to the German army, and the aircraft factory of

/Fieseler Flugzeugbau

Pioseler Flugzeugbau G.m.b.H., engaged in the production of major components of P.W.190s and other aircraft, and several concerns manufacturing machine tools, chemicals. All of these were damaged, and several were still burning on the day after the raid. In all about 30 factories and industrial premises were partly destroyed or damaged.

18. In the outskirts of the town and surrounding districts are several districts and military depots, many of which were severely damaged. More than two-thirds of the large Fasanenhof Barracks, N. of the town was destroyed, and the military barracks near Wolfsanger, known to be housing flak personnel, lost 30% of the barrack blocks, and 36 out of an encampment of 38 huts.

19. The most spectacular damage was in the ammunition depot W. of Ihringhausen which was one of the largest in Germany. 84 of 110 buildings containing explosives or stores were destroyed by fire or by explosions which left huge craters. The largest crater measured over 300' across at its widest point.

ALTERNATIVE TARGETS

20. 6 aircraft attacked alternative targets in the areas of Texel, Damme, Mekkings, Minden, Meppen and between Bielefeld and Paderborn. One bomber, which also attacked Kassel, dropped part of its load near Hazelnurme.

SPECIAL EQUIPMENT

21. OBOE 6 of the 7 Mosquitoes despatched as route markers completed the task successfully, but the seventh sortie was abortive owing to OBOE failure.

22. H2F The 24 Blind markers detailed all reported attack, 13 with T.I., flares and H.E., and 11 with H.E. only. The timing of the aircraft was good, almost all of them overshot the aiming point, attacking between 1 and 3 miles to the S.E. or E.

23. 56 Y-type aircraft carried H2S as a navigational aid, and 53 reported attack, 47 with serviceable sets. 2 aircraft returned early and one was lost.

24. SEE The Eastern Chain operated on the Wyoming and the Southern Chain on the Carolina frequency throughout. The Eastern Chain also operated on the Zanzibar and Maryland frequencies from 1947 to 2317 hours. Jamming was of the usual type, being relatively weak on the Maryland frequency, which had not been used for some time, and consequently gave the best results. Many fixes were plotted past 07°00'E. on the outward journey and beyond 05°30'E. on the return, where the signals were weaker. The average results for the whole raid were better than

ENEMY DEFENCES

25. Flak and Searchlights Searchlights and heavy flak were encountered at the N. end of Texel Island, but elsewhere on route little flak was met. The defences of Eulen and Brunen were seen to be in action, however, and on the homeward route many aircraft which strayed off the track were fired at by the Cologne/Bonn area defences. Warnings given by controls to enemy fighters also indicated that the guns at Hannover and Brunswick were in action, with ceilings of 18,000 ft. and 11,500 ft. respectively.

26. In the target area heavy barrage flak, varying in height from 16,000 to 25,000 ft. and much light flak up to 16,000 ft. was reported, despite the fact that control announced a ceiling of 14,500 ft. over Kassel. Searchlights were numerous but not very accurate, possibly owing to ground haze. A few aircraft were illuminated and subjected to intense flak fire. In all 10 aircraft were hit by flak.

27. Fighters Intercepted wireless traffic showed that G.C.I. activity was greater than it had been for some time. 16 pursuits were overheard, 9 against outbound and 7 against homebound bombers. The identified areas of operation included the Frisian Islands, Deelen/Munster, Trier and Wesermünde/Brandenburg.

/One victory

... victory claimed near Terschelling agreed with reports given by bomber crews.

8. The majority of the fighters were controlled by running commentaries from Texel and Deelen. The bomber stream was first announced shortly after it crossed the Dutch coast, and Hannover was given as the probable main target. However, after the main stream turned south, and the small raid on Hannover was over, Brunswick was suggested as the objective, and fighters were ordered there. It was not until 2118 (7 minutes after the first markers had been dropped) that Kassel was announced as the target. By the time the fighters reached Kassel the attack was more than half over.

9. 54 interceptions, including 19 attacks, were reported. Only 2 of the 12 attacks in or near the target took place before 2122, giving further proof of the success of the feint towards Hannover. On the outward route 2 attacks occurred between Texel and Leeuwarden, one shortly before reaching the Steinhuder Meer, and one near Paderborn. One attack took place on the return route before reaching the turning-point S. of Bonn, and the remaining attack was made by an intruder. 15 aircraft were damaged by fighters, of which 3 were destroyed.

CASUALTIES

10.	No. of aircraft missing	24 (4.4%)
	No. of aircraft damaged	
	(flak .....9*)	
	(fighter ....14)	
	(flak &	37 (6.9%)
	(fighter .....1)	
	(other causes 13)	

* One also hit by incendiaries.

11. It was estimated that at least 7 aircraft were shot down by fighters and 9 by flak. Fighter losses occurred near Texel, Leeuwarden, Steinhuder Meer, Paderborn, the target (2) and the route-markers S. of Aachen. Aircraft were shot down by flak in the areas of Texel, Leeuwarden, Dipenau, Kassel (2) and the Cologne/Bonn area (4). 2 bombers collided and crashed in the target area. The fate of the remaining 6 bombers is unknown.

12. 3 bombers were hit by incendiary bombs and 3 by stray bullets. 3 other aircraft were damaged in landing accidents, one after an early return.

HANNOVER

13. A diversionary attack on Hannover was made by 10 Mosquitoes, which left the main bomber stream when it turned southwards. 9 aircraft completed the mission, dropping T.I. green and H.E. on a D.R. run from the groundmarkers at the Steinhuder Meer. A good concentration of T.Is. was reported, with a single T.I. some 12 miles to the N. Several bombs were seen bursting among the T.Is., and 4 fires were also observed. The tenth sortie was abortive owing to a technical defect. All returned undamaged.

COLOGNE (KNAPSACK)

14. 12 St.I. OBOE Mosquitoes were despatched to attack Knapsack, and 8 bombed the primary target on OBOE. The others bombed on D.R., following OBOE failures; one of these received signals until within one minute of release time on D.R., and attacked Knapsack; the other 3 bombed Cologne. Bomb-bursts and one large explosion were seen in the Knapsack area. One Mosquito sustained minor flak damage.

/AACHEN

AACHEN

35. A further operational trial of OBOE Mk.II was made on this target by Mosquitoes. One of these bombed successfully on OBOE; this was the first occasion on which a Mk.II OBOE Mosquito had been able to do so. The remaining 3 aircraft did not receive adequate signals, and bombed on D.R. A few bomb bursts were seen in the target area. None of the Mosquitoes was damaged.

MINELAYING

36. 7 Stirlings laid a total of 42 mines off the Frisian Islands without incident. One of these aircraft was equipped with H2S, but did not use it to lay its mines, although the set was serviceable in the primary area.

LEAFLETS

37. Leaflets were scattered over Versailles, Chartres, Paris and Rouen, 6 of 7 aircraft despatched by Training Groups. The seventh sortie was aborted owing to a technical failure. All the aircraft returned undamaged.

EMO/JT.
BC/S.26342/2/ORS3,
29th. November, 1943.

AMENDMENT

Night Raid Report No. 356, paragraph 27. Delete the last 14 words ("and allmethod.")

TARGET	GROUP	ALIGNMENT TYPE	SORTING	A/C REPORTING		AGGRESSIVE		MISC	DAMAGE				DESCRIPTIONS		RESULTS	
				ATTACK ON	ALT.	OVER	NOT		FLAK	FIRING	MISC.	OTHER	ATTACK	NOT		
				PRIM. AREA	ALT. AREA	R.R.	OVER R.T.	MG			IN FLIGHT	CAUSES	ED	ATTACK-ED	Tons of Bombs H.E. Inc.	
KASSEL	8	Hal.Ia	54	54	-	-	-	-	1	1	1	-	2	-	P. 68.6 885.2 A. 4.5 11.2 M. 16.9 45.7	
	PPF	Lanc.III	44	43	1°	-	-	1	-	-	1x0	-	-	2		
	8	Hal.II	1	1	-	-	-	-	-	-	-	-	-	-		
	M.F.	Hal.Ia	6	6	-	-	-	-	-	-	-	-	-	-	-	Heavy Bombs 4000lb. P. 189 A. 2 M. 4
		Lanc.III	41	40	-	-	-	-	-	-	-	-	-	-	-	
	1	Lanc.I	5	4	-	-	-	1	-	-	-	-	-	-	-	
	3	Lanc.III	52	47	-	-	-	5	-	-	-	-	-	-	4	
		Stir.I	1	1	-	-	-	-	-	-	-	-	-	-	-	
	3	Stir.III	112	95	4	3	4	4	6	1x0+1 1x0*	3x0+3	2x0	2B	8	7	
		4	Hal.IIIV	48	38	-	-	6	4	-	1	2	1B	1	2	
4	Hal.Ia	79	70	-	-	3	3	6	2	1x0	1x0+1	-	1	6		
	5	Lanc.I	16	15	-	-	-	1	-	-	1	-	-	-		
5	Lanc.III	76	71	1	-	2	2	2	-	2x0+1*	1	-	4	5		
	6	Hal.IIIV	54	44	1	3	3	3	-	2B	-	-	3	8		
6	Hal.Ia	21	18	-	-	2	1	1	1x0+2	1B	-	-	-	1		
	KASSEL TOTAL			540	477	6x1°	6	27	24	3x0+6	2B+1B+ 6x0+5x1*	1x0+6	2B+1B	19	35	
ROUTE MARKERS			8	5	-	1	-	-	-	-	-	-	-	-	-	
- M			8	5	-	1	-	-	-	-	-	-	-	-	-	
KASSEL			1	1	-	-	-	-	-	-	-	-	-	-	-	
ROUTE MARKERS TOTAL			7	6	-	1	-	-	-	-	-	-	-	-	-	
KASSEL-ROUTE MARKER TOTAL			547	483	6x1°	7	27	24	3x0+6	2B+1B+ 6x0+5x1*	1x0+6	2B+1B	19	35		

- * Also damaged by incendiaries
- * Also hit by flak.
- * Also attacked Primary

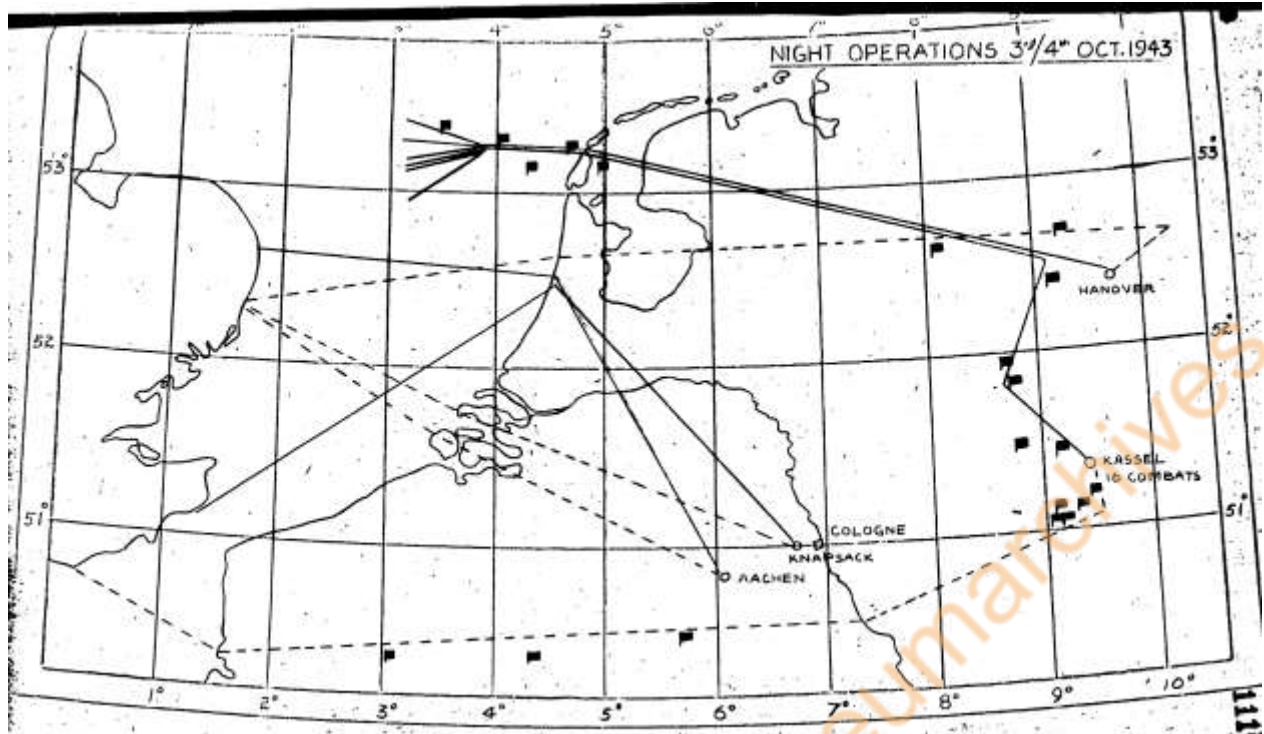
KASSEL: HANNOVER: AACHEN: COLOGNE: Minselaying: Leaflets:
1/4th. OCTOBER, 1943 (Contd)

TARGET	GROUP	ALIGNMENT TYPE	SORTING	A/C REPORTING		AGGRESSIVE		MISC	DAMAGE				DESCRIPTIONS		RESULTS
				ATTACK ON	ALT.	OVER	NOT		FLAK	FIRING	MISC.	OTHER	ATTACK	NOT	
				PRIM. AREA	ALT. AREA	R.R.	OVER R.T.	MG			IN FLIGHT	CAUSES	ED	ATTACK-ED	Tons of Bombs H.E. Inc.
KASSEL - ROUTE MARKER TOTAL			547	483	6x1°	7	27	24	3x0+6	2B+1B+ 6x0+5x1*	1x0+6	2B+1B	19	35	
COLOGNE	8	Moag.IX	2	2	-	-	-	-	-	-	-	-	-	-	P. 7.0
(KILPATRICK)	PPF	Moag.IV	10	7	3	-	-	-	1	-	-	-	-	-	A. 2.3
COLOGNE TOTAL			12	9	3	-	-	-	1	-	-	-	-	-	
AACHEN	8	Moag.IX	4	4	-	-	-	-	-	-	-	-	-	-	P. 3.1
HANNOVER	8	Moag.IX	2	2	-	-	-	-	-	-	-	-	-	-	P. 1.0 2.0
	PPF	Moag.IV	8	7	-	-	-	-	-	-	-	-	-	-	
HANNOVER TOTAL			10	9	-	-	1	-	-	-	-	-	-	-	
BOMBING TOTAL			573	505	9x1°	7	28	24	3x0+7	2B+1B+ 6x0+5x1*	1x0+6	2B+1B	19	35	
MINSLEYING	5	Stir.III	7	7	-	-	-	-	-	-	-	-	-	-	42 mines
FOULCLES	93	Well.III	1	-	-	-	-	-	-	-	-	-	-	-	
L. P. F. G. S.	4	Well.X	4	4	-	-	-	-	-	-	-	-	-	-	
N. P. F. G. S.	2	Whit.	2	2	-	-	-	-	-	-	-	-	-	-	
LEAFLET TOTAL			7	6	-	-	1	-	-	-	-	-	-	-	
TOTAL			587	518	9x1°	7	29	24	3x0+7	2B+1B+ 6x0+5x1*	1x0+6	2B+1B	19	35	

1/4th. OCTOBER, 1943 (Contd)

- * Also hit by flak.
- * Also attacked Primary.

www.bombing.com/forums/seumarchives.ca



www.bombercommandmuseumarchives.ca

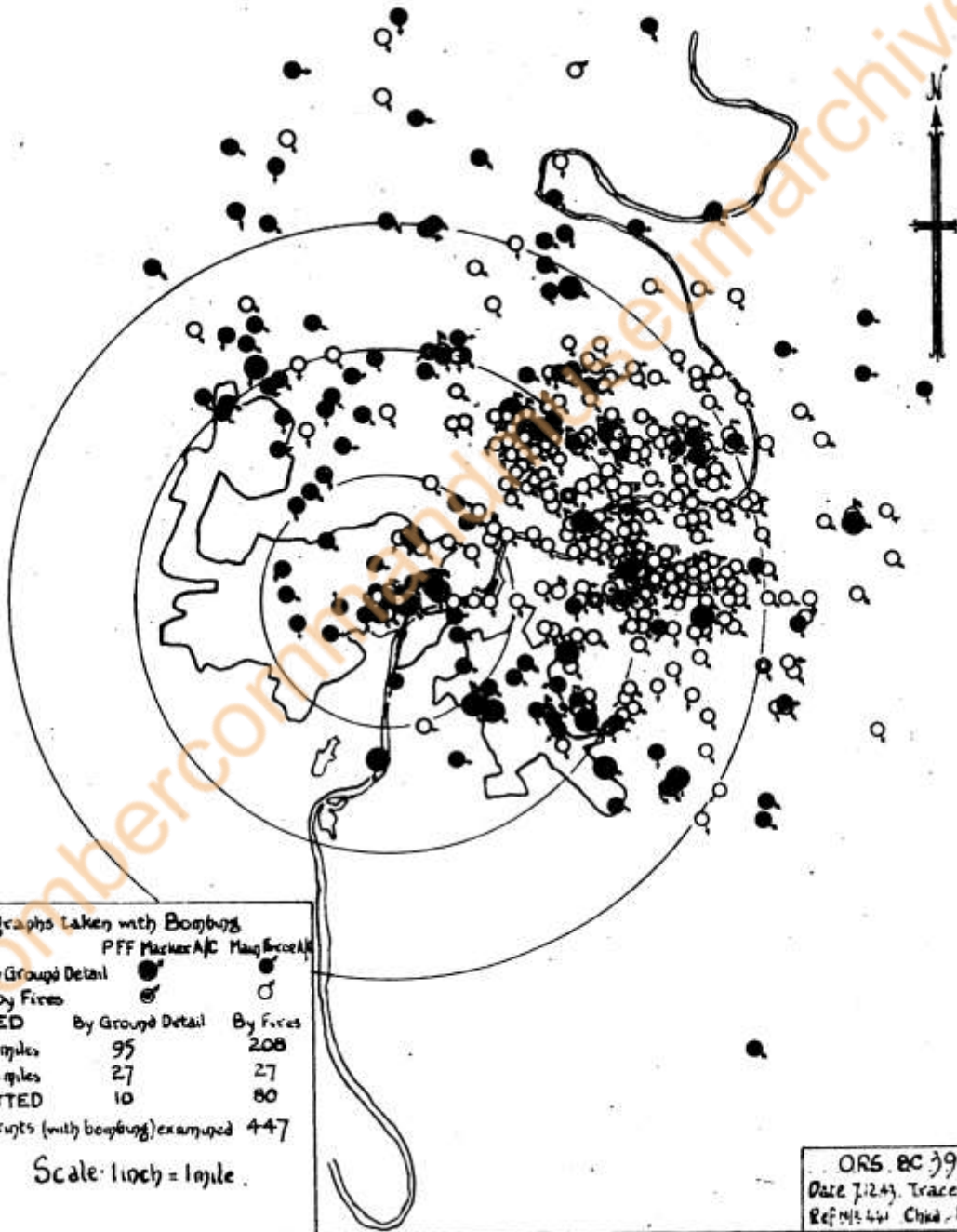
FINAL PLOT OF NIGHT PHOTOGRAPHS

SECRET

TAKEN 3/4th OCTOBER 1943

TARGET **KASSEL**

113



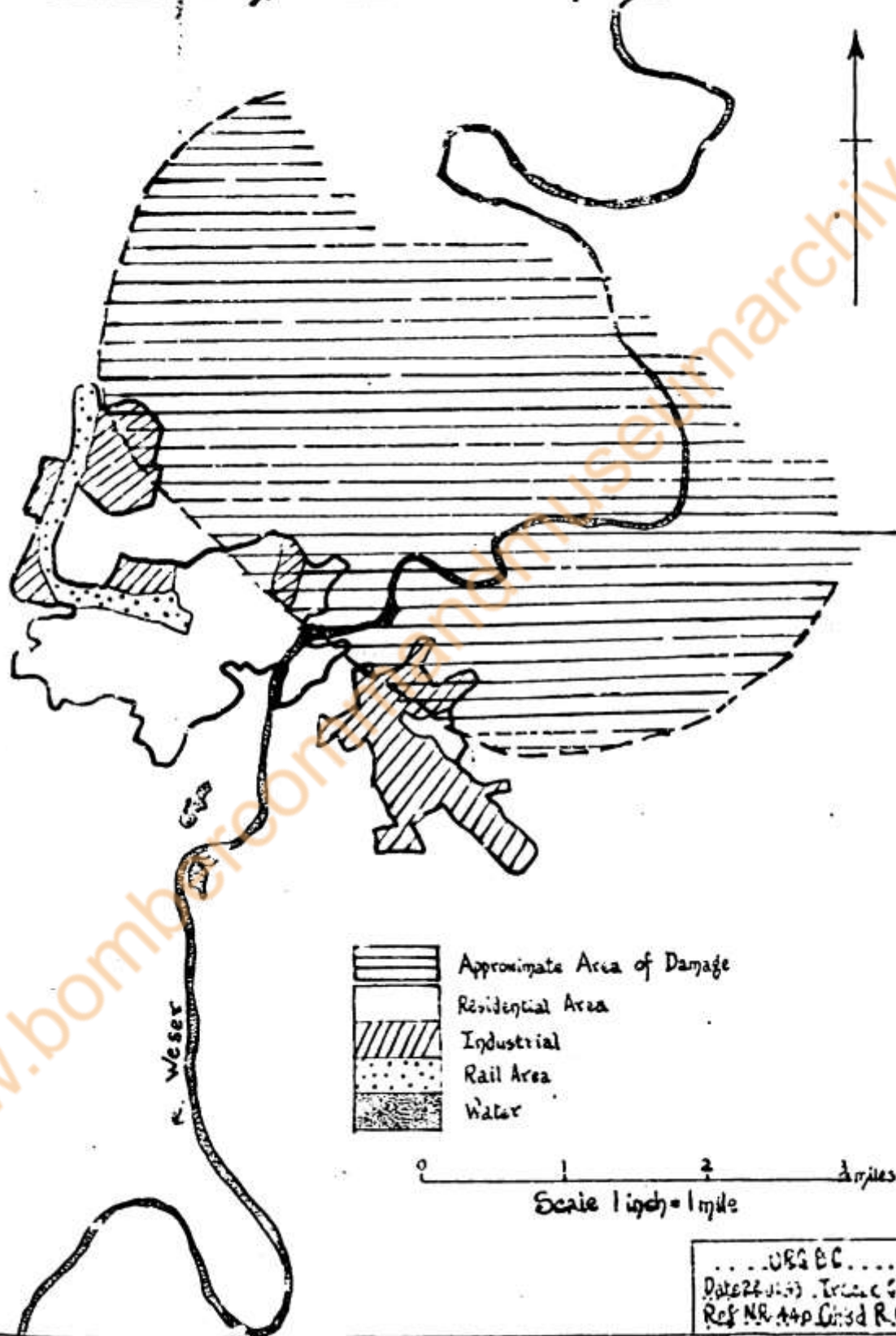
Photographs taken with Bombers		
	PFF Mackay	A/C Mangrove
Plotted by Group Detail	●	○
Plotted by Fires	⊙	⊚
PLOTTED	By Group Detail	By Fires
Within 3 miles	95	208
Outside 3 miles	27	27
UNPLOTTED	10	80
No. of prints (with bombers) examined 447		

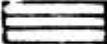
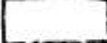
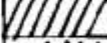
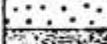

Scale: 1 inch = 1 mile.

ORS. BC 395A
Date 7/24/43. Tracer 68
Ref. 44. Chid. 100

SECRET

DIAGRAM SHOWING LOCATION OF ATTACK
AS INDICATED BY DAMAGE
KASSEL 3/4th OCTOBER 1943.



-  Approximate Area of Damage
-  Residential Area
-  Industrial
-  Rail Area
-  Water

0 1 2 miles
Scale 1 inch = 1 mile

... URG BC ...
Date 24.11.53. Trace 526.
Ref NR 44p Grid R.H.C.

BOMBER COMMAND REPORT ON NIGHT OPERATIONS,

4/5th. OCTOBER, 1943.

FRANKFURT: LUDWIGSHAVEN: Knapsack: Aachen: Minelaying: Leaflets.SUMMARY

Frankfurt 341 heavy bombers delivered a most concentrated attack against Frankfurt, devastating the E. of the town and causing enormous damage to the important East Harbour. The blind-markers dropped their T.I. accurately over the docks and the city centre, and these were easily identified by the main force in clear weather conditions. 10 British aircraft were lost, together with one of the 3 U.S. Fortresses which accompanied the force. 2 enemy fighters were probably destroyed.

Ludwigshaven 66 Lancasters were detailed to carry out a diversionary attack on Ludwigshaven, to mislead the night fighters, but the enemy controller's reaction was unexpectedly slow, so that the attack on Frankfurt had started before the fighters could swarm to the wrong target. This effort was not well concentrated, owing to inexplicably bad marking, but a number of industrial targets were hit. One aircraft was lost.

Knapsack 12 OBOE Mosquitoes were despatched on a precision attack, with the power station at Knapsack as the objective. 5 bombed the primary, and 5 others attacked useful targets. All returned safely.

Aachen The first G-H operational trial was held on this night, one Mosquito being sent to drop bombs on Aachen. The apparatus was not actually used in bombing, owing to a confusion as to which frequencies were to be employed. The aircraft attacked visually and returned undamaged.

Minelaying 4 Stirlings laid 14 mines in the Gironde estuary; a fifth dropped its mines safe. No casualties were sustained.

Leaflets 6 Wellingtons, out of a force of 8, dispersed leaflets over towns in Northern France. All returned safely.

WEATHER FORECAST

7. Midnight frontal positions: (1) warm from 60°N. 14°E. to 57°N. 15°E. to 53°N. 10°E. to 50°N. 02½°E. to Havre. (2) cold from 60°N. 12°E. to 55°N. 22½°W. to Flamborough to 53½°N. 05°W., becoming warm over N. Ireland; but wave developments in this front may modify its position.

Bases:- At 1800 hours, cold front will lie from east to west across lines; by midnight it will have moved to just S. of 3 and 8 Groups, or possibly still further S. The front may be quite severe, with rain, cloud based locally below 1,000', and extending solidly to 15,000'; but freezing level will not fall below 8,000' in the frontal cloud, so that it should be practicable to fly through the front below freezing level and then climb outside the front. Possibly the cloud will be well layered with deep lanes above 12,000'. For take-off, 4 and 6 Groups will be clear of the front, with well broken cloud; 1 and 5 Groups will be in frontal zone, with 10/10ths. at 1,500'; 3 and 8 Groups, S. of the front, will have 6-9/10ths. at 1,500-2,000'. For return (from Frankfurt), 1, 4, 5 and 6 Groups will be fit, with little cloud; 3 and 8 Groups will be mainly fit, but some airfields may have cloud based below 1,000'. Diversion areas: S. coast and Training Groups. High winds all night, especially N. of 53°N.

..../Germany:-

Germany:- Much strato-cumulus in zone of warm front over N. Germany, base 1-2,000', tops 5-8,000'. Cloud will decrease S.E'wards to small amounts. Frankfurt: near the edge of 10/10ths. cloud, even chance of either clear skies or large amounts of cloud. Stuttgart will be safer.

France:- Variable amounts of strato-cumulus inland. W. coast: little cloud except in extreme N., where there will be 10/10ths. at 1,500' or below.

Frisians and Heligoland:- Much cloud at 1,500' or lower in rain. Better conditions late in night after front has passed.

Wind to Frankfurt:- 260-270°/20-30 m.p.h.

PLAN OF ATTACK

8. Route Beachy Head - 50°20'N. 01°36'E - 49°34'N. 07°52'E - FRANKFURT - 50°16'N. 01°35'E - Beachy Head.

9. Route-marking 12 blind markers and 9 backers up were to drop T.I. red at 49°46'N. 06°29'E (10 miles 255° Trier). On the return route, 4 Mosquitoes were to release T.I. red at 50°23'N. 06°04'E (27 miles S. of Aachen) and T.I. greens at 50°27'N. 06°11'E (23 miles 167° Aachen), to starboard of the main force track.

10. Target marking (a) Blind-markers were to illuminate the aiming-point with T.I. yellow, either blindly on H2S or visually, if positive of their position. Each aircraft was also to release a string of flares.

(b) Visual markers were to mark the aiming-point with reds and greens in salvo after positive visual identification. Each aircraft was to carry one bundle of white flares to be used at the Captain's discretion. If unable to identify visually, they were to aim greens only at the centre of all yellows burning, with 2-second overshoot.

(c) Backers-up were to maintain the marking with greens aimed at (in order of preference): reds, the centre of yellows, the centre of greens (overshooting by 2 seconds in either of the two last-named eventualities).

(d) Supporters were to identify the aiming-point visually, otherwise to aim at reds or the centre of yellows.

(e) Main force aircraft were to bomb on reds or the centre of greens, overshooting in either case by 1 second.

11. Timing Zero hour: 2130 hours. Duration of attack: 2126-2148 hours

<u>Blind-markers</u>	15 aircraft at zero - 4
<u>Visual-markers</u>	5 " " zero - 3
<u>Backers-up</u>	2 " " zero
	2 " " zero + 1
	1 " " zero + 2
	1 " " zero + 3

<u>Main force</u>	
Supporters	4 Mosq. + 21 Lanc. at zero - 4
1st. wave	56 Lanc. from zero + 2 to zero + 5
2nd. wave	82 Hal. from zero + 5 to zero + 8
3rd. wave	85 Stir. } from zero + 8 to zero + 12
	3 Fort. }
4th. wave	81 Hal. from zero + 12 to zero + 15
5th. wave	57 Lanc. from zero + 15 to zero + 18

<u>Backers-up</u>	9 aircraft from zero + 5 to zero + 13 (1 per min.)
	2 " " at zero + 14
	1 " " at zero + 16

...../arker Leads.

12. Marker Loads

Blind-markers 12 Hal: 8x4 white flares + 2 T.I. yellow (1 LB) + 1 T.I. red (1B)
 3 Lanc: 8x4 white flares + 2 T.I. yellow (1 LB)

Visual-markers 2 Hal: 1x4 white flares + 7 T.I. red (3 LB) + 1 T.I. green
 3 Lanc: 1x4 white flares + 10 T.I. red (5 LB) + 1 T.I. green

Bookers-up 3 Hal. + 6 Lanc. + 4 T.I. green (2 LB)
 9 Lanc: 4 T.I. green (2 LB) + 1 T.I. red (1B)

13. Tactics (a) WINDOW was to be dropped at the rate of one bundle every 2 minutes from the French coast to 07°52'N.; one bundle every half-minute from that point to the target and 20 miles beyond; and one bundle every minute thence to the French coast.

(b) Spoof target 7 blind-markers (T.I. red + flares), 3 bookers-up (T.I. green) and 51 Lancasters of 1 Group were to make a diversionary attack on Ludwigshaven between 2121 hours and 2127 hours.

SORTIES

14. (a) No. of aircraft despatched.....402
 (b) " " " reporting attack on primary area.....341(84.8%)
 (c) " " " reporting attack on alternative area..... 9(2.2%)
 (d) " " abortive (tech. defect or manipulative error.....32)
 sorties (crew failure..... 9).....42(10.4%)
 (late..... 1)
 (e) " of aircraft missing.....10(2.5%)

3 Fortresses of 8th. U.S.A.A.F. partook in the operation, flying under the control of 3 Group; one attacked the primary, one bombed an alternative target and the third was lost.

WEATHER EXPERIENCED

15. Bases:- Generally 10/10ths. cloud, base 1,500-2,000'. Moderate visibility. Light showers in Northern Groups, spreading southwards during the night, with local patches of cloud below 1,000'.

Frankfurt:- Clear, apart from drifting patches of 2-3/10ths. layer cloud at 6,000'. Slight haze. No moon. Good visibility.

Winds at 20,000':- En route, 260-270°/30-45 m.p.h.
 Frankfurt, 260°/30-35 m.p.h.
 Frankfurt, surface wind: light W.S.W.

NIGHT PHOTOGRAPHIC STATISTICS

16. No. of photographs showing ground detail (plotted within 3 mls..76)
 (" outside 3 mls..24).....132
 (unplotted.....32)
 " " " showing fire-tracks only (unplotted).....191
 " " aircraft reporting attack.....341
 " " aircraft estimated to have bombed within 3 mls. of A/P.....170

NARRATIVE OF ATTACK

17. All of the blind-markers' yellow T.I. and flares have been plotted within 3 miles of the aiming point. All the flares fell either over the docks or near the aiming point in the central city area, except one which was dropped well N. of the target. In the light of these flares, 4 visual markers released their red T.I.: the first salvo, at zero - 3, is reported to have fallen in the dock area, probably 1-1½ miles S.E. of the aiming point. This was quickly followed

...../by 2 further salvos,

by 2 further salvos, one on the aiming point and the other $1\frac{1}{2}$ miles N.E. The fourth and last salvo was dropped at zero hour, $\frac{1}{2}$ mile N.E. During this stage of the attack, (i.e. before zero + 6), 75% of the main force bombed, aiming at red T.I. The bombing was very concentrated, and by zero + 6, after 101 aircraft had attacked, the area covered by incendiaries measured only $3 \times 1\frac{1}{2}$ square miles, centred $\frac{1}{2}$ mile E. of the aiming point.

18. 229 aircraft bombed after zero + 6, and 100 of these (44) claimed to have aimed at red T.I. Most of these are shown by photographs to have bombed the remains of the last 2 reds to be dropped, which must have burnt for at least 10-12 minutes. Other aircraft were scattered S. of the target, and are thought either to have mistaken fires for red T.I., or to have been misled by pyrotechnic decoys. During this period, as the result of undershooting by a few backers-up, the fire area shifted about $1\frac{1}{2}$ miles S. at the same time extending E. across the dock area. By zero + 17, 90% of the main force had bombed and the area of attack had reached its maximum limits, covering about 11 square miles - mostly within 3 miles radius of the aiming-point.

DAY RECONNAISSANCE

19. Nearly all the damage resulting from this attack was caused in the E. of the town, particularly in the East Harbour and the districts of Offenbach and Oberrod. The East Harbour (priority 2) suffered severely from both H.E. and fire, and most of the quayside buildings were destroyed or partially demolished. Among industrial targets, the works of Voigt and Heffner A.G. (range-finders) and Messer & Co. (welding apparatus), both priority 2, sustained serious damage, and Hexos Union (grinding wheels, priority 1), Collet and Engelhardt (machine tools, priority 2) and Lurgi Ges für Chemie und Apparatebau (priority 2) were affected in varying degrees. Altogether, 37 factories were hit, including a champagne press.

20. Warehouses and dockside premises suffered even more extensively. Numerous stores and sheds on the quayside were burnt out, the Grossmarkthalle (general and cold storage, priority 3) was virtually destroyed and the premises of Latscha Schade und Kula Froehling (grocers) were utterly devastated. In the river Main, the Oberrod Sluice was hit immediately S. of the central pier, and photographs taken 3 days after the raid showed the water flowing unchecked. 10 days later, the damaged coping was seen to have been removed and, with piles driven in beside the broken section as a temporary assistance, further repairs were being conducted from barges. A direct hit was also scored on the dam in the Nordbecken.

21. Railway property was widely affected in the eastern districts. The buildings of the docks station, near the East Harbour, were gutted and the platform broken. The marshalling yards N. of the harbour (priority 2) suffered general damage, involving the engine roundhouse and a small power-house besides various minor buildings. The gasworks (priority 2) supplying this area was hit, and the municipal slaughterhouse and cattle market lost most of its buildings to fire and H.E. A nearby tram depot sustained major damage.

22. Many public buildings and municipal services were affected, including the Rathaus, the courts of justice and the customs-house. Business and residential property in the E. of the city were widely devastated.

ALTERNATIVE TARGETS

23. 9 aircraft attacked alternative targets at Darustadt (2), Hochst, Griesheim, Trier, Liège, Abbeville, Cherbourg and an unspecified position on the French coast.

SPECIAL EQUIPMENT

24. H2G: 58 Y-aircraft were despatched - 14 blind-markers and 44 main force aircraft. 10 blind-markers reported attack, 6 dropping markers on H2S and 4 releasing H.E. only. The timing and accuracy were excellent. 32 of the main force reached the target with their sets in order. 2 Y-aircraft were lost.

25. G2E The Eastern Chain operated on the Wyoming frequency throughout and on Zanesville from 2000 to 2300 hours. The Southern Chain transmitted on the Carolina

frequency throughout. Interference of the usual type was very heavy on all 3 frequencies, the signal strength being normal. It was unfortunately impossible to see the Maryland frequency, which gave such good results on the night of 3/4th, and the enemy was able to concentrate all jammers on the 2 frequencies of the Eastern Chain. The ranges were thus much lower than usual, being only 220 miles on the outward and 230 miles on the return routes.

ENEMY DEFENCES.

26. Flak and Searchlights. Moderate heavy flak was encountered at Frankfurt, fired in the form of a barrage up to 20,000'. Many searchlights were active, and aircraft held in cones were subjected to intense predicted fire. The defences slackened towards the close of the attack. Most of the route was flak free, but a continuous belt of searchlights was reported stretching from Mannheim to Frankfurt. The latter part of the route lay almost along the line of this belt, and the glare caused considerable nuisance. Very bright yellow or white flares were observed over Frankfurt, hanging in the sky for about 10 minutes at 20,000'. 6 returning bombers were damaged by flak; one was wrecked on landing.
27. Fighters. R/T gave no evidence of the usual marshalling of groups of fighters at beacons on this night. Only one control was heard, and that on a single frequency. This was Munich, which was first picked up at 2136, 10 minutes after the target had been marked, announcing an attack on Frankfurt. Further waves were stated to be approaching the city until 2205; then at 2208 came the sudden announcement: "No more enemy action over Frankfurt. All aircraft may land." Some enemy aircraft were also operating under day fighter procedure. One of these reported that it was short of fuel at 2127 hours. Others were active until 2200 hours, but their area of operation was not located.
28. The diversionary attack on Ludwigshaven was not very successful in drawing fighters away to the latter town, possibly because the enemy's reaction was so late that the attack on Frankfurt had started before any opinion had been formed concerning the main target.
29. Controlled fighters were active in larger numbers than recently along the route between Valenciennes and Frankfurt. Fighters did not appear in the target area until the attack had been in progress for 10 minutes. 7 aircraft reported fighter damage. Our crews made no victory claims, but observations suggested that 2 enemy fighters were destroyed near Trier in combats which also resulted in the loss of the bombers engaged.

CASUALTIES.

30.	No. of aircraft missing	10 [*] (2.5%)
	" " " damaged (flak	6)
	(fighter	7)
	(misc. causes in flight. 6)	...19
	(other causes	0)

^{*}(plus one Fortress of 8th U.S.A.A.F.)

Losses to fighters were seen en route at Trier (2) Valenciennes and Charleroi. Several aircraft were observed to go down in the target area, mostly after being held in searchlight cones; probably 5 aircraft were lost here, 3 to flak and 2 to fighters. 2 bombers were reported to have been destroyed by isolated salvos of heavy flak along the route, one at Sedan while outward bound and the other at Charleroi on the way home. The 11 losses thus accounted for include the missing Fortress. 2 aircraft were wrecked on return; both had previously been damaged, one by flak and the other by fighter.

.../LUDWIGSHAVEN

LUDWIGSHAVEN.PLAN OF ATTACK.

31. 7 blind-markers (T.I. red + flares) and 3 back-up (T.I. green) were to lead 51 Lancasters of 1 Group in a diversionary attack on Ludwigshaven between 2121-2127 hours.

SORTIES.

32. (a) No. of aircraft despatched 57
 (b) " " " reporting attack on primary area 57 (86.4%)
 (c) " " " " " alternative area 1 (1.5%)
 (d) " " abortive sorties (tech. defect or
 manipulative error 6)
 (crew failure 2) .. 8 (12.1%)
 (e) " " aircraft missing 0

4 P.P.F. Mosquitoes accompanied the force as route-markers, without proceeding to the target. All completed their task and returned without loss.

WEATHER EXPERIENCED

33. Ludwigshaven:- No cloud. Slight haze. Good visibility. No moon.

NIGHT PHOTOGRAPHIC STATISTICS

34. No. of photographs showing ground detail (plotted within 3 mls...21) .. 34
 " " " " " outside 3 mls...13 }
 (unplotted..... 0)
 " " " " fire-tracks only (unplotted).....15
 " " aircraft estimated to have bombed within 3 miles of
 aiming point.....28
 " " " reporting attack.....57

NARRATIVE OF ATTACK

35. The timing of the P.P.F. was excellent, T.I. being alight in the target area from 2119-2136 hours, but their standard of accuracy was unaccountably low; possibly through bad use of H2S. Although one or two aircraft marked the aiming-point, most dropped their T.I. in the district of Worms, several miles to the north, where the bulk of the attack was concentrated.

DAY RECONNOISSANCE

36. The damage resulting from this attack was not heavy, but involved a number of important buildings. Bopp und Reuther G.m.b.H. (priority 2), a firm engaged on the production of armatures and measuring instruments of all kinds, suffered considerable damage to machine shops and other sheds. Dockside warehouses and transshipment sheds were gutted or partly demolished. Only a few scattered incidents were visible among residential and business property. The general destruction was spread evenly between Mannheim and Waldhof to the N.E.

37. The photographs covering this attack revealed new points of damage resulting from the raid of 23/24th. September, including further destruction in the chemical plant of I.G. Farbenindustrie. Other industries affected include a shipbuilding yard, factories engaged in woodworking, ice production and ships carpentry, and several whose purpose has not yet been ascertained. Dockside buildings were damaged, and barges were sunk and gutted.

ALTERNATIVE TARGETS

38. One aircraft bombed the suburbs of Mannheim.

SPECIAL EQUIPMENT

39. H2S 6 of the 7 Y-aircraft despatched as blind-markers reached the/target and dropped

7.

target and dropped markers on H2S. Only one has been plotted, $1\frac{1}{2}$ miles from the aiming-point. The seventh aircraft returned early. None were lost.

40. OBOE 4 Mk. I Mosquitoes accompanied the force as route-markers. 3 completed their task, dropping red and green T.I. on either side of the route; the fourth experienced fading signals after releasing its first pair, and brought the others back. All returned undamaged.

EVERY DEFENCES

41. No interceptions were reported by aircraft returning from Ludwigshaven. Flak was fired in moderate quantity from the target, mainly predicted at "seen" targets.

CASUALTIES

42. None of our aircraft was lost on this target. 4 slight instances of flak damage were reported.

KNAPSACK

43. 12 Mk. I OBOE Mosquitoes were despatched to attack the power station at Knapsack. 4 bombed the primary according to plan, and another on D.R. 4 attacked Cologne and one Trier, visually, as the result of OBOE failure; one aircraft failed owing to a hang-up and one because of GEE failure. All returned safely; 2 were hit by flak. Subsequent reconnaissance revealed several points of damage in the power station resulting from this attack and that of the previous night.

LACHEN

44. The first operational trial of G-H was made on this night, one Mosquito being detailed to attack Lachen; but there was a confusion as to which frequencies were to be used, no signals were received and the aircraft bombed on D.R. from a GEE fix. It returned undamaged.

MINELAYING

45. 4 Stirlings laid 14 mines in the Gironde estuary; a fifth dropped its mines safe. All returned undamaged.

LEFLETS

46. 6 Wellingtons dispersed leaflets over towns in Northern France; 2 others failed for technical reasons. No casualties were sustained beyond 2 minor hits from flak.

MLM/JT.
BC/S. 26342/1/CRSA,
4th. December, 1943.

FRANKFURT: LUDWIGSLAYEN: KNAPSACK: COLOGNE: MINDEN: LEAFLETS
4/5th. OCTOBER, 1943.

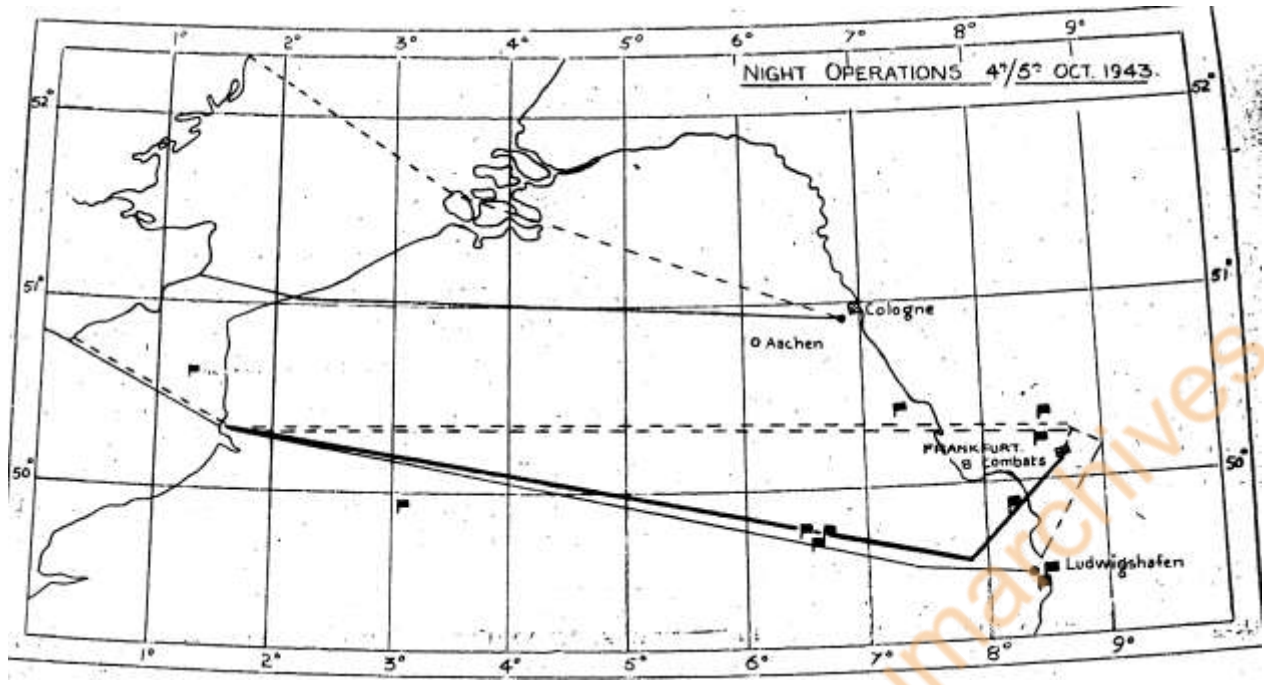
TARGET	GROUP	AIRCRAFT TYPE	SORTIES	A/C REPORTING ATTACK ON				DAMAGE				DIVERSECTIONS		TONS OF BOMBS H.R.	
				FRONT AREA	REAR AREA	OVER B.T.	NOT OVER B.T.	MIS- DIR	FLAK	FIGHTER	MISC. IN FLIGHT	OTHER CAUSES	ATTACK-ED		NOT ATTACK-ED
FRANKFURT	B	Hal.II	1	1	-	-	-	-	-	-	-	-	-	-	F. 4.5 644.5 A. 14.3 11.4 H. 11.6 15.5
		Hal.La	15	14	-	1	-	-	1E	-	-	-	-	-	
	B	Lang.III	20	15	2	-	1	2	-	-	-	-	2	2	Heavy Bombs 4000lb. A. 11.7 H. 4 H. 3
		Lang.III	4	4	-	-	-	-	-	-	-	-	-	1	
	M.F.	Lang.III	20	17	1	-	2	-	-	-	-	-	-	-	A. 11.7 H. 4 H. 3
		Lang.I	1	1	-	-	-	-	-	-	-	-	-	-	
	5	Lang.III	26	25	-	-	1	-	-	-	2AC	-	-	-	A. 11.7 H. 4 H. 3
		Stir.III	70	55	3	1	9	2	1	1A+C+1	1A	-	2	2	
	4	Hal.II&V	31	24	1	3	6	-	1	-	1A	-	-	2	A. 11.7 H. 4 H. 3
		Hal.La	60	47	-	2	11	-	-	1	-	-	2	3	
5	Lang.I	19	17	-	-	1	1	1	-	-	-	-	2	A. 11.7 H. 4 H. 3	
	Lang.III	76	72	1	-	3	-	-	3AC	2AC	-	3	5		
6	Hal.II&V	42	37	1	-	1	3	1	1E	-	-	1	1	A. 11.7 H. 4 H. 3	
	Hal.La	17	15	-	-	-	2	-	-	-	-	-	1		
FRANKFURT TOTAL			402	341	9	6	36	10	1E+5	1E+4A+C+2	6A	-	10	20	
U.S. ... P.			Portressa	3	1	1	-	1	-	-	-	-	-	-	
LUDWIGSLAYEN	B	Lang.III	12	11	-	-	1	-	1	-	-	-	-	-	H. E. Eng. F. 125.8 108.4 A. 2.2 2.2 H. - -
		Lang.I	6	6	-	-	-	-	1	-	-	-	-	-	
LUDWIGSLAYEN	BFF	Lang.I	48	40	1	-	7	-	2	-	-	-	-	-	Heavy Bombs 4000lb. F. 55 A. 1 H. -
		Lang.III	48	40	1	-	7	-	2	-	-	-	-	-	
LUDWIGSLAYEN TOTAL			66	57	1	-	8	-	4	-	-	-	-		
ROUTE-MAJORS			8	3	-	-	-	-	-	-	-	-	-	-	
LUDWIGSLAYEN			1	1	-	-	-	-	-	-	-	-	-	-	
ROUTE MAJOR TOTAL			4	4	-	-	-	-	-	-	-	-	-	-	
ROUTE MAJOR															
FRANKFURT-LUDWIGSLAYEN TOTAL			472	402	10	6	44	10	1E+9	1E+4A+C+2	6A	-	10	20	

NOT INCLUDED IN TOTAL.

FRANKFURT: LUDWIGSLAYEN: COLOGNE: MINDEN: Mindelaying Leaflets: (Contd:-)
4/5th. OCTOBER, 1943.

TARGET	GROUP	AIRCRAFT TYPE	SORTIES	A/C REPORTING ATTACK ON				DAMAGE				DIVERSECTIONS		TONS OF BOMBS H.R.	
				FRONT AREA	REAR AREA	OVER B.T.	NOT OVER B.T.	MIS- DIR	FLAK	FIGHTER	MISC. IN FLIGHT	OTHER CAUSES	ATTACK-ED		NOT ATTACK-ED
FRANKFURT LUDWIGSLAYEN TOTAL			472	402	10	6	44	10	1E+9	1E+4A+C+2	6A	-	10	20	
KNAPSACK	B	Mosq.IX	6	2	3	-	1	-	-	-	-	-	-	-	F. 4.1 A. 4.2
		Mosq.IV	6	3	2	1	-	-	-	2	-	-	-	-	
COLOGNE TOTAL			12	5	5	1	1	-	2	-	-	-	-		
MINDEN			1	1	-	-	-	-	-	-	-	-	-	-	F. 0.7
BOMBING TOTAL			485	408	15	7	45	10	1E+11	1E+4A+C+2	6A	-	10	20	
MINDEN															
MINDEN			3	4	-	-	1	-	-	-	-	-	-	-	1L mines
LE-FLAPS			92	4	2	-	2	-	-	-	-	-	-	-	
N. FRANCE				4	-	-	-	-	1	-	-	-	-	-	
LE-FLAPS TOTAL			8	6	-	-	2	-	1	-	-	-	-	-	
TOTAL			498	418	15	7	48	10	1E+12	1E+4A+C+2	6A	-	10	20	

92 GROUP TO BELGIUM - BOMB - MINDEN - BRUNNEN - ORPHEUS.

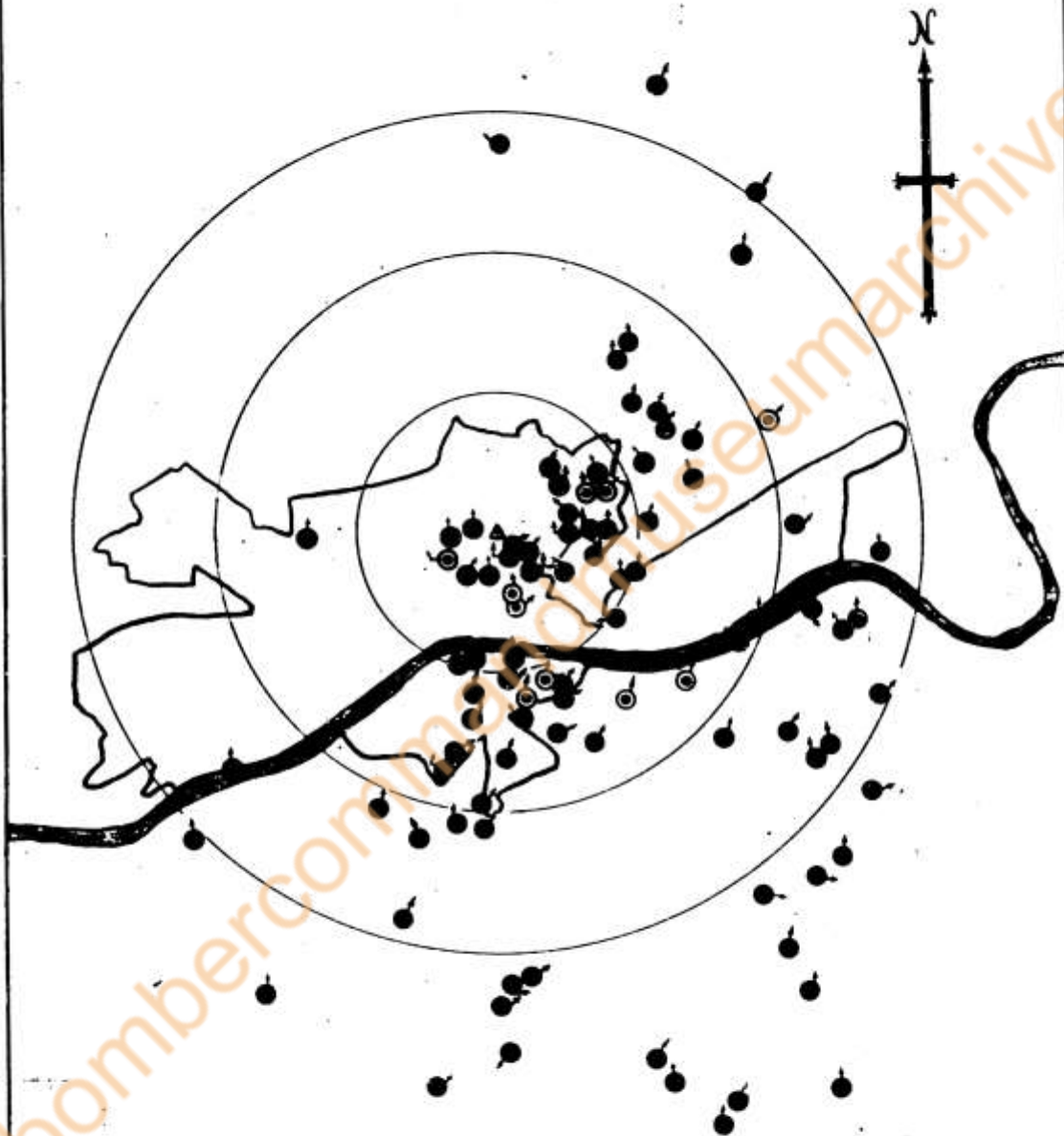


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SECRET

121

**FINAL PLOT OF NIGHT PHOTOGRAPHS
TAKEN 4/5th OCTOBER 1943. TARGET FRANKFURT**



Photographs taken with Bombs

	<u>PFF Marker A/C</u>	<u>Main Force A/C</u>
Plotted by Ground Detail	⊙	○
<u>PLOTTED</u>	By Ground Detail	By Fires
Within 3 miles	76	-
Outside 3 miles	24	-
<u>UNPLOTTED</u>	32	191
No: of prints (with bombing) examined	323	

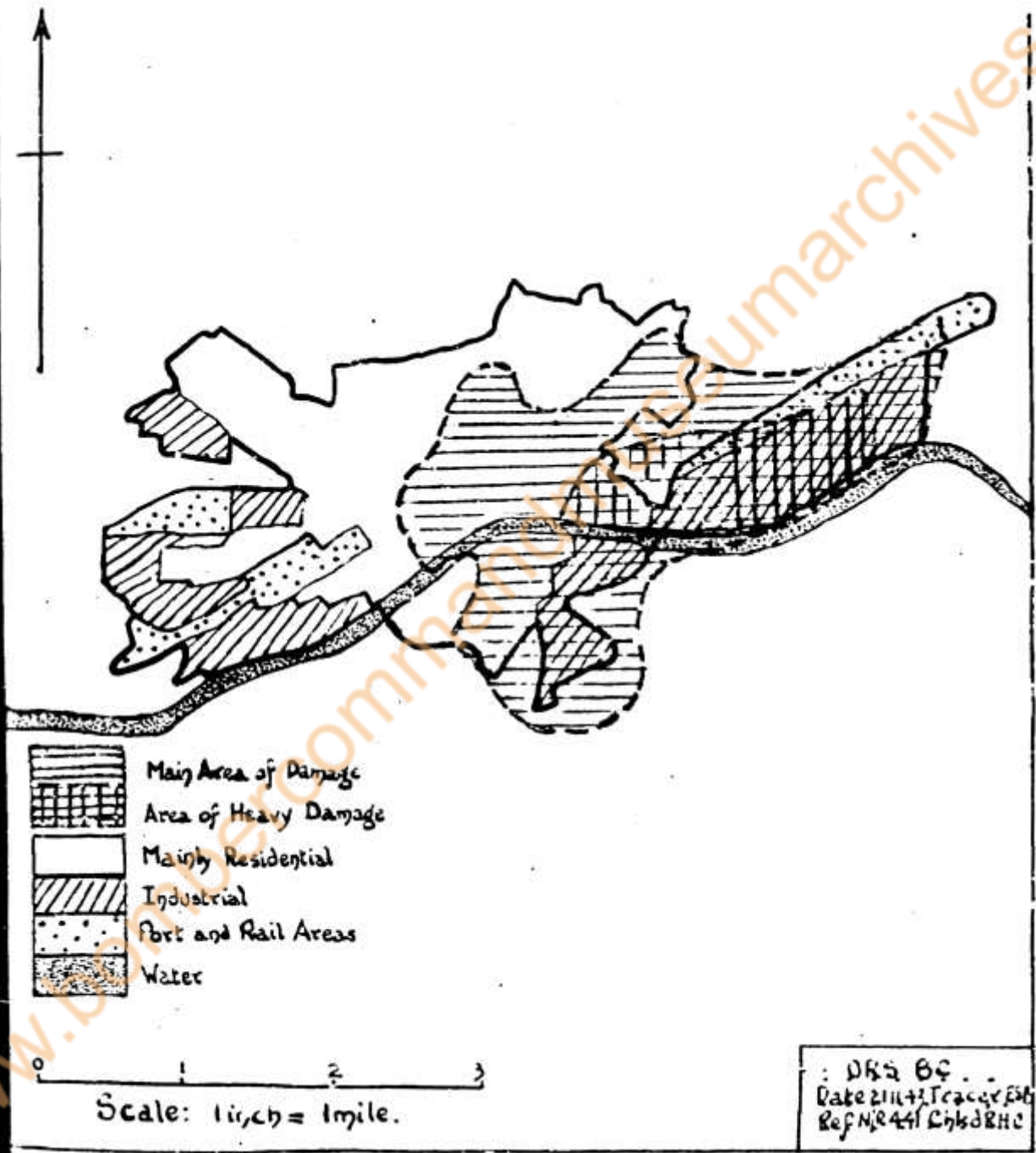
4 aircraft have been plotted outside the area of this map.

Scale 1 inch = 1 mile.

ORS. BG. 389A
Date 1 12 43 Tracer ES8
Ref NR/44 Chkd. K.C.

SECRET

DIAGRAM SHOWING LOCATION OF ATTACK
AS INDICATED BY DAMAGE
FRANKFURT 4/5th OCTOBER 1943.



FINAL PLOT OF NIGHT PHOTOGRAPHS
TAKEN 4/5 OCTOBER 1943. TARGET LUDWIGSHAVEN

122

SECRET



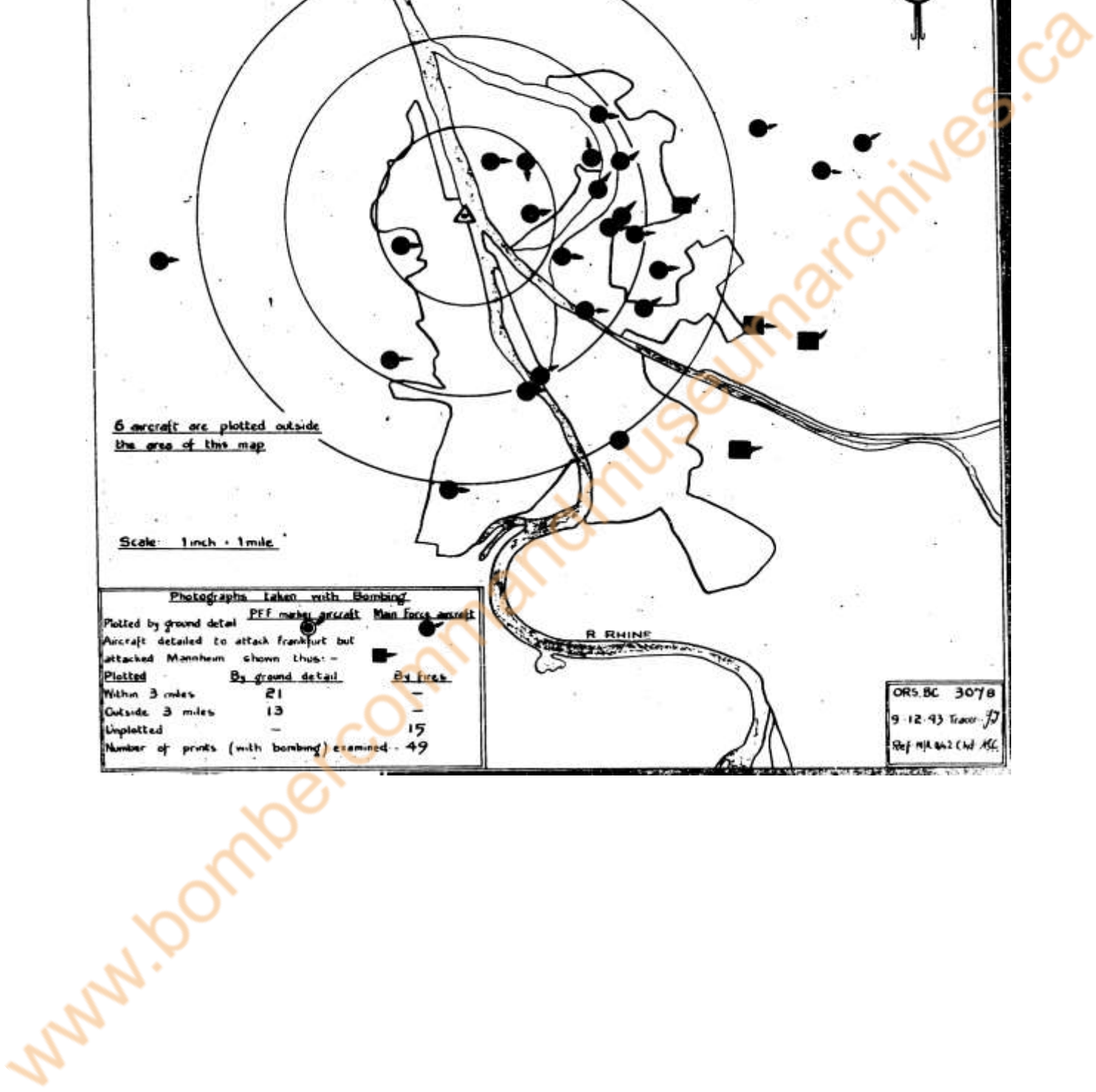
6 aircraft are plotted outside
the area of this map.

Scale: 1 inch = 1 mile

Photographs taken with Bombing

	<u>PFF member aircraft</u>	<u>Man force aircraft</u>
Plotted by ground detail	●	▲
Aircraft detailed to attack Frankfurt but attacked Mannheim shown thus: -	■	
<u>Plotted</u>	<u>By ground detail</u>	<u>By fire</u>
Within 3 miles	21	-
Outside 3 miles	13	-
Unplotted	-	15
Number of prints (with bombing) examined - 49		

ORS BC 3078
9-12-43 Trace: JF
Ref MR 62 CW 156



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BOMBER COMMAND REPORT ON NIGHT OPERATIONS

7/8th. OCTOBER, 1945.

STUTTGART: FRIEDRICHSHAFEN: Munich: Aachen: Emden: Minelaying: Leaflets:SUMMARYSTUTTGART

1. 343 Lancasters were despatched to attack Stuttgart, which was obscured by thin cloud. Y-type aircraft marked the target with F.E., which could be seen through the cloud, and with release-point flares. 2 main concentrations of bombing developed about 5 miles apart, both on track. The damage to the target was not severe, and cannot be distinguished from that caused by aircraft of U.S.B.C. which bombed Stuttgart on 6th. September. Only 4 Lancasters were lost; this was mainly due to the confusion of the enemy controllers resulting from the attack on Munich.

FRIEDRICHSHAFEN

2. The feint attack on Friedrichshafen by 16 Lancasters of 8 Group did not attract many fighters since the enemy controllers were already confused by the Munich raid. However, useful damage was caused to the Luftschiffbau Zeppelin G.m.b.H., one very large workshop being very severely hit. None of the aircraft was lost.

MUNICH

3. 8 of 10 Mosquitoes which set out, bombed Munich from high level. 2 collided and returned early.

AACHEN

4. Aachen was attacked by 4 OBOE Mosquitoes, only one of which was able to use the special equipment to bomb. This target was also attacked by one G.H. Mosquito, which received good signals in the target area.

EMDEN

5. 7 OBOE Mosquitoes, 2 of which were repeater aircraft, were sent to raid Emden. Both repeater aircraft worked satisfactorily and 4 of the bombers attacked on OBOE. The fifth bombed visually. None of the aircraft was damaged.

MINELAYING

6. 80 aircraft were sent out minelaying, and 61 of these laid a total of 194 mines in enemy waters. 3 aircraft failed to return.

LEAFLETS

7. 13 of 14 Wellingtons of Training Groups and 4 Fortresses of U.S.B.C. dropped leaflets over towns in northern France. The other Wellington returned early.

WEATHER FORECAST

8. Estimated midnight position of cold front: 60°E. 25°E. - 55°E. 15°E - Hamburg - Cologne - 50°E. 4°E. - Tours - Bordeaux, with waves on it.

Home bases:- generally fit for take-off, with moderate visibility. For

...../return, local fog

return, local fog expected to form over Operational Groups, but is unlikely to be widespread. Possibly only 5 Group will require to divert many aircraft. Diversions available: most stations in 4 Group, coastal areas of East Anglia, S.E. England, S. Coast, S.W. England and W. Coast bases; also some bases in Training Groups until 04.00 hours.

Route to Stuttgart: frontal cloud belt about 100 miles wide will first be met when crossing enemy coast, but there will be clear lanes in medium cloud above 15,000ft. From 5°E. onwards only small amounts of medium cloud and of strato-cumulus below, total amount over target not expected to exceed 5/10ths. Ground mist at target.

W. France: probably clear lanes in frontal zone between 5,000ft. and 10,000ft. Much strato-cumulus, base 1,500ft., over areas in N. Thundery rain with cloud base lowering at times to 1,000ft., but otherwise above 3,000ft.

Denmark area: well broken convection cloud, mainly less than 5/10ths, base 2,000ft., tops not above 10,000ft. Good visibility.

Winds:	<u>750mb.</u>	<u>500mb.</u>
Bases to 51°N	340°/5-10mph.	330°/15 mph.
51°N. to Beauvais	360°/10 mph.	340°/20 mph.
Beauvais to Metz	Light, variable	230°/35 mph.
Metz to Stuttgart	220°/25 mph.	230°/30 mph.
	<u>300mb</u>	
Bases N. of 53°N.	350°/30 mph.	
" S. " 53°N. to 51°N.	220°/65-70 mph.	
51°N. to Rhines	220°/50-55 mph.	
Rhines to Stuttgart	220°/40 mph., decreasing gradually to 210°/20 mph. at Stuttgart.	

STUTTGART

PLAN OF ATTACK

9. Route: Beachy Head - 50°04'N. 01°22'E - 48°22'N. 05°42'E - 48°00'N. 07°50'E - TARGET - 48°52'N. 09°20'E - turn wide left - 48°40'N. 05°00'E - 50°04'N. 01°22'E - Beachy Head.

10. Method of Attack (a) 10 blind-markers and 11 backers-up were to drop T.I. yellow at 48°00'N. 07°51'E (4 miles, 115° Freiburg) marking the turning-point to the target, and at 48°51'N. 08°28'E (13 miles, 170° Karlsruhe) on the return route.

(b) The blind-markers were to drop T.I. yellow on the aiming-point, either blindly on H2S or, if absolutely certain, by visual identification. 8 bundles of flares white were to be dropped at 10 second intervals, the first 30 seconds before the T.I. yellow. The visual markers were to mark the aiming-point with 10 T.I. red and one T.I. green after definite identification. One bundle of flares white was to be used if necessary. If unable to identify the target the were to aim T.I. green to overshoot the estimated centre of T.I. yellow by 2 seconds. The marking was to be maintained by backers-up, aiming T.I. green at (i) T.I. red, or to overshoot the estimated centre of (ii) T.I. yellow or (iii) T.I. green, by 2 seconds.

(c) Supporters were to aim their bombs visually at the aiming-point at the estimated centre of T.I. yellow or at T.I. red. The rest of the main force aircraft were to aim at T.I. red or to overshoot the estimated centre of T.I. green by 1 second.

(d) Release-point flares (red with green stars) were to be carried by all Y-type aircraft with qualified crews, for use if cloud conditions made it necessary.

11. Timing Zero hour: 0005 hours. Duration of Attack: 0001-0019 hours

Pathfinder Force

18 blind-markers (Lancasters) at Z - 4
 6 visual-markers (Lancasters) at Z - 3
 3 backers-up (Lancasters) at Z.
 3 " " " " Z + 1
 11 " " " " from Z + 2 to Z + 12 at one minute intervals.

Main Force

Supporters (8 Group, 26 Lancasters) at Z - 4
 1st. Wave (90 Lancasters) from Z + 2 to Z + 6
 2nd. Wave (88 Lancasters + 3 Fortresses H.S.) from Z+6 to Z+10
 3rd. Wave (87 Lancasters) from Z + 10 to Z - 14

12. Tactics WINDOW was to be dropped during the whole time the aircraft were over enemy territory; at one bundle per 2 minutes on the outward route; at 2 bundles per minute within 20 miles of the target, at one bundle per minute on the return.

A diversionary attack was to be made on Friedrichshafen by aircraft of 8 Group.

SORTIES

- | | | |
|-----|--|------------|
| 13. | No. of aircraft despatched..... | 323 |
| " | " " reporting attack on primary area..... | 309(90.0%) |
| " | " " " " " alternative area..... | 4(1.2%) |
| " | " " abortive sorties (technical and manipulative defects.....21) | |
| | (weather.....1) | |
| | (crew failure.....2)..... | 26(7.6%) |
| | (pilot wounded.....1) | |
| | (take-off accident.....1) | |
| " | " " aircraft missing..... | 4(1.2%) |

WEATHER EXPERIENCED

14. Home bases: variable. Small amounts of cloud. Local fog patches over Operational Groups after midnight became fairly widespread inland by 0500 hours, but coastal areas N. of Wash, most of East Anglia and S.E. England retained visibility greater than 2,000 yards at that time.

Route: little cloud over England. Hazy. From French coast to 5°-6°E. 7-10/10ths. frontal cloud, main tops 15,000ft. occasionally 18-20,000ft. Variable amounts of thin cirrus above, base 20-22,000ft. No reports of icing. From 5°-6°E. to near target, only small amounts of cloud. Generally hazy. Winds at 20,000ft./250°-270°/30-35 m.p.h.

Target: 7-10/10ths. thin medium cloud at about 10,000ft.; one report gave thickness as 500ft. Some valley fog; generally hazy. Wind at 20,000ft./210°/25-30 m.p.h. Half moon, setting at about zero hour.

NIGHT PHOTOGRAPHIC STATISTICS

15. None, owing to cloud over the target.

NARRATIVE OF ATTACK

16. T.I. yellow, which were released by 8 of the blind-markers, were visible through the thin cloud, but no visual identification was possible. T.I. green were dropped by 15 backers-up and 2 visual markers, aiming at the yellows. Release-point flares were also dropped by 8 Y-type aircraft. It appears from reports by crews that two moderate concentrations of bombing developed, about 5-6 miles apart, and both on track. Lack of night photographic evidence makes it

...../impossible to state which,

impossible to state which, if either, of these concentrations was on the target.

DAY RECONNAISSANCE

17. Reconnaissance photographs showed damage caused by this raid and the attack by aircraft of U.S.E.C. on 6th. September. Almost all the fresh damage seen was concentrated in a small area in the town centre, namely the Altstadt district. 7 small factories, including Scheef (sheet metal works and motor and aircraft installations) and Langerer und Reich A.G. (automobile, and possibly aircraft, radiators) were damaged, and 21 probable small industrial concerns were also affected. 16 public buildings, including a police-station and 5 government offices sustained damage, and about 60 incidents of damage to business and residential property were scattered throughout the town.

ALTERNATIVE TARGETS

18. 4 aircraft released their bombs in the areas of Dieppe (2), Amiens/Gilsy Airfield and St. Dizier airfield, while another, which also attacked Stuttgart, dropped part of its load near Baden-Baden.

SPECIAL EQUIPMENT

19. H2S 17 of the 18 blind-markers reported attack, 12 releasing T.I. and/or flares on H2S. One aircraft dropped a salvo of T.I. in error. The timing was not very good, being spread over 8 minutes, and the marking appeared to be scattered, 2 concentrations about 5 miles apart being reported. 43 other Y-type aircraft were despatched, using H2S as a navigational aid. 4 used the equipment to bomb blindly and 2 others to check the markers bombed.

20. GEE The Eastern Chain operated on the Wyoming and the Southern Chain on the Carolina frequency throughout. The Eastern Arizona and Zanesville frequencies were also in use from 2205-0230 hours. The visual types of interference were reported, and at times spurious pulses were seen drifting slowly along the traces. All frequencies were heavily jammed. The signals were normal, C being the strongest on the Eastern Chain and B on the Southern Chain. In general the Carolina frequency gave the best signals and the longest range, but a few very good fixes were taken on the Arizona frequency up to 06⁰⁰'E.

ENEMY DEFENCES

21. Flak and Searchlights Little flak was encountered en route, and in the target area the barrage of heavy flak was reported as only slight to moderate in intensity. Early in the raid some predicted flak was encountered, but later all the defences diminished. Searchlights were unable to penetrate the cloud. Only 3 aircraft were hit by flak.

22. Fighters The first intercepted report of hostile aircraft was overheard at zero hour, when the leading aircraft were stated to be F.E. of Munich. Three minutes later, although the attack on Stuttgart had already begun, both Stuttgart and Augsburg were suggested as targets. Later Munich was mentioned, and although the attack on Stuttgart was said to be increasing in intensity, all fighters were ordered to Munich, where many hostiles were reported. At 0059 hour all the fighters were ordered to land owing to fog. This, together with the confusion caused by the Mesquite attack on Munich, resulted in very few interceptions over the target and on the return journey. The greatest fighter activity was between the English coast and Laon on the outward route.

23. Crews reported only 17 interceptions, none of which developed into attacks although 15 bombers opened fire on the fighters.

CASUALTIES

24.	No. of aircraft missing.....	4 (1.2%)
	" " " damaged (flak..... 3)	
	(fighters..... 0).....	14 (4.1%)
	(other causes.....11)	

..../25. It was estimated

but T.I. were visible beneath. 3 blind-markers dropped T.I. red and these were backed-up by 9 salvos of T.I. green. Reports indicate that a good concentration developed in the target area. One T.I. yellow was released in error with the T.I. red.

D.V. RECONMISSANCE

35. Reconnaissance photographs revealed that a large workshop building forming part of the Luftschiffbau Zeppelin G.m.b.H. was destroyed over a length of 160ft. at the end and severely damaged over 190ft. at the W. end. A large shed, some stores and several small sheds belonging to the works were also seriously damaged. In addition 3 houses were destroyed and 7 damaged, and 28 new craters were visible within 1,500 yards of the works. These included 3 close to a flak battery, damaging a hut forming the gun-cross quarters.

ALTERNATIVE TARGETS

36. Owing to a petrol leak, one aircraft released its bombs in the St. Dizier area.

SPECIAL EQUIPMENT

37. H2S 5 Y-type Lancasters were despatched as blind-markers. 4 of these attacked the primary target, 3 dropping markers and bombs on H2S. Owing to an unserviceable set, the fourth dropped bombs only. 6 of the backers-up carried H2S for navigational purposes, and 4 reached the target with serviceable equipment.

ENEMY DEFENCES

38. Heavy flak over the target damaged 3 aircraft. No interceptions were reported.

CASUALTIES

39. The only aircraft damaged were the 3 hit by flak.

MUNICH

40. 8 of 10 Mosquitoes which were despatched attacked Munich from high level on timed runs from the T.I. yellow at Freiburg, or from the last GEE fix. No results were observed. The other 2 Mosquitoes collided near Sedan, and returned early. One aircraft was hit by flak.

41. This attack served admirably as a diversion to the main attack on Stuttgart, although the feint on Friedrichshafen was ignored by the running commentary controllers. Nevertheless, the Mosquitoes were not intercepted by enemy aircraft.

LICHTEN

42. OBOE 4 Mk.II OBOE Mosquitoes were sent to bomb Lichten, and one attacked using the special equipment. The others bombed on D.F. runs from GEE fixes, following failures of OBOE. One aircraft was damaged by flak.

43. C.M. One Mosquito which carried out a further operational trial of C.M., attacked successfully, receiving very good signals in the target area. There is no evidence of the accuracy achieved.

EMDEN

44. OBOE The first operational trial of Mk.I repeater OBOE was carried out on this night with Emden as the target. Repeater aircraft were used on one leg only; the ground stations were Winterton, which worked direct, and Cleaden which operated through a repeater. 2 OBOE Mosquitoes were despatched as

...../repeaters for 5 bombers.

repeaters for 5 bombers. Both the repeaters worked satisfactorily and 4 bombers were successfully controlled. The fifth attacked visually owing to OBOE failure. All the Mesquitos returned undamaged.

MINELAYING

N. W. France

45. 16 Wellingtons of 1 Group were despatched to lay mines off Erest, Lorient, and St. Nazaire. The task was completed by 12 aircraft, which laid 23 mines. 3 sorties were abortive owing to crew failures, and one Wellington was lost without trace.

Frisian Islands

46. 15 of 19 Stirlings despatched laid a total of 83 mines off the Frisian Islands. 3 aircraft returned early owing to technical defects, and one was lost near the target area, probably owing to ship's flak, although a single-engined aircraft was seen in the vicinity of the crashed Stirling. Another Stirling was shot down by ship's flak near Cromer on the return, 6 of the crew being rescued.

Kattegat and Aalborg Bay

47. 3 Group sent 20 Stirlings to the Kattegat and 4 to Aalborg Bay. 20 aircraft laid a total of 60 mines in the 2 areas, and 3 returned early owing to technical defects. The remaining aircraft was probably shot down by ship's flak N.E. of Denmark. 3 interceptions, including 2 attacks, were reported, but none of the Stirlings were damaged.

Horn's Reef

48. 18 mines were laid off Horn's Reef by 9 of 11 Halifaxes detailed for this area. One aircraft was damaged on take-off, and one was unable to identify the target area, and brought back its mines. All the aircraft were equipped with H2S, which was used by 6 to lay their mines blindly. The other 3 successful aircraft used it to check their positions.

Heligoland

49. 6 Group: detailed 10 Wellingtons to lay mines off Heligoland. 5 aircraft laid 10 mines in the allotted area, and 5 were unable to pin-point, and brought back their mines. 4 interceptions, including 2 attacks, were reported. Although there was no evidence of G.C.I. activity, radio beacons were active in the Schleswig and Stade areas, and it is probable that this large number of interceptions (for so small a force) was due to G.C.I. aircraft. One Wellington was damaged in combat.

LEAFLETS

50. 14 Wellingtons of Training Groups and 4 Fortresses of U.S.B.C. set out to scatter leaflets over towns in northern France. 16 aircraft reached their primary areas, and released their loads, and one detailed for Versailles dropped its leaflets in the Dreux area. The eighteenth aircraft returned early owing to a technical defect. One Wellington was hit by flak.

EM/JT.
BC/S. 26342/1/ORS3,
3rd. December, 1943.

TARGET	GROUP	AIRCRAFT TYPE	SORTIES	A/C REPORTING ATTACK ON		AGGRESSIVE SORTIES		MIS-SES	DAMAGE			DISEMPOWERED		RESULTS TONS OF BOMBS H.E. Inc.	
				PRIM. AREA	ALT. AREA	OVER E.T.	NOT OVER E.T.		FLYER	FIGHTER	MISC. IN FLIGHT	OTHER CAUSES	ATTACKED		NOT ATTACKED
STUTTGART	8 PFF	Lanc.III	41	39	-	-	2	-	1	-	20+1	-	-	P. 686.9 551.0 A. 14.1 5.6 M. 7.1 9.9	
	8 M.F.	Lanc.III	26	25	1+0	-	-	-	-	-	-	-	2	Heavy Bombs 4000lb.	
	1	Lanc.I	10	8	-	-	2	-	-	-	1,0	-	-	P. 309	
		Lanc.III	97	91	1	-	5	-	-	-	-	1B+1,0	-	2	A. 5 M. 4
	3	Lanc.II	13	11	-	-	2	-	1	-	-	-	-	-	Total of Bombs 16 E. Inc.
	5	Lanc.I	24	20	-	1	3	-	-	-	1	1	-	2	P. 2.7
	Lanc.III	104	92	1	2	6	3	1	-	2	-	-	10	Heavy Bombs 4000lb.	
	Lanc.II	28	23	1	-	3	1	-	-	1	-	-	1	Total of Bombs 16 E. Inc.	
STUTTGART TOTAL			343	309	4+1 ⁰	3	23	4	3	-	30+5	1B+1,0+1	-	17	P. 1000.0 400.0 A. 2.7 M. 4
FREIDRICHSHAFEN	8 PFF	Lanc.III	16	15	1	-	-	-	1,0+2	-	-	-	-	-	Total of Bombs 16 E. Inc.
MINICH	8 PFF	Moq. IV	2	2	-	-	-	-	-	-	-	-	-	-	P. 4
	8 PFF	Moq. IX	3	3	-	-	-	-	-	-	-	-	-	-	Total of Bombs 16 E. Inc.
	8 PFF	Moq. IV	2	2	-	-	-	-	-	-	-	-	-	-	P. 3.9
MINICH TOTAL			7	7	-	-	-	-	-	-	-	-	-	-	P. 6.0
PAGE 1 TOTAL			376	339	5+1 ⁰	5	23	4	1,0+6	-	30+7	1B+1,0+1	-	17	

* Repeater aircraft. ° Also attacked primary.

STUTTGART-FREIDRICHSHAFEN-MINICH: BOMBING RECORD: Bombing: Leaflets - 7/8th. OCTOBER, 1943 (Contd.)

TARGET	GROUP	AIRCRAFT TYPE	SORTIES	A/C REPORTING ATTACK ON		AGGRESSIVE SORTIES		MIS-SES	DAMAGE			DISEMPOWERED		RESULTS TONS OF BOMBS H.E.	
				PRIM. AREA	ALT. AREA	OVER E.T.	NOT OVER E.T.		FLYER	FIGHTER	MISC. IN FLIGHT	OTHER CAUSES	ATTACKED		NOT ATTACKED
PAGE 1 TOTAL			376	339	5+1 ⁰	5	23	4	1,0+6	-	30+7	1B+1,0+1	-	17	
MINICH	8 PFF	Moq. IX	4	4	-	-	-	-	1	-	-	-	-	-	P. 3.9
	8 PFF	Moq. IV	1	1	-	-	-	-	-	-	-	-	-	-	
MINICH TOTAL			5	5	-	-	-	-	1	-	-	-	-	-	
BOMBING TOTAL			381	344	5+1 ⁰	5	23	4	1,0+7	-	30+7	1B+1,0+1	-	17	
MINENWANDER	1	Well.X	5	5	-	-	-	-	-	-	-	-	-	10 mines	
LORENZ	1	Well.X	4	4	-	-	2	-	-	-	-	-	-	7 mines	
ST. KATHARINE	1	Well.X	5	3	-	-	1	1	-	-	-	-	-	6 mines	
KUNIGSHEIM	3	Star.I	1	1	-	-	-	-	-	-	-	-	-	3 mines	
	3	Star.III	19	15	-	-	3	1	-	-	-	1	1	45 mines	
	3	Star.II	4	4	-	-	-	-	-	-	-	1	-	12 mines	
FRIDLAND	3	Star.III	19	15	-	-	3	1	1B	-	-	-	-	83 mines	
HORNES REEF	4	Hal.L.	11	9	-	-	2	-	-	-	1,0	-	-	18 mines	
WEGGOLD	6	Well.X	10	5	-	-	5	-	1,0	-	-	2	2	10 mines	
MINENWANDER TOTAL			80	61	-	-	16	3	1B	1,0	-	1,0	4	3	194 mines

° Also attacked Primary.

...../over.

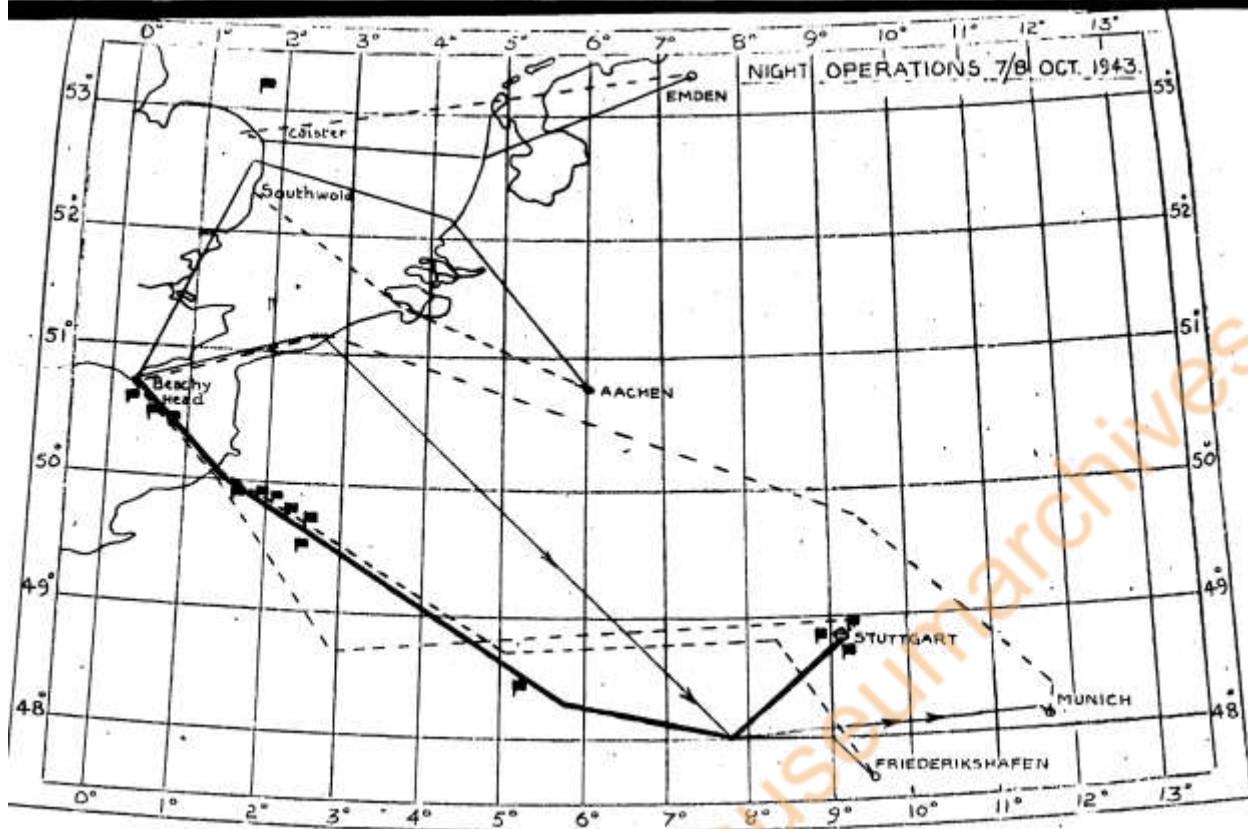
STUTTGART-FREIDRICHSHAFEN-MINICH: BOMBING RECORD: Bombing: Leaflets - 7/8th. OCTOBER, 1943 (Contd.)

TARGET	GROUP	AIRCRAFT TYPE	SORTIES	A/C REPORTING ATTACK ON		AGGRESSIVE SORTIES		MIS-SES	DAMAGE			DISEMPOWERED		RESULTS
				PRIM. AREA	ALT. AREA	OVER E.T.	NOT OVER E.T.		FLYER	FIGHTER	MISC. IN FLIGHT	OTHER CAUSES	ATTACKED	
BOHEMIA - MORAVIA TOTAL			460	405	5+1 ⁰	5	38	7	1B+1,0+7	1,0	3,0+7	1B+2,0+1	4	20
LEAPLES	91	Well.III	7	6	1	-	-	-	-	-	-	-	-	-
N. PALICE	95	Well.Ic	3	2	-	-	1	-	-	-	-	-	-	-
		Well.III	1	1	-	-	-	-	1	-	-	-	-	-
		Well.X	3	3	-	-	-	-	-	-	-	-	-	-
LEAPLES TOTAL			14	12	1	-	1	-	1	-	-	-	6	-
(U.S.B.C.)		Fortress	4*	4*	-	-	-	-	-	-	-	-	-	-
TOTAL			474	417	6+1 ⁰	5	39	7	1B+1,0+8	1,0	3,0+7	1B+2,0+1	4	20

91 GROUP TO-DREUX - BEAUVAIS - COLEMAN - TOURS - GRANVILLE - VERSAILLES - MOIS - (J.T. TARRANT - DREUX ALSO)

93 GROUP TO - METZ - THOUROING - LILLE.

NOT INCLUDED IN TOTAL.



BOMB PLOTS NOT AVAILABLE

www.bombercommandmuseumarchives.ca

BOMBER COMMAND REPORT ON NIGHT OPERATIONS

8/9th. OCTOBER. 1943.

HANNOVER: BREMEN: Berlin: Castrop-Rauxel: Duren: Minelaying: Leaflets:SUMMARYHANNOVER

1. 430 Lancasters, Halifaxes and Wellingtons (out of a force of 1,96) delivered a most concentrated attack against Hannover, devastating 2 square miles of the city centre and damaging 62 factories, much railway, commercial and residential property and numerous military installations. The target was clear of cloud, and the H2S ground-marking exceptionally accurate. 27 aircraft (5.45) were lost; returning crews claimed the destruction of 5 fighters, one as the result of a collision.

BREMEN

2. 95 Stirlings and 24 Pathfinder "heavies" were detailed to carry out a diversionary raid against Bremen, following the successful American attack in the afternoon. The target was cloud-covered and the bombing consequently scattered, although much of it fell within the built-up area. 10 factories were damaged as a result of the two raids and scattered incidents occurred in the town. 3 aircraft were lost. One fighter was shot down.

BERLIN

3. A diversionary attack on Berlin was made by 6 Mosquitoes; one other returned early. T.I. rod and bombs were dropped. None of the aircraft was lost.

CASTROP-RAUXEL

4. 10 OBCE Mosquitoes were despatched to attack Castrop-Rauxel. 8 aircraft attacked, 3 using the precision device, and all returned safely.

DUREN

5. One Mosquito carried out an attack against Duren using G.H. The equipment functioned satisfactorily and a photograph was obtained, which was plotted 500yds. from the aiming-point.

MINELAYING

6. 16 of a force of 17 Stirlings laid 62 mines off the west coast of France, and all returned safely.

LEAFLETS

7. 2 Wellingtons of 92 Group, and 2 Fortresses of U.S.B.C. scattered leaflets over Orleans and Rennes, without incident.

WEATHER FORECAST

8. Estimated midnight position of fronts: (i) occluded 63°N. 10°W - 57°N. 2°W - Holyhead, becoming (ii) warm front to 47°N. 7°W. and (iii) cold front south-westwards.

Home bases:- generally fit for take-off, with little or no low cloud, appreciable amounts of medium and high cloud in 1, 4 and 6 Groups only. For return, 50% of operational bases may be fit up to 04.00 hours, but from 0500 to 0600 hours most airfields will probably be unfit owing to fog. Diversions will be required for all groups, especially 5 and 6 Groups, which may have to divert between 80 and 100% of their effort. Diversions should be available along coastal districts of S. England and S. of East Anglia, and probably N.W. side Cornish peninsula. Pershore, Honeybourne, Mornton-in-the-Marsh should be fit 0500 hours, and one airfield of 93 Group up to 0600 hours. In addition, E. Scotland will have cloud base at 1,500 ft., and moderate or good visibility with some rain.

N.W. France:- increasing amounts of medium and low cloud. Remainder of France: small amounts of cloud, with local fog inland late at night.

Germany: N. of 50°N., small amounts of cloud, but fog developing inland locally. Broken layer cloud at medium and low levels S. of 50°N., and much cloud with rain in the extreme S.E.

Route: small amounts of cloud over North Sea, with higher cloud breaking up quickly. Patches of strato-cumulus over eastern North Sea. Increasing medium and high cloud on return, W. of 2½°E, making a total of 10/10ths. above 8,000ft.

Hannover: probably less than 3/10ths. cloud, with ground mist or fog developing about 0300 hours. Wind at 20,000ft., 310°/15 m.p.h.

HANNOVER

PLAN OF ATTACK

9. Route: East coast - 53°15'N. 03°50'E - North end of Texel Island - 52°08'00"E - 52°40'N. 09°48'E - TARGET - 51°56'N. 09°18'E - Egmond - 52°35'N. 03°30'E - East Coast.

10. Method of Attack (a) 12 blind-markers and 14 backers-up were to drop T.I. yellow at 52°40'N. 09°48'E (20 miles 005° Hannover) on the outward route. 8 OBQE Mosquitoes were to drop T.I. red at 52°10'N. 07°21'E and T.I. green at 52°18'N. 07°19'E (on either side of the track on the return route, 30 miles 258° and 32 miles 275° Osnabruck).

(b) Blind-markers were to drop T.I. yellow on the target, either on H2S or visually if certain of identification. They were also to release 6 bundles of flares at 6 second intervals, the first 24 seconds before the T.I. yellow. Visual markers were each to drop a salvo of 10 T.I. red and 1 T.I. green on the aiming-point after visual identification, releasing one bundle of flares if necessary. If unable to see the aiming-point they were to aim T.I. green to overshoot the estimated centre of T.I. yellow by 2 seconds. Backers-up were to maintain the marking by aiming T.I. green at (i) T.I. red, or to overshoot the estimated centre of (ii) T.I. yellow or (iii) T.I. green by 2 seconds.

(c) Supporters were to identify visually or to aim (i) at the estimated centre of T.I. yellow, or (ii) at T.I. red. The rest of the main force were to aim at (i) T.I. red or (ii) to overshoot the estimated centre of T.I. green by 2 seconds. (5 Group, no overshoot).

10. Timing Zero hour: 0130 hours Duration of Attack: 0126-0150hrs

Pathfinder Force

- 20 blind-markers (Lancasters) at Z - 4
- 8 visual markers (Lancasters) at Z - 3
- 2 backers-up (Lancasters) at Z.
- 2 " " " " at Z + 1
- 21 " " " " from Z + 2 to Z + 22 at one minute intervals.

...../Main Force.

Main Force

Supporters: (8 Group) 23 Lancasters at Z + 4
 70 Halifaxes + 2 Lancasters from Z + 2 to Z + 5
 126 Halifaxes + 3 Lancasters + 26 Wellingtons from Z + 5 to Z + 11
 205 Lancasters from Z + 11 to Z + 20

11. Tactics WINDOW was to be dropped from 03°50'E to 09°48'E at one bundle per 2 minutes, within 20 miles of the target at 2 bundles per minute, and from 09°30'E to 03°30'E at one bundle per minute.

(b) Diversionary raids were to be made on Bremen and Berlin.

SORTIES

12.	No. of aircraft despatched.....	496
	" " " reporting attack on primary area.....	430(86.7%)
	" " " " alternative area.....	7(1.4%)
	" " abortive sorties (technical and manipulative	
	defects.....	29
	(crew failure.....	2
	(late.....	1
	" " aircraft missing.....	27(5.4%)

WEATHER EXPERIENCED

13. Home bases:- cloudy in N., fair to fine in S. Visibility moderate; mist and fog patches increased during the night, becoming widespread by dawn.

Route: patches of layer-cloud, tops 6-8,000ft., 8/10ths. at times. Small patches of cirrus at 28-30,000ft. Condensation trails at 22-25,000ft. Winds at 15-20,000ft.: 260°-280°/20 m.p.h.

Target: cloudless, hazy. Wind at 15-20,000ft., rather variable, light; 280°-330°/15 m.p.h. Moon 70% of full, setting shortly before zero hour.

NIGHT PHOTOGRAPHIC STATISTICS

14.	No. of photographs with bombing examined.....	397
	" " " showing ground-detail (plotted within 3 miles..70)	
	" " " " outside 3 miles..18)	101
	" " " " (unplotted.....13)	
	" " " " fire-tracks (plotted within 3 miles..206)	
	" " " " " outside 3 miles.. 3)	296
	" " " " (unplotted..... 87)	
	No. of aircraft estimated from the photographic evidence to have bombed within 3 miles of the aiming-point.....	340
	No. of aircraft reporting attack.....	430

NARRATIVE OF ATTACK

15. The blind-markers placed their T.I. yellow very accurately round the aiming-point, which was brilliantly illuminated. In spite of this, the first 4 visual markers overshot the aiming-point by 2-3½ miles, but the next 2 dropped their salvos of T.I. red and green within ½ mile of the aiming-point. The main force, following their usual procedure, bombed the first T.I. red that they saw, which in this instance were those nearest to the aiming-point. About 70% of the main force bombed before these T.I. were extinguished, with the result that an exceptionally concentrated attack developed in the centre of the city. The backers-up dropped their T.I. green on the estimated centre of the reds, S.E. of the aiming-point. Since, however, the majority of the main force bombed on reds, this had little influence on the course of the raid. This was undoubtedly one of the most successful attacks hitherto made using the Newhaven technique.

DAY RECONNAISSANCE

16. Reconnaissance photographs showed that the central city area around and
 / south of the main

south of the main railway station was very seriously damaged, and that the industrial district of Linden, S.W. of the town centre, had also suffered severely. The fires seen burning the day after the raid spread over an elliptical area 2 miles long by a mile wide, engulfing innumerable buildings. About 54% of the fully built-up area of the town was destroyed, mainly by fire.

18. Industrial damage was exceptionally severe, 62 factories being affected, including the old works of Continental Gummiwerke (priority 1+) at Hainholz, the main Linden branch of Hannoverische Maschinenbau A.G. (Hanomag) (priority 1), and the Vereinigte Leicht Metallwerke G.m.b.H (priority 1). The wool-combing factory at Döhren, which suffered so severely as a result of the raid on 22/23rd. September, suffered further heavy damage.

19. Buildings of the main railway station were partially destroyed, and offices of the railway directorate almost burnt out. Sheds at the northern goods station and in yards and sidings at Hainholz and Linden were gutted, and several waggons were still burning 3 days after the attack. Engine sheds at a locomotive depot near the main station were damaged, and several workshops of a wagon repair shop destroyed.

20. The main gas works was seriously damaged, and about 70 public buildings were affected. Military depots and barracks sustained much damage, many buildings being partially or wholly destroyed.

ALTERNATIVE TARGETS

21. 6 aircraft dropped their loads in the areas of Oldenburg, Springe, Twistringen, Texel, Vlagtwedde and Boetatorwaag. Another bomber jettisoned its load just before reaching the target, after colliding with an F.W. 190.

SPECIAL EQUIPMENT

22. H2S 71 Y-aircraft were despatched, 19 blind-markers and 52 main force aircraft, carrying H2S for navigational purposes. All but one of the blind-markers reported attack, 15 dropping T.I. blindly. Their timing was good and their standard of accuracy high. 48 main force aircraft reached the target with their sets in order. 4 Y-aircraft were lost.

23. OBOE 8 Mk. I OBOE Mosquitoes accompanied the force as route-markers. All were successful and returned undamaged.

24. GEE The Eastern Chain operated on the Wyoming frequency throughout and on the Zanesville and Arizona frequencies from 2359 to 0330 hours. The usual types of interference were experienced, grass or noise being the most intense, particularly on the Arizona frequency. The signals were strong and the ranges rather better than usual, due mainly to the many good fixes taken on the Zanesville frequency. The average ranges were 270 and 330 miles on the outward and return routes respectively.

A comparison of the plots of October raids to date showed that the Arizona frequency was heavily jammed everywhere, particularly over northern Holland. The Zanesville frequency on the other hand gave good ranges over Northern Holland but was more heavily jammed over northern France and Belgium. The use of the Maryland frequency on 3/4th. enabled fixes to be obtained well past 0700'E., and the cancelling of this frequency on the following night, leaving only one target frequency, resulted in unusually low ranges.

ENEMY DEFENCES

25. Flek and Searchlights Searchlights were active but hampered by the haze. Few aircraft were coded. Towards the close of the attack, small cones were formed in a line across the target, presumably to help fighters. The guns fired a moderate barrage, which slackened as the raid progressed. 8 aircraft were hit by flek.

26. Fighters The Stade controller was apparently deceived by the

...../diversionary raid

diversionary raid on Bremen, and ordered all fighters there; but many seem to have met the main bomber stream near Hoyas on its way to Hannover, and to have followed our aircraft to the primary target. Considerable fighter activity was reported during the later stages of the route and over the target, at least 9 bombers being lost in combat. The controller did not recognise Hannover as the main target till 9 minutes after zero hour.

27. A Halifax of 4 Group, and a Wellington and Lancaster of 6 Group, each claimed to have destroyed a Ju.88., and a Halifax of 4 Group to have shot down a FW.190. 9 returning aircraft reported fighter damage. A Lancaster of 5 Group collided with a FW.190 and sent it down in flames; the bomber returned without its front turret.

CASUALTIES

23.	No. of aircraft missing.....	27 (5.44)
	" " " damaged	(flak..... 8)
		(fighter..... 9)..... 32
		(British incendiaries.. 7)
		(British aircraft..... 3)
		(other causes..... 5)

Only one loss can definitely be attributed to flak. This occurred over the target. Few other losses were observed; 2 aircraft (possibly 4) were seen shot down by fighters over Hannover, 5 to fighters on the outward route (North Sea, Louwarden, N.W. of Hannover (2) and Papenburg), and 2 on the way home, one to a fighter and one to an unknown cause. Most of the other 15 losses were probably due to fighters.

29. One Lancaster of 1 Group crashed on return, with the loss of 5 of its crew, and another Lancaster (of 6 Group) ditched off Alderney owing to a shortage of fuel. The crew were all picked up. A Halifax of 4 Group was struck by British incendiaries and so badly damaged that it was wrecked on landing. All these aircraft were totally destroyed.

BREMEN

PLAN OF ATTACK

30. Route East coast - 53°20'N. 03°50'E - North end of Texel Island - 52°55'N. 08°00'E - TARGET - 53°30'N. 09°10'E - 54°40'N. 05°30'E - East coast.

31. Method of Attack (a) Blind-markers were to release T.I. yellow at 52°59'N. 08°19'E (23 miles, 253° Bremen) on the outward route.

(b) T.I. red were to be dropped on the aiming-point by the blind-markers, using H2S, or visually if the aiming-point was positively identified. 6 bundles of flares white were to be released at 6 second intervals, the first 18 seconds before the T.I. red. The marking was to be maintained by backers-up, aiming visually if possible; otherwise aiming to overshoot T.I. red or the estimated centre of T.I. green by one second.

(c) Supporters were to bomb visually, or aim at the estimated centre of T.I. red or T.I. green. Selected crews of the rest of the main force were to bomb visually or to aim at the estimated centre of T.I. red. All other aircraft were to aim to overshoot the estimated centre of T.I. green by one second.

32. Timing Zero hour: 0115 hours. Duration of Attack: 0111-0119 hours

Pathfinder Force

12 blind-markers (Halifaxes) at Z - 4
 4 backers-up (Lancasters) at Z - 3
 3 " " " at Z + 1 to Z + 3 at one minute intervals.

..../Main Force.

Main Force

Supporters (8 Group) 6 Halifaxes at Z - 4
 Selected crews: 25 Stirlings from Z - 2 to Z.
 Other aircraft: 75 Stirlings from Z to Z + 4.

33. Tactics WINDOW was to be dropped at one bundle per minute on the outward route; at 2 bundles per minute within 20 miles of the target; at one bundle per minute on the return.

SORTIES

34.	No. of aircraft despatched.....	119
	" " " reporting attack on primary area.....	104 (87.4%)
	" " " " " alternative area.....	2 (1.7%)
	" " abortive sorties (technical and manipulative defects)	10 (2.5%)
	" " aircraft missing.....	3 (2.5%)

WEATHER EXPERIENCED

35. Home bases and route: as for Hannover (para.13).

Target: 7-9/10ths. layer cloud, tops 10,000ft. Wind: at 10-15,000ft./260°/15 m.p.h. Moon 70% of full, setting just before the attack began.

NIGHT PHOTOGRAPHIC STATISTICS

36. None available owing to cloud over the target.

NARRATIVE OF ATTACK

37. Only 3 blind-markers dropped T.I., and none of the 9 backers-up was able to identify the aiming-point visually, although 7 eventually released their green T.I. on reds or other greens. 89% of the main force reported attack, two thirds of these bombing on greens and one-third on reds. Photographic evidence shows that 3 of the blind-markers, including one which dropped T.I., bombed within 2½ miles of the aiming-point. Reconnaissance suggests that the bulk of the attack fell on the built-up area of the port, without achieving any particular concentration. Airborne CIGAR was carried for the second time under operational conditions.

DAY RECONNAISSANCE

38. Damage caused in part by this attack and in the daylight raid by aircraft of U.S.B.C. on the preceding afternoon, was largely confined to 10 industrial works in the Neuenlander district, S. of the town centre, and in the area of the W. docks. Deutsche Schiff und Maschinenbau A.G. (priority 1+), makers of submarines and other warships, sustained hits on 1 large and 3 small buildings, and 3 floating docks. An assembly shop and workshop of Weser Flugzeugbau (priority 1), aircraft components and assembly, were affected, together with 2 nearby merchant-vessels measuring 250' and 300'. The main building of Bremen Lugerhaus Ges (priority 2), cereal handling and silos, was partly demolished. An assembly shop of Focke-Wulf Flugzeugbau (priority 1+), aircraft design and construction, was damaged and a nearby airfield hangar almost destroyed. Other industrial plants damaged include an iron construction works, 2 furniture factories, and a workshop of Karl F.W. Borgward (priority 1), A.F.V. and H.T. One railway building, 9 warehouses or commercial structures, a military barracks and a hatted camp were also affected. Scattered incidents occurred among business and residential property.

ALTERNATIVE TARGETS

39. 2 aircraft bombed alternative targets, in the areas of Bectsterzwang and Lathen.

...../SPECIAL EQUIPMENT.

SPECIAL EQUIPMENT

40. H2S 24 Y-aircraft were despatched, including 10 blind-markers, all but one of which reported attack. Only 3, however, dropped T.I., the remainder being uncertain of the aiming-point as indicated by the set, and releasing flares and H.E. One Y-aircraft was lost.

41. GEE See paragraph 24.

ENEMY DEFENCES

42. Flak and Searchlights Searchlights were active but failed to penetrate the cloud. A moderate barrage was put up by the heavy guns. 7 aircraft were hit.

43. Fighters Fighters were operating over the target throughout the attack, mostly Ju.88's and FW.190's. They were ordered to Bremen at 0108, 7 minutes before zero hour, and were not diverted to Hannover until half an hour later. 1 bomber reported fighter damage. A Stirling of 3 Group claimed the destruction of a Me.110.

CASUALTIES

44.	No. of aircraft missing.....	3 (2.5%)
	" " " damaged (flak..... 7)	
	(fighter..... 4)	15
	(British incendiaries..... 3)	
	(other causes..... 1)	

The 3 missing aircraft were lost in the target area, 2 to fighters and one to an unknown cause. A Stirling ditched in shallow water off Yarmouth, after experiencing engine trouble, and was wrecked. A P.P.T. Halifax crashed on return after being badly damaged by a fighter.

BERLIN

45. 7 Mosquitoes were detailed to carry out a diversionary attack on Berlin. 6 attacked in clear conditions, dropping red T.I. with their F.E., the seventh abandoned its task for technical reasons. All returned safely.

CASTROP-RAUXEL

46. 10 OBOE Mosquitoes were sent on a harassing raid against Castrop-Rauxel, 10 miles N.W. of Dortmund. 8 aircraft attacked, 3 by means of their precision device and the rest on D.R. The other 2 aircraft returned early for technical reasons. None was lost or damaged.

DUREN

47. One Mosquito bombed Duren successfully on G.H., producing a photograph which was plotted 500 yards from the aiming-point.

MINELAYING

48. 16 Stirlings laid 62 mines off La Pallice and in the Gironde estuary. A seventeenth aircraft was unable to pinpoint and brought its mines back. One aircraft was hit by flak, but all returned safely.

LE-FLETS

49. 2 Wellingtons of 92 Group and 2 U.S. Fortresses dispersed leaflets uneventfully over Orleans and Rennes.

ESD/YEM/JT
EC/S. 2632/1/CRS3,
6th. December, 1943.

HANNOVER, BRUNNEN, CASTROP-RAUXEL, BUNDEL, BUNDEL, BUNDEL, BUNDEL, BUNDEL

8/9th. OCTOBER, 1943.

TARGET	GROUP	AIRCRAFT TYPE	BOARDS	A/C REPORTING ATTACK ON		AGGRESSIVE SORTIES		MISSED	FLAK	FIGHTER	DAMAGE		DIVERGENTIONS		RESULTS
				PRIM. AREA	ALT. AREA	OVER S.T.	NOT OVER S.T.				IN FLIGHT	OTHER CAUSES	ATTACKED	NOT ATTACKED	
HANNOVER	B	Lano.III	49	45	-	-	2	2	1	-	1A+C+1	-	2	-	TONS OF BOMBS H.E. Inc. P. 376.2 803.7 A. 13.7 13.6 M. 50.1 52.3
	PFY	Lano.III	25	21	2	-	-	2	-	-	-	-	-	-	
	M.P.	Lano.III	10	10	-	-	-	-	-	-	-	-	1	1	
	1	Lano.I	86	77	-	-	5	4	-	2A	-	1B	2	4	Heavy Bombs 8000lb. 4000lb. P. 18 237 A. - 5 M. - 13
		Well.X	12	10	1	-	1	-	-	1A	-	-	3	1	
	3	Lano.II	12	9	-	-	1	1	-	-	-	-	1	1	
		Hal.IIIV	38	31	-	-	2	4	1	2	1	1A	2	-	
	4	Hal.L.	80	67	1	1	4	7	3	1B+2	1E+1A+C	-	5	2	
		Hal.L.	14	12	1	-	-	1	-	-	-	-	-	3	
	5	Lano.I	70	63	1	-	3	3	1	1A+C+1	2	1B	5	15	
		Lano.III	51	45	-	-	2	4	-	-	-	-	2	8	
	6	Hal.IIIV	19	16	-	-	2	1	-	-	1A	-	-	2	
Hal.LA		14	10	-	-	3	1	-	-	1	-	3	-		
Well.X		16	14	1	-	1	-	-	-	1	1B	1	3		
Lano.II		16	14	1	-	1	-	1	-	-	-	-	-		
HANNOVER TOTAL			496	430	7	4	28	27	8	1B+4A+C	1E+3A+C	2B+1B	27	40	
ROUTE HANNOVER (HANNOVER)			4	4	-	-	-	-	-	-	-	-	-	-	
ROUTE HANNOVER TOTAL			8	8	-	-	-	-	-	-	-	-	-	-	

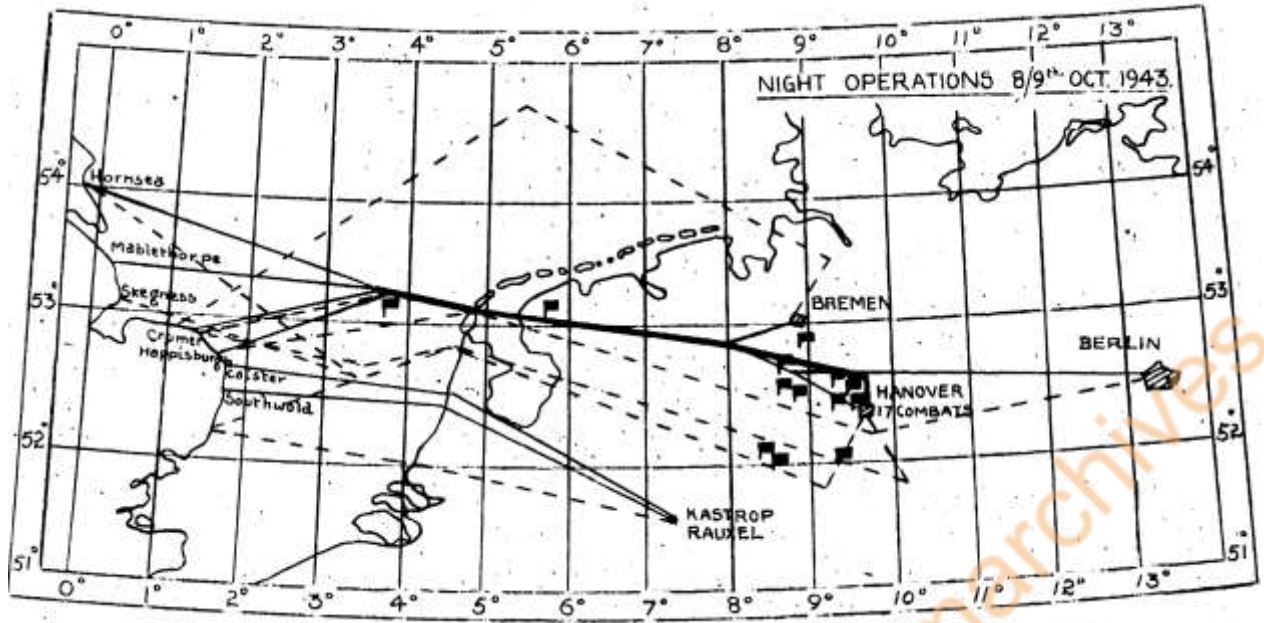
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HANNOVER, BRUNNEN, CASTROP-RAUXEL, BUNDEL, BUNDEL, BUNDEL, BUNDEL, BUNDEL

8/9th. OCTOBER, 1943. (Contd.)

TARGET	GROUP	AIRCRAFT TYPE	BOARDS	A/C REPORTING ATTACK ON		AGGRESSIVE SORTIES		MISSED	FLAK	FIGHTER	DAMAGE		DIVERGENTIONS		RESULTS
				PRIM. AREA	ALT. AREA	OVER S.T.	NOT OVER S.T.				IN FLIGHT	OTHER CAUSES	ATTACKED	NOT ATTACKED	
HANNOVER AND ROUTE HANNOVER TOTAL			504	438	7	4	28	27	8	1B+4A+C	2E+1B	1B+3A+C	27	40	TONS OF BOMBS H.E. Inc. P. 172.4 116.7 A. 2.9 1.7 M. 5.4 4.0
BRUNNEN	B	Hal.II	1	1	-	-	-	-	-	-	-	-	1	-	
	PFY	Hal.LA	11	9	1	-	1	-	-	-	-	-	-	-	
	8	Lano.III	7	6	-	-	-	-	-	-	-	-	-	-	
		M.P.	Hal.L.	5	4	-	-	1	-	-	-	-	-	-	
3	Stir.III	95	84	1	-	8	2	-	-	1E	1A+C+2	9	9	Heavy Bombs 4000lb. P. 4 A. - M. 1	
BRUNNEN TOTAL			119	104	2	-	10	3	7	1B+2A+C+1	1E	1A+C+2	10	9	
CASTROP-RAUXEL			2	2	-	-	-	-	-	-	-	-	-	-	P. 5.8 tons A. 0.8 "
CASTROP-RAUXEL TOTAL			10	8	1	-	1	-	-	-	-	-	-		
BUNDEL			7	6	-	-	1	-	1	-	-	-	-	-	P. 2.7 A. 1.2 "Inc. M. -
BUNDEL TOTAL			1	1	-	-	-	-	-	-	-	-	-		
BUNDEL AND ROUTE BUNDEL TOTAL			64	57	10	1	40	30	16	1B+1B+6A+C	3B+1B	1E+4A+C	37	50	
MINDELAYNE			1	1	-	-	-	-	-	-	-	-	-	-	10 mines 22 mines
MINDELAYNE TOTAL			17	16	-	-	1	-	1	-	-	-	-		
LESLIES			2	2	-	-	-	-	-	-	-	-	-	-	P. - A. - M. -
LESLIES TOTAL			92	92	-	-	-	-	-	-	-	-	-		
(U.S.B.C. (United States Bomber Command))			2	2	-	-	-	-	-	-	-	-	-	-	

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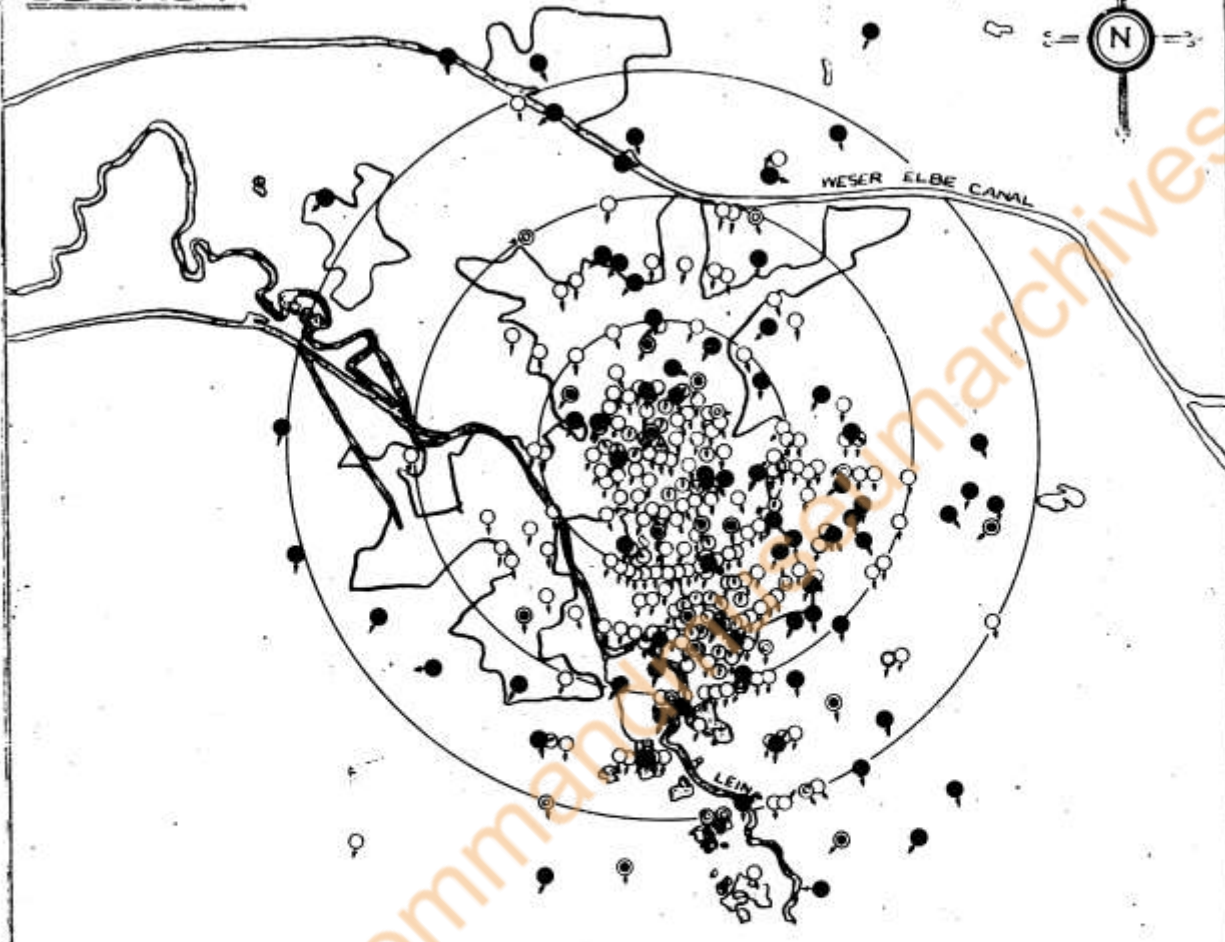


FINAL PLOT OF NIGHT PHOTOGRAPHS

TAKEN 8/9 OCTOBER 1943. TARGET: HANNOVER

SECRET

137



2 aircraft have been plotted outside the area of this map

Photographs taken with Bombing		
	PFF marker aircraft	Main Force aircraft
Plotted by ground detail	⊙	●
Plotted by fires	⊙	⊙
Plotted	By ground detail	By fires
Within 3 miles	70	206
Outside 3 miles	16	3
Unplotted	13	67

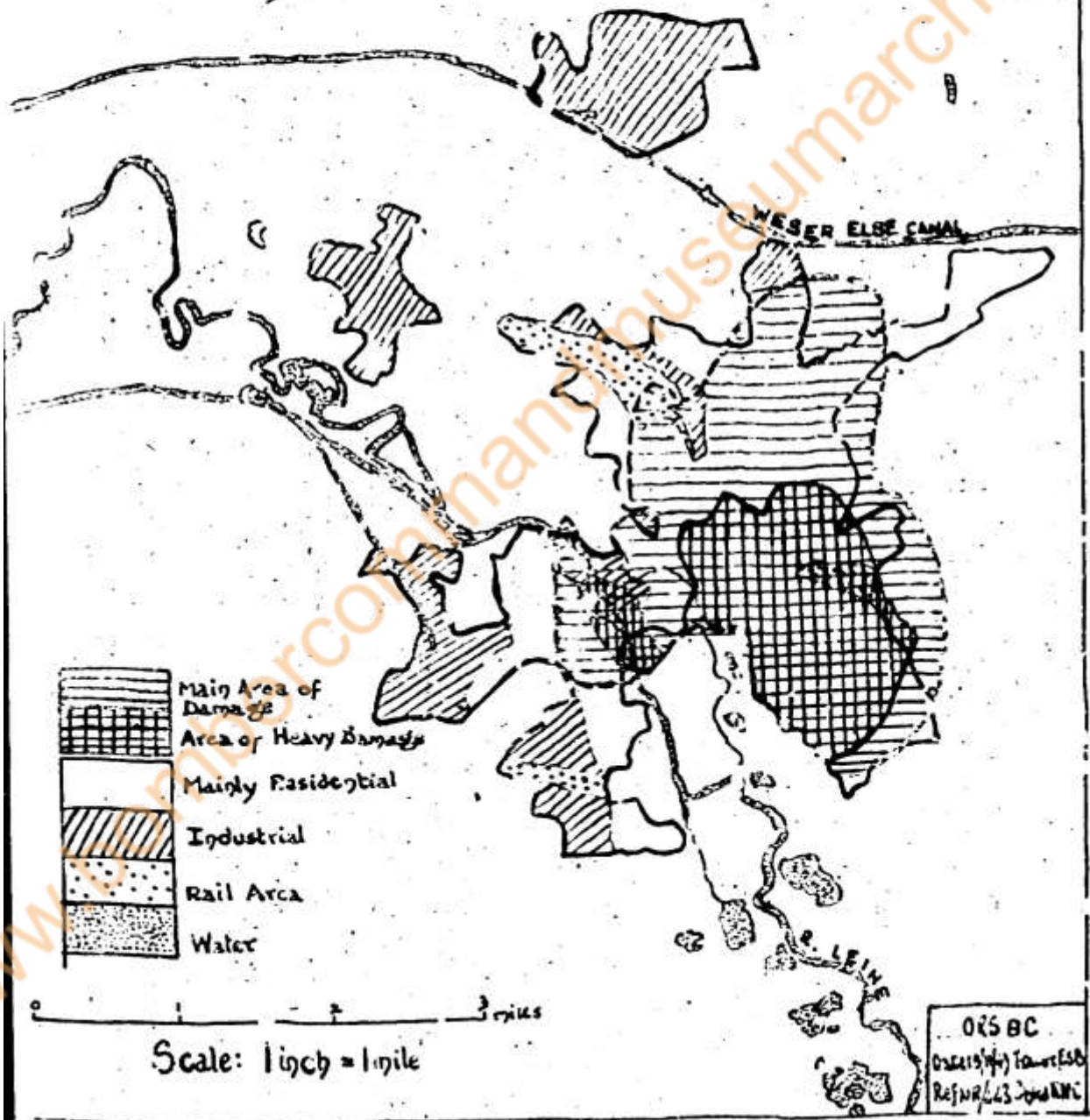
Scale: 1 inch = 1 mile

ORS/BC 309 B
11-12-43 TKS/jj
Ref. N. 137

SECRET

DIAGRAM SHOWING LOCATION OF
ATTACK AS INDICATED BY DAMAGE

HANNOVER 8/9th OCTOBER 1943



BOMBER COMMAND REPORT ON NIGHT OPERATIONS,9/10th. OCTOBER, 1943.BerlinSUMMARY

1. 6 Mosquitoes were despatched on an anti-morale attack against Berlin. 5 successfully completed their task; the sixth returned early. All crews reported that large fires were still burning at Hanover from the previous night's raid. All aircraft returned safely.

WEATHER FORECAST

2. Bases:- Variable cloud. Visibility moderate to poor early in evening; bases should generally be just fit for take-off, with 2-3,000 yards visibility (locally 1,000 yards). Fog will form in smoky areas before midnight, becoming widespread later.

Continent:- Little or no cloud, apart from some layer cloud over France and S. Germany. Fog after midnight in smoky areas.

SORTIES

3.	(a)	No. of aircraft despatched.....	6
	(b)	" " " reporting attack on primary area.....	5
	(c)	" " abortive sorties (crew failure).....	1
	(d)	" " aircraft missing.....	0

WEATHER EXPERIENCED

4. Bases:- General mist and fog by midnight, affecting the whole of England by dawn.

Berlin:- No cloud. Good visibility. No moon.

ENEMY DEFENCES

5. No reaction by enemy fighters was heard and no sightings were reported. Very many searchlights were active at Berlin and some Mosquitoes were held for several minutes at heights up to 30,000'. Moderate flak co-operated.

CASUALTIES

6. All our aircraft returned undamaged.

MLM/JT.
BC/E. 26342/6/CRS4,
1st. December, 1943.

BERLIN

2/104h. OCTOBER, 1943.

103

TARGET	GROUP	AIRCRAFT TYPE	SORTIE	A/C DESCRIPTION				MISSED	LOSS			REMARKS		Bomb Tonnage (B.Z.)	
				PREL. MISS.	ALL. MISS.	OVER E.T.	NOT OVER E.T.		DOWN	FIGHTING	DISC. IN FLIGHT	OTHER CAUSES	ATTACKED		NOT ATTACKED
BERLIN	8 PFF	Boeing IV	6	5	-	1	-	-	1	-	-	-	-	-	5. 3.5

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BOMBER COMBINED REPORT ON NIGHT OPERATIONS,13/14th. OCTOBER, 1943.Cologne: Duisburg:DETAILS

4 Mosquitos were despatched to Duisburg, and a similar number to Cologne, for harassing raids. All completed their tasks, using the GEE/DR technique, and returned safely, although 2 were damaged by flak.

WEATHER FORECAST

Bases:- Cold front will affect operational areas to-night; midnight position, S. Lines to Isle of Wight to N.W. France. Low cloud and light rain in 30-mile wide belt in frontal zone; much lower cloud and poor visibility S.E. of front, clear skies to N.W. with fog forming towards dawn. 3 and 8 Groups fit at dusk, with broken strato-cumulus at 2,000' and moderate visibility, locally perhaps 1-2,000 yards. 5 and 1 Groups will have 10/10ths. strato-cumulus at 1,000' or below at dusk. 4 and 6 Groups will have bad frontal conditions till 200, then radiation fog.

Germany:- Fine, with moderate visibility; local fog in Middle Rhine. Thick smoke haze in Ruhr. Moderate visibility at Berlin.

France:- General fog in N.E. Variable amounts of strato-cumulus along coast, with fog patches and 10/10ths. low cloud in vicinity of cold front.

STATISTICS

(a)	No. of aircraft despatched.....	8
(b)	" " " reporting attack on primary area.....	8
(c)	" " " missing.....	0

WEATHER EXPERIENCED

Bases:- Fog and very low cloud over Lines and S. Midlands, affecting S. Berkshire and parts of East Anglia before midnight, and increasing during the night.

Route:- 10/10ths. layer cloud, base 3,000', tops 28,000', breaking from 15°E. to nil over Germany. Condensation trails at 28-35,000'. Patches of cloud at 600' on return.

Ruhr:- No cloud. Moderate visibility, with some ground fog. Full moon.

DEFENCES

Moderate heavy flak, co-operating with searchlights, was encountered from both targets. No fighters were observed.

RESULTS

All our aircraft returned undamaged.

CM/JT.
S/S. 26342/6/OBS4,
1st. December, 1943.

COLOGNE BOMBING

13/14th. OCTOBER, 1943.

TARGET	GROUP	MISSET TYPE	SOURCES	NO REPORTS ATTACK ON		DESCRIPTIVE SOURCES		MISS- ING	REASON				INTERCEPTION		Bomb Tonnage (H.B.)	
				PRIM. AREA	ALT. AREA	OVER E.T.	NOT OVER E.T.		FLAK	FORWARD	MISSED IN FLIGHT	OTHER CAUSES	FLAK- ED	NOT ATTACK- ED		
COLOGNE	8 PFF	Misq. II Misq. IV	1 3	1 3	- -	- -	- -	-	-	-	-	-	-	-	-	P. 3.1
COLOGNE TOTAL			4	4	-	-	-	-	-	-	-	-	-	-	-	
DUISBURG	8 PFF	Misq. IV	4	4	-	-	-	-	2	-	-	-	-	-	-	P. 3.1
TOTAL			8	8	-	-	-	-	2	-	-	-	-	-	-	

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BOMBER COMMAND REPORT ON NIGHT OPERATIONS

16/17th. OCTOBER, 1943.

Dortmund: Leaflets:

SUMMARY

1. Dortmund 9 Mosquitoes (one fitted with G-H) carried out a successful harassing raid on Dortmund. All bombed on D.R., 8 according to plan and one because the G-H equipment failed. All returned safely, although 2 were hit by flak.

2. Leaflets 8 Wellingtons and Whitleys dispersed leaflets over various towns in Northern France; 3 other aircraft returned early. No losses were sustained.

WEATHER FORECAST

Bases:- Occlusion will affect operational areas to-night (midnight position: Limerick to Solway Firth to Bristol to N.W. France). Belt of rain and low cloud in frontal zone; but at midnight Lincs and East Anglia will only have broken strato-cumulus at 1,500-2,000', and some medium cloud. Rain should not reach East Anglia till 0300-0400 hours. Visibility moderate except in rain.

Germany:- Variable amounts of medium and strato-cumulus cloud; well broken medium cloud in Ruhr - Bremen - Hanover - Middle Rhine area.

France:- Variable amounts of medium and low cloud. Frontal conditions along W. coast; low cloud and rain.

RESULTS

	<u>Dortmund</u>	<u>Leaflets</u>
(a) No. of aircraft despatched.....	9	11
(b) " " " reaching primary area.....	9	8
(c) " " abortive sorties.....	0..(icing.....2)	3
		(tech.defect..1)
(d) " " aircraft missing.....	0	0

WEATHER EXPERIENCED

Dortmund:- 5/10ths. thin low stratus. Very hazy. Good visibility. No rain.

N. France:- Generally, 10/10ths. cloud. Full moon.

ENEMY DEFENCES

Mosquitoes experienced slight but accurate predicted flak at Dortmund. Leaflet aircraft were engaged by heavy flak at Cherbourg, Dinan and Cabourg, where Ju.88 was seen.

REMARKS

All our aircraft returned safely. 2 Mosquitoes and one Wellington were slightly damaged by flak.

W/JT.
C/S. 26342/60854,
22. December, 1943.

REPORT: Leaflets

16/17th. OCTOBER, 1945.

TARGET	GROUP	AIRCRAFT TYPE	SORTIES	A/C REPORTING		AGGRESSIVE SORTIES		MISSED	MISC.		OTHER		DIVERGENTIONS		TONS OF BOMBS		
				DOWN	REPAIRS	OVER E.T.	NOT OVER E.T.		FLAK	FIGHTER	MISC. IN FLIGHT	CAUSES	ATTACKED	NOT ATTACKED	H. H.	Inc.	
DORCHESD	8 FFV	Heag. D Heag. IV	1 8	1 8	-	-	-	-	-	-	-	-	-	-	-	P. 6-5	0.1
DORCHESD TOTAL			9	9	-	-	-	-	2	-	-	-	-	-	-		
LEAFLET'S																	
H. FRANCE	91	Whit.	7	4	-	-	3	-	-	-	-	-	-	-	1		
H. FRANCE	92	Well.X	4	4	-	-	-	-	1	-	-	-	-	-	-		
LEAFLET TOTAL			11	8	-	-	3	-	1	-	-	-	-	-	1		
TOTAL			20	17	-	-	3	-	3	-	-	-	-	-	1		

91 Group to: ORLÈANS - BREST - CHARENTAIS - CLERMONT - ESPÈRES.

92 Group to: CHENOUËT - GRAYVILLE - ST. NAÛO - REZES.

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BOMBER COMBINED REPORT ON NIGHT OPERATIONS

17/18th. OCTOBER, 1943.

Berlin: Lachen: Hamborn: Minelaying: Leaflets:

SUMMARY

1. Berlin 8 Mosquitoes were despatched on a harassing raid against Berlin. 6 attacked the capital, which was clear of cloud. Bombs were seen to burst in the built-up area. The other 2 aircraft returned early; no losses were sustained.
2. Lachen: Hamborn: 3 Mosquitoes, equipped with 15. II OBOZ, carried out a harassing raid on Lachen. A G-H Mosquito, despatched on a precision test to Hamborn, had to abandon its task owing to GEE failure. All returned safely.
3. Minelaying 49 Stirlings and Wellingtons laid 124 mines off the Frisians and the French Atlantic ports. 3 carried M23, and one used it to determine its position at the time of release. 5 other sorties were abortive. No losses were sustained.
4. Leaflets 16 Wellingtons and Whitlochs were detailed to disperse leaflets over towns in Northern France. 10 completed their task. All returned safely.

WEATHER FORECAST

5. Midnight frontal position:- Spurn Head to Paris to Marseilles.
 Bases:- Broken cumulus and strato-cumulus at dusk, base 1,500'.
 Visibility moderate to good. Cloud will disperse during the night, except in W. during scattered showers. Visibility troubles after midnight E. of the Wash.
 Germany:- Variable strato-cumulus with some good clearances. Ruhr: 10/10ths. below 25,000' by 2030. Berlin: cloudless all night.
 France:- Cloud to 20,000' along front. Heavy showers in Bay of Biscay, with local hail and perhaps lightning; cloud base generally above 1,500'.
 Frisians:- Frontal belt will pass through this area from the west between dusk and midnight, with a narrow belt of rain and cloud at 1,000' or below. On either side of this, low cloud broken above 1,500'. Moderate visibility.

SORTIES

Bombing Minelaying Leaflets

6.	(a)	No. of aircraft despatched.....	12	.....	54	.....	16
	(b)	" " " reaching primary area.....	9	.....	49	.....	10
	(c)	" " abortive sorties (tech.defect..3)	3	{(t.defect.3)	(icing.3)		
				{(crew fail.1)	5	{(t.def.2)	6
				{(icing...1)		{(crew fail.1)	
	(d)	" " aircraft missing.....	0	.....	0	.....	0
	(e)	" " mines laid.....		.....	184	.....

...../WEATHER EXPERIENCED.

WEATHER EXPERIENCED

7. Bases:- Broken low and medium cloud during the operation. Moderate to good visibility.

Berlin:- Cloud broke sharply from Dutch coast. Clear skies at Berlin. Slight haze. Good visibility.

Ruhr:- 10/10ths. cumulo-nimbus to 29,000'. Poor visibility.

Frisians:- 6-9/10ths. towering cumulus over North Sea, tops 25,000', 2-3,000', falling to 500' in heavy thunder showers. Severe lightning and thunderstorms, with heavy rime in cloud. Bad frontal conditions were met near Terschelling, with cloud tops to 29,000' and base 500'; elsewhere, conditions as for route.

N. France:- Generally 3-5/10ths. cloud, base 2-4,000', tops 5-6,000' (locally 8-10,000'). Considerable static in cloud en route, with heavy clear ice formation. Good visibility.

Three-quarters moon during mining operations.

ENEMY DEFENCES

8. Small-scale activity by controlled fighters was heard from areas of N. Germany and Holland, and patrols were active in the Rocamp/Rouen district. No interceptions were reported and only 2 sightings, one at Berlin and the other near Cap Frehel. Many searchlights were operating at Berlin, probably for the benefit of fighters, as little flak was experienced. Intense and accurate flak was met over Aachen. Minelayers were engaged at Cap Frehel, St. Malo and the Channel Islands, as well as from the usual coastal points.

CASUALTIES

9. No aircraft was lost. 2 Mosquitoes were slightly damaged by flak, one over Aachen and one at Bremen en route for Berlin. One leaflet aircraft was also hit.

MLM/JT.
BC/S. 26342/6/CRS4,
2nd. December, 1943.

BOMBER COMMAND REPORT ON NIGHT OPERATIONS

18/19th. OCTOBER, 1943.

HANNOVER: Berlin; Stolberg; Duisburg; Emden; Dusseldorf;Minelaying; Leaflets;SUMMARYHANNOVER

1. 360 Lancasters were despatched to Hannover, in the fourth attack delivered against the city within a month. The target was covered with cloud and much of the bombing fell in open country N. and N.W. of the town; but the industrial district of Hainholz suffered heavily, at least 21 separate factories sustaining damage, including two rubber works of the highest priority. Transport and military installations were also affected. Fighters were exceptionally active in the target area, but weather conditions and the scatter of our force subdued their efforts. 17 bombers (4.7.3) were lost; 2 fighters were destroyed.
2. Berlin 7 Mosquitoes carried out a diversionary raid on Berlin; an eighth returned early. None was lost.
3. Stolberg; Duisburg; Emden; Dusseldorf; 25 Mosquitoes were detailed on harassing raids and training flights against targets in N.W. Germany. All were equipped with OBOE, and the force despatched to Emden contained 2 repeaters. 19 aircraft attacked their targets, 10 by means of their special equipment and 9 on D.R. Both repeaters failed to function properly, because of a difficult beam wind, so that none of the Mosquitoes on Emden could be controlled by the ground stations. One Mosquito swung and crashed while taking-off. All the rest returned safely.
4. Minelaying 6 Wellingtons laid 12 mines off the Dutch coast without incident.
5. Leaflets; 11 Wellingtons dispersed leaflets over towns in Northern France; a twelfth returned early.

WEATHER FORECAST

6. Bases:- Front approaching from S.W., probably lying at midnight from Pembroke to Beachy Head (to Paris to 45N. 03E), with a rain belt extending to a line Valley-Manston. All bases should be fit till fairly late in the night, with broken medium and low cloud, base 1,500-2,000', and moderate to good visibility.

Germany:- Cold front will affect W. Germany, remaining almost stationary all night. Midnight position: N. Denmark to Emden to Cologne to W. Alps. 2 layers of cloud in frontal zone, both above 10,000'; tops of main medium sheet 14-16,000'. Base of cirrus 25,000'. The same conditions will hold for the Ruhr. Hannover may be only $\frac{3}{4}$ covered with low and medium cloud (tops 18-20,000') but is in risk of 10/10ths. to above 20,000'. Cloud will disperse E. of the front to small amounts beyond 11 E.

Dutch coast: Well broken low and medium cloud above 1,500'.

Winds at 20,000':- Hannover, 180°/25 m.p.h.
Ruhr: 190°/50 m.p.h.

...../HANNOVER.

SORTIES

13.	(a)	No. of aircraft despatched.....	360
	(b)	" " " reporting attack on primary area.....	332(92.2%)
	(c)	" " " " " alternative area.....	2(0.6%)
	(d)	" " abortive sorties (technical or manipulative error.....8)	9(2.5%)
		(crew failure.....1)	
	(e)	" " aircraft missing.....	17(4.7%)

WEATHER EXPERIENCED

14. Bases:- A belt of rain covered England and Wales S. of a line Manston - Aberporth at 2100, and moved N.E'wards at 20 m.p.h. Cloud remained above 1,000' everywhere except the Chilterns and Salisbury Plain, even during continuous rain. Visibility moderate to good.

Route:- Small patches of cirrus near the East Coast increased quickly to 4-8/10ths., over the North Sea, base 23-25,000' with 5-8/10ths. alto-cumulus, base 12,000' tops 14-16,000'. Alto-cumulus thickened at times to 10/10ths., especially inland over Holland and Germany. Light rime and frost were encountered while ascending through medium cloud; there were reports of ice formation on windscreens, and of bumpiness and light static over the North Sea. Good visibility. Dense and persistent contrails formed between 03-07 E, from 18-20,000'. Mean wind at 20,000': 180°/35-40 m.p.h.

Hannover: 4-8/10ths. cirrus, base 23-25,000'.

8-10/10ths. alto-cumulus, base 12,000', tops 14-16,000'.

Visibility 5-10 miles. Noon, rising about 15 minutes before zero hour.

NIGHT PHOTOGRAPHIC STATISTICS

15. Owing to the weather, photographs were not suitable for the usual accurate plotting. An approximate method, however, suggests that about 50 aircraft bombed within 3 miles of the aiming-point. No plot is issued.

NARRATIVE OF ATTACK

16. The inadequacy of night photographic evidence makes it impossible to reconstruct the raid in detail. 8 of the 19 blind-markers dropped T.I. yellow, between zero-5 and zero + 4. None of the visual markers were able to identify the aiming-point, and 4 acted as backers-up, aiming greens at the centre of yellows. 9 backers-up followed with greens. Of the 292 main force aircraft reporting attack, nearly two-thirds aimed at greens. 63 crews claimed to have bombed on reds, although none were dropped by the D.T.F. Cloud prevented any accurate observation of results, but the raid appeared to be scattered, although several large fires were burning.

DAY RECONNAISSANCE

17. The N.W. of Hannover suffered most from this attack, a concentration of bombs having fallen among industrial property at Hainholz and nearby; but isolated incidents occurred at Bothfeld in the F.E., Misburg in the E., and at points W. of the actual town. Several priority targets were hit, including the Nordhafen premises of Continental Gummiwerke A.G. (rubber tyres, priority 1+), which are specially equipped for the production of Buna rubber. The old works (priority 1+) of the same firm suffered further damage. At least 19 other factories were affected, including a copper foundry, an engineering works and a large accumulator plant. Stripping had begun on the damaged buildings of Woll-Wascherei and Kammerei Döhren (wool-combing, priority 1+), revealing even more extensive damage than had previously been visible. A large building at the North Goods Station, Hainholz, (priority 2) sustained severe

...../roof damage, and the

roof damage, and the railway workshops at Leinhausen, further to the W., were heavily hit. A mechanical transport depot at Hainholz was partly destroyed. Severe damage was caused to the Artillery Barracks in the same area, several blocks being gutted. Public buildings and business and residential property escaped comparatively lightly.

ALTERNATIVE TARGETS

18. 2 aircraft bombed alternative targets at Nienburg and Texel.

SPECIAL EQUIPMENT

19. H2S 85 Y-aircraft were despatched, including 19 blind-markers. All the latter reported attack, but only 9 dropped markers (all on H2S). 8 released bombs only, because their sets were out of order, and one on account of flak damage. Little is known of their accuracy; only one was plotted, 1 1/2 miles from the aiming-point. 47 other Y-aircraft reached the target with the sets in order, and 4 bombed blindly by this means. 5 Y-aircraft were lost.

20. GEE The Eastern Chain operated on the Wyoming frequency throughout on the Zanesville and Arizona frequencies from 1845 to 2145 hours. The usual types of jamming were reported on the Wyoming and Zanesville frequencies, and on the Arizona there were a few reports of drifting pulses in addition to the usual heavy grass. The signals on the Wyoming and Zanesville frequencies were strong and those on Arizona weak, so that this frequency was not often used. Average ranges of 260 and 230 miles were obtained on the outward and homeward routes respectively.

ENEMY DEFENCES

21. Flak and Searchlights Most of the flak was expended in the form of a barrage, fired to heights between 17,000 and 20,000'. Searchlights were generally unable to penetrate the cloud, but occasionally illuminated aircraft through the presenting targets for accurate predicted "seen" fire. Some predicted "unseen" fire was also experienced. The intensity of the ground defences decreased as the attack progressed. Balloons were reported in a circle around the target at 10,000'. Little opposition was encountered en route except from strongly defended places such as Munster and Osnabruck. 11 aircraft reported flak damage.

22. Fighters The running commentator picked our aircraft up in the neighbourhood of Groningen at 1916 hours, and directed the fighters along the route in readiness to announce the target as soon as it should be identified. At 2007 Hannover was announced after the first bombs had been dropped there. Combats and sightings of enemy aircraft were virtually confined to within 40 miles of the target area. A very large, possibly a record number of fighters was active, but weather conditions subdued their efforts. The diversionary raid did not appear to have been very effective. All types of fighters were observed, especially Ju.88's and Me.109's. 2 Lancasters, of 5 and 6 Group, each claimed to have destroyed an unidentified enemy aircraft. 11 returning bombers sustained fighter damage.

CASUALTIES

23.	No. of aircraft missing.....	17 (1.75)
	" " " damaged { flak..... 11	}..... 26
	{ fighter..... 11	
	{ British incendiaries. 3	
	{ other causes..... 1	

Observations suggest that 2 aircraft were lost to fighters near Bassora on the way in, and 5 more in the target area. 7 losses to flak were reported, 3 over the target, 2 at Munster, one at Hengelo and one at Osnabruck. The 3 remaining losses must be attributed to unknown causes. One Lancaster of 6 Group ditched 40 miles off Orfordness because of fuel shortage; the crew were picked up by a flak ship. 3 other Lancasters were very seriously damaged by fighters.

...../BERLIN.

BERLIN

24. 8 Mosquitoes were despatched on a diversionary raid against Berlin. 7 attacked the capital on D.R. through 10/40ths. clouds; the eighth experienced GCS failure and bombed Eiden. All aircraft dropped BELOW. No casualties were sustained.

STOLBERG

25. 3 Mk.II OBOE aircraft were detailed to Stolberg. One bombed according to plan, but the other 2 experienced OBOE failure and attacked on D.R. All returned undamaged.

DUISBURG

26. 12 Mk.I OBOE Mosquitoes left for Duisburg on a training and harassing attack. 8 were successfully controlled, and 2 bombed on D.R. because of technical difficulties. The pilot of one aircraft returned early with cramp; another Mosquito swung and crashed while taking-off. One aircraft was hit by flak; none was lost.

EIDEN

27. 1 Mk.I OBOE operation, employing 2 repeater aircraft on one leg and 5 bombers, was delivered against Eiden. Owing to a beam wind, the drift angle of the repeater exceeded the tolerance permitted by the horizontal polar diagram of the aircraft, and none of the bombers could be successfully controlled. All attacked Eiden on D.R., and returned undamaged.

DUSSELDORF

28. 1 Mk.II OBOE Mosquito attacked Dusseldorf according to plan.

WELLYNDE

29. 6 Wellingtons laid 12 mines off the Dutch coast without incident.

LEAFLETS

30. 11 Wellingtons dispersed leaflets over towns in Northern France; a twelfth returned early. No casualties were sustained.

MLH/JT.
BC/S. 26342/1/ORS3,
13th. December, 1943.

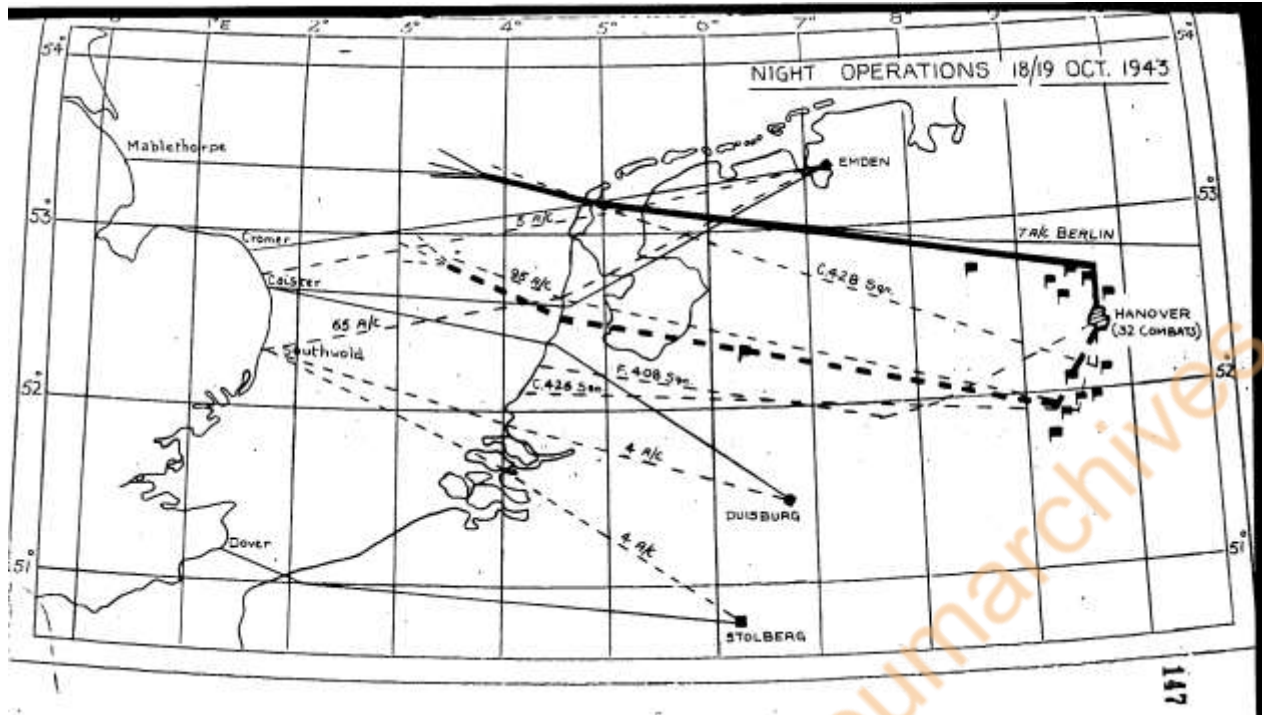
MANOEVER: BERLIN: STOLBERG: DUISBURG: EISEN: DUISBURG: Patrolling: 18/19th. OCTOBER, 1943.

TARGET	GROUP	MACHINE GUN TYPE	SIGHTS	A/C REPORTS		AGGRESSIVE		MIS- DIR	DAMAGE				HYPERMETRICS		RESULTS (Tons of Bombs) H.E. Inc.
				ATTACK ON FRONT AREA	ATTACK ON REAR AREA	OVER E.T.	NOT OVER E.T.		PLANE	FIGHTER	MISC. IN FLIGHT	OTHER CAUSES	ATTACK- ED	NOT ATTACK- ED	
MANOEVER	B PFF	Lanc. III	41	40	-	-	-	1	1A+C	-	1	-	2	3	P. 900.4 709.5 A. 3.6 5.1 B. 49.6 57.4 Heavy Bombs 3000lb. 4000lb. C. 19 287 D. - 2 E. - 15
	B H.P	Lanc. III	26	25	-	-	1	2	-	1	-	-	-	-	
	1	Lanc. I	11	11	-	-	-	-	1	3A	-	-	5	-	
		Lanc. III	97	87	-	1	2	7	1	2	1A	-	4	4	
	3	Lanc. II	14	12	1	-	-	1	-	1B	-	-	3	3	
	5	Lanc. I	23	20	-	-	-	3	-	1B	-	-	1	3	
	Lanc. III	120	113	1	-	3	3	4	1B+1A+C+1	1A	-	6	13		
	6	Lanc. II	26	24	-	-	2	-	1	-	-	1B	2	4	
MANOEVER TOTAL			360	332	2	1	8	17	1A+C+10	3B+4A+C+4	2A+C+1	1B	23	30	Tons of Bombs H.E.
BERLIN	B PFF	Hooq. IV	8	7	1	-	-	-	-	-	-	-	-	-	C. 5.5
DUISBURG (HAMBURG)	B PFF	Hooq. IV	12	10	-	-	2	-	1	-	-	1B	-	-	D. 8
EISEN	B PFF	Hooq. IX	3	3	-	-	-	-	-	-	-	-	-	-	E. 3.1
	B PFF	Hooq. IV	2	2	-	-	-	-	-	-	-	-	-	-	F. 2.3
EISEN TOTAL			5	5	-	-	-	-	-	-	-	-	-	-	
STOLBERG	B PFF	Hooq. IX	3	3	-	-	-	-	-	-	-	-	-	-	G. 2.3
TOTAL PAGE 1.			388	357	3	1	10	17	1A+C+11	3B+4A+C+4	2A+C+1	1B+1B	23	30	

MANOEVER: BERLIN: STOLBERG: DUISBURG: EISEN: DUISBURG: Patrolling: 18/19th. OCTOBER, 1943. (Contd.)

TARGET	GROUP	MACHINE GUN TYPE	SIGHTS	A/C REPORTS		AGGRESSIVE		MIS- DIR	DAMAGE				HYPERMETRICS		RESULTS (Tons of Bombs) H.E.
				ATTACK ON FRONT AREA	ATTACK ON REAR AREA	OVER E.T.	NOT OVER E.T.		PLANE	FIGHTER	MISC. IN FLIGHT	OTHER CAUSES	ATTACK- ED	NOT ATTACK- ED	
TOTAL PAGE 2			388	357	3	1	10	17	1A+C+11	3B+4A+C+4	2A+C+1	1B+1B	23	30	
DUISBURG	B PFF	Hooq. IX	1	1	-	-	-	-	-	-	-	-	-	-	H. 0.0
STOLBERG	B PFF	Hooq. IV	2	2	-	-	-	-	-	-	-	-	-	-	
BOBING TOTAL			391	360	3	1	10	17	1A+C+11	3B+4A+C+4	2A+C+1	1B+1B	23	30	
HELVETIA S. TOWN	6	Hell. X	6	6	-	-	-	-	-	-	-	-	-	-	12 tons
HELVETIA N. P. TOWN	93	Hell. X	12	11	-	-	1	-	-	-	-	-	-	-	
TOTAL			409	377	3	1	11	17	1A+C+11	3B+4A+C+4	2A+C+1	1B+1B	23	30	

93 GROUP TO: LON - ST. QUENTIN - LILLE - COXEDON - CHERBOURG - BOURG - TOURCOING.



BOMB PLOT NOT AVAILABLE

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BOMBER COMMAND REPORT ON NIGHT OPERATIONS

20/21st. OCTOBER, 1943.

LEIPZIG: Berlin: Emden: Brauweiler: Knapsack: Minelaying: Leaflets:SUMMARY

Leipzig The first large-scale night attack on Leipzig was spoilt by falling weather. 271 of the 358 Lancasters despatched reported attacking the city, but reconnaissance revealed only scattered damage. 15 aircraft (4.2%) were lost; 1 fighter was destroyed.

Berlin 10 Mosquitoes were detailed to make a diversionary attack on Berlin at the time of the main operation, and succeeded in drawing off the bulk of the enemy's fighter strength. 2 Mosquitoes were lost.

Emden: Brauweiler: Knapsack: 4 Mosquitoes bombed Emden on CBOE, with the loss of a repeater. 5 others attacked the power station at Brauweiler and 4 out of a force of 9 the power station at Knapsack. 4 other aircraft detailed for the latter target bombed Cologne, on the failure of their precision device. All returned safely.

Minelaying 12 Stirlings laid 63 mines off the Frisians without incident.

Leaflets 20 Whitleys and Wellingtons dropped leaflets over towns in northern and Central France. 6 others returned early. No casualties were sustained.

WEATHER FORECAST

Midnight frontal positions: (1) cold from 60°N. 11°E. to Hamburg to 50°N. 10°E. becoming warm to the tip of a wave slightly to the N.W., then cold again to Gironde. (2) occlusion from Central England to tip of wave in N.W. Germany.

Bases:- At dusk, brief thundery showers with 9/10ths. cloud, base 1,500', tops 15,000' (locally 20,000'); appreciable clearances between showers. Visibility moderate or good. For return (from Leipzig), little cloud, except in local showers, and then not below 1,500'.

Germany:- Much cloud along cold front, probably layered above 15,000'. Further N., much medium cloud and broken low cloud. Route to Leipzig: Conditions as for bases to 06E., where frontal zone will be encountered, with 9/10ths. to 15,000' (locally 20,000'), and wide lanes below cirrus level. E. of 06E., cloud will decrease to well broken medium, tops 15,000', amount 6/10ths. or even less. Good visibility at Leipzig. Possibility of cumulus-nimbus tops to 5,000' in frontal zone, at least locally (confirmed by American aircraft returning from Continent at 1800 hours). High icing index above 5000'.

Winds to Leipzig	750 mbs.	500 mbs.	300 mbs.
Bases to 02E	210-220°/35-40 mph.	220-230°/35-50 mph.	230°/55 mph.
02-08E.	230°/45 mph.	230°/50 mph.	240°/90 mph.
08E-Leipzig	220°/25-30 mph.	230°/30-35 mph.	250°/45-50 mph.

Frisians:- Variable amounts of cloud, increasing to 8-10/10ths. in showers, base 1,000-1,500', tops 15,000' (locally higher). Visibility moderate or good.

...../LEIPZIG.

LEIPZIGPLAN OF ATTACK

7. Route 53°20'N. 03°50'E. - N. of Texel - 52°53'N. 07°40'E - 52°36'N. 11°52'E - 52°02'N. 12°42'E - LEIPZIG - 51°06'N. 12°11'E - 52°53'N. 07°40'E - N. of Texel - 53°20'N. 03°50'E.

8. Route-marking 13 blind markers and 10 backers-up were to drop red spot fires at 17 miles 220° Bremen and yellow T.I. near Stendhal, both on the outward route, and red T.I. at 24 miles 173° Hannover on the way home.

9. Target-marking Blind-markers (Y-type) were to release yellow T.I. on the aiming-point; if cloud was less than 7/10ths., each aircraft was also to drop a string of flares, the first bundle 24 seconds before the T.I., the second 18 seconds before, the third with the T.I., and the rest at 6-second intervals thereafter. Visual markers were to mark the exact aiming-point with red T.I.; if unable to identify visually they were to aim green T.I. at the centre of yellows, with a 3 second overshoot. Flares might be used at the discretion of Captains. Backers-up were to maintain the marking with greens, aimed at (in order of preference) reds, centre of yellows or centre of greens, overshooting; in either of the 2 last-named eventualities by 3 seconds. Supporters were to identify visually, otherwise aiming at the centre of yellows. Main force aircraft were to aim at reds or the centre of greens. All qualified Y-crews were to carry one flare red + green stars for use in unfavourable cloud conditions.

10. Timing Zero hour: 2100. Duration of attack: 2056-2111

(a) Ground-marking

Blind-markers 23 Lanc. at zero - 4
 Visual-markers 9 Lanc. at zero - 2
 Backers-up 3 Lanc. at zero
 2 Lanc. at zero + 1
 2 Lanc. at zero + 2
 7 Lanc. from zero + 3 to zero + 9 (1 each minute)
 Main Force 27 Lanc. at zero - 4
 93 Lanc. from zero + 2 to zero + 5
 92 Lanc. from zero + 5 to zero + 8
 91 Lanc. from zero + 3 to zero + 11

(b) Emergency sky-marking

Blind and visual markers 9 Lanc. from zero to zero + 3
 7 Lanc. from zero + 3 to zero + 6
 8 Lanc. from zero + 6 to zero + 9
 8 Lanc. from zero + 9 to zero + 12

11. Marker Loads

Blind-markers: 10 Lanc: 6x4 white flares + 2 yellow T.I. (1 LB)
 13 Lanc: 6x4 white flares + 3 yellow T.I. (1 LB) + 1 red spot + 1 red T.I. (1 LB)
 Visual markers: 9 Lanc: 1x4 white flares + 1 green T.I. + 10 red T.I. (5 LB)
 Backers-up: 4 Lanc: 4 green T.I. (2 LB)
 10 Lanc: 4 green T.I. (2 LB) + 1 red T.I. LB + 1 yellow T.I. LB. + 1 red spot.

12. Tactics 10 Mosquitoes were to make a diversionary attack on Berlin, dropping red T.I. and white flares after a carefully timed run from the yellow route-marker T.I. WINDOW was to be dropped at the rate of one bundle every 2 minutes from 0350E to 1232E; one bundle every half minute from 1232E to Leipzig

back to 1211E; and one bundle every 2 minutes from that longitude to 0350E.

SORTIES

1. (a) No. of aircraft despatched..... 358
 (b) " " " reporting attack on primary area..... 271(75.7%)
 (c) " " " " " alternative area..... 50*(14.2%)
 (d) " " abortive sorties (technical defect or manipulative error.....19).....22
 (crew failure..... 3) (6.1%)
 (e) " " aircraft missing.....15
 (4.2%)
- * plus 9 aircraft which also attacked the primary.

WEATHER EXPERIENCED

1. Bases:- Scattered showers in East Anglia until midnight. Then a large area of heavy showers, with local thunderstorms, affected 91 Group area and moved eastwards, covering most of the country E. of a line Wash - Bristol by dawn. Cloud base generally held above 1,000', with visibility not less than 2 miles in showers.

Route:- Variable convection cloud over North Sea, mainly 4-6/10ths., tops 12,000'. Similar conditions as far as 08°E., with local tops to 18,000'. From 08-11°E, a belt of frontal cloud presented a barrier of 10/10ths. cumulo-nimbus to 21,000', and in places to 24,000'. Large patches of cirrus lay above, base 22-24,000'. Much static and moderate to heavy rain was encountered at cloud tops, which lowered towards the target to 16-17,000'. Similar conditions were met on return, except that tops over the North Sea had risen to 18,000' and above.

Leipzig:- 10/10ths. convection cloud, tops 16-17,000', breaking towards E. at time of attack. Small amounts of cirrus above. No moon. Horizontal visibility good, vertical visibility nil.

Winds at 20,000':	North Sea	230°/50 m.p.h.
	Dutch coast - 08°E.	230°/65 m.p.h.
	08°E - Leipzig	220-230°/55 m.p.h.
	Leipzig	220°/40-45 m.p.h.

PHOTOGRAPHIC STATISTICS

1. No useful photographs were returned. All showed 10/10ths cloud.

PERFORMANCE OF ATTACK

1. 17 blind-markers reported reaching Leipzig, but only 7 dropped T.I. or flares, and these were immediately obscured by the cloud. 24 Pathfinders released H.E. only. 239 main force aircraft claimed attack, 83 of these aiming at suspected T.I. or flares and 89 bombing blindly on E.T.A. No concentration was achieved.

PHOTOGRAPHIC EVIDENCE

1. Photographs taken 9 days after the raid revealed a number of points of damage in the town and outskirts of Leipzig. Several industrial and commercial concerns were affected, including a group of 3 small factories engaged respectively in the production of building machinery, accumulators, and chemical products. 5 warehouses at the goods station at Neustadt were gutted, and part of workmen's barracks belonging to the Allgemeine Transport-Anlagen G.m.b.H. was demolished. Scattered damage was caused to business and residential property.

ALTERNATIVE TARGETS

1. 50 aircraft attacked alternative targets in the estimated areas of Salzwedel (9), Stendhal (7), Allersehe (5), Leipzig (4), Nienburg (2), Wittenberg (2)

...../Texel (2).

Texel (2), Schanck (2), Ulzer (2), Hagleburg, Mucheln, Jerichow, Aschenlof, Plankenburg, Arundsee, Dessau, Klotze, Friesoythe, Soehausen, Belzig, Alkmaar, Rathenow, and Lathen. 9 other aircraft, which also reported attacking the primary, bombed Salzwedel (3), Stendal (3), Wittingen (2) and Grouw.

SPECIAL EQUIPMENT

19. H2S 86 Y-aircraft were despatched, including 23 blind markers. 17 of the latter reported attack, 7 dropping markers blindly on H2S and 10 H.E. only 6 because their sets were not in order and 4 because they were uncertain of their position. The timing was poor and there is no evidence that they were accurate. 16 main force aircraft used H2S to bomb blindly. 5 Y-aircraft were lost.

20. GEE The Eastern Chain operated on the Wyoming frequency throughout and on the Zanesville and Maryland frequencies from 1900 to 2300 hours. The usual types of jamming were reported, being most intense on the Zanesville frequency. The Wyoming frequency gave the best results, with a maximum range of 320 miles. No signals were seen on the Maryland frequency, and since the transmitting stations report no faults the absence of signals over the continent can only be ascribed to propagational conditions.

ENEMY DEFENCES

21. Flak and Searchlights Slight heavy flak was encountered at Leipzig, mostly predicted at unseen targets, although in the later stages a moderate barrage was fired up to 22,000'. Searchlights illuminated the cloud, which they were unable to penetrate. Guns were in action at many places en route, including Stendhal, Halle and Merseburg. Accurately predicted heavy flak co-operated with searchlights at Texel. 18 aircraft were hit.

22. Fighters 3 running commentators were operating from Stade, Deelen and Berlin, apart from the one at Vechte/Quackenbruck, whose function is not fully understood. Deelen soon handed over to Berlin, but Stade continued independent. The controllers did not always act in concert, although they never gave contradictory orders. The fighters were first ordered to a beacon S.E. of Bremen at 1908 hours, then to Osnabruck at 1919 hours, while our aircraft were crossing the Dutch coast. At 1928 hours in the case of one control and at 1956 in the case of the other they were detailed to the Stendhal area, to cover the Berlin route, at 2009 to a point W. of Brandenburg, at 2103 to Dessau and at 2124 hours to Leipzig, 5 minutes after the main attack had finished. Bremen, Hanover and Berlin were consecutively suspected of being the main objective.

Few combats took place over the target, most of the interceptions occurring along the outward route. Over half the identified attackers were Ju.88's. 8 aircraft sustained fighter damage; a Lancaster of 1 Group claimed the destruction of a Me.110.

RESULTS

23.	No. of aircraft missing.....	15 (4.2%)
	" " " Damaged (flak.....)	18
		(fighter.....) 8
		(British aircraft.....) 2
		(British incendiaries..) 1
		(Other causes.....) 5
		.....33

5 aircraft were probably lost to fighters on the outward route, 2 S. of Groningen, 2 between Texel and Leeuwarden and one S. of Oldenburg. A sixth was destroyed on the homeward route in the Texel area. 5 were observed to fall victims to flak, one over the target, one (possibly 2) at Liden, which was well off track, and 2 more between Texel and Leeuwarden. The remaining 4 losses must be ascribed to unknown causes, although unconfirmed reports suggest that 2 may have been caused by fighters in the target area. A Lancaster of 5 Group ditched 60 miles off Grimsby as a result of engine failure. 5 of the crew were rescued. A Lancaster of 6 Group was rammed by another aircraft while on the perimeter of its airfield and badly damaged.

...../BERLIN.

BERLIN

24. 10 Mosquitoes were detailed to make a diversionary attack on Berlin to mislead the enemy's fighter control. 7 reached the capital, and dropped T.I. and flares with their bombs. The city was covered with 10/10ths. cloud, and no results could be seen. 2 Mosquitoes were lost without trace, probably to the fighters whose attention they successfully attracted. All the other aircraft returned undamaged.

EMDEN: KNAPSACK: BRAUNELER

25. 4 Mosquitoes bombed Emden on OBOE, with the aid of a repeater. 5 others (2 D.R.) attacked the power station at Brauneiler, and 4 (2 on D.R.) out of a force of 9 the power station at Knapsack. 4 other aircraft detailed for the latter target attacked Cologne on the failure of their precision device, and the ninth abandoned its task for technical reasons. All returned safely, 2 being hit by flak.

HIRELAYTG

26. 12 Stirlings laid 63 mines off the Frisians without incident.

LEAFLETS

27. 26 Hitleys and Wellingtons, manned by training crews, were detailed to disperse leaflets over towns in Northern and Central France. 19 reached their targets, and a twentieth jettisoned its bundles over a useful area. The remaining 6 aircraft returned early, 4 because of bad weather and 2 for technical reasons. No losses or casualties were sustained.

LM/JT.

C/S. 26342/1/ORS3,
14th. December, 1943.

TARGET	GROUP	DISCR. PT TYPE	SORTIES	A/C REWORKING		AGGRESSIVE SORTIES		MISSED	DAMAGE				INTER-OPTIONS		TONS OF BOMBS	
				ATTACK ON PRIM. AREA	ALT. AREA	OVER E. T.	NOT OVER E. T.		FLAK	FIGHTER	DISC. IN FLIGHT	OTHER CAUSES	ATTACKED	NOT ATTACKED	H.E.	Inc.
LEIPZIG	B PFF	Lanc. III	45	32	8+1 ⁰	-	2	4	4	1B+2C	-	-	6	2	1,521.4	509.1
	B M.P.	Lanc. III	27	21	4	-	-	2	2	-	-	-	-	-	1,109.1	93.9
	1	Lanc. I	13	13	-	-	-	-	1	-	-	-	-	-	1,33.3	21.1
		Lanc. III	91	74	6	-	6	5	1	1	-	-	1	13		
	3	Lanc. II	13	8	2	-	2	1	-	-	-	-	-	1	Heavy Bombs	
	5	Lanc. I	36	30	3+1 ⁰	-	2	1	3	1,0	1,0	2,0+1	1B+1,0	2	5	1, -	255
	Lanc. III	104	72	24+7 ⁰	1	5	2	1,0+4	2	2,0+1	1B+1,0	6	8	1, -	56	
	Lanc. II	28	21	3	-	4	-	2	1,0	-	1B+1,0	4	4	1, -	15	
LEIPZIG TOTAL			358	271	50+9 ⁰	1	21	15	1,0+17	1B+4,0+3	2,0+1	1B+1B+2,0	19	33		
BERLIN	B PFF	Hsq. IV	10	7	-	-	1	2	-	-	-	-	-	-	H.E.	Inc.
															2,1,0	1,0
															1,0,9	0,2
KIEB	B PFF	Hsq. IX	2	2	-	-	-	-	-	-	-	-	-	-	H.E.	
		Hsq. IV	2	2	-	-	-	-	-	-	-	-	-	-	2, 2.5	tons
KIEB TOTAL			4	4	-	-	-	-	-	-	-	-	-	-	2, 3.9	tons
KANDEL	B PFF	Hsq. IX	2	1	1+1 ⁰	-	-	-	1	-	-	-	-	-	1, 3.1	tons
		Hsq. IV	7	3	3+1 ⁰	-	1	-	1	-	-	-	-	-	1, 3.1	tons
KANDEL TOTAL			9	4	4	-	1	-	2	-	-	-	-	-		
TOTAL PAGE 1			386	291	54+9 ⁰	1	23	17	1,0+19	1B+4,0+3	2,0+1	1B+1B+2,0	19	33		

Also attacked Primary.

...../Contd:-

LEIPZIG: BERLIN: KIEB: KANDEL: BOMBING: PATROLLING: Patroling: Mine-laying: Leaflets:
20/21st. OCTOBER, 1943(Contd:)

TARGET	GROUP	DISCR. PT TYPE	SORTIES	A/C REWORKING		AGGRESSIVE SORTIES		MISSED	DAMAGE				INTER-OPTIONS		RESULTS
				ATTACK ON PRIM. AREA	ALT. AREA	OVER E. T.	NOT OVER E. T.		FLAK	FIGHTER	DISC. IN FLIGHT	OTHER CAUSES	ATTACKED	NOT ATTACKED	
TOTAL PAGE 1			386	291	54+9 ⁰	1	23	17	1,0+19	1B+4,0+3	2,0+1	1B+1B+2,0	19	33	
PATROLLING	B PFF	Hsq. IV	1	1	-	-	-	-	-	-	-	-	-	-	
BOMBING TOTAL			387	292	54+9 ⁰	1	23	17	1,0+19	1B+4,0+3	2,0+1	1B+1B+2,0	19	33	
MINE-LAYING	3	Star. III	12	12	-	-	-	-	-	-	-	-	-	-	63 mines
LEAFLETS	91	Well. III	5	5	-	-	-	-	-	-	-	-	-	-	
		Well. X	2	2	-	-	-	-	-	-	-	-	-	-	
	92	Well. III	3	2	-	-	1	-	-	-	-	-	-	-	
		Well. X	5	5	-	-	-	-	-	-	-	-	-	-	
	93	Well. Ie	4	1	-	3	-	-	-	-	-	-	-	-	
		Well. III	3	3	-	-	-	-	-	-	-	-	-	-	
	Well. X	2	1	-	1	-	-	-	-	-	-	-	-		
	Well. V	2	1	-	1	-	-	-	-	-	-	-	-		
LEAFLET TOTAL			26	19	1	4	2	-	-	-	-	-	-	-	
MINE-LAYING	PARIS-LEFLETS	Portress	5	5	-	-	-	-	-	-	-	-	-	-	
TOTAL			425	323	55+9 ⁰	5	25	17	1,0+19	1B+4,0+3	2,0+1	1B+1B+2,0	19	33	

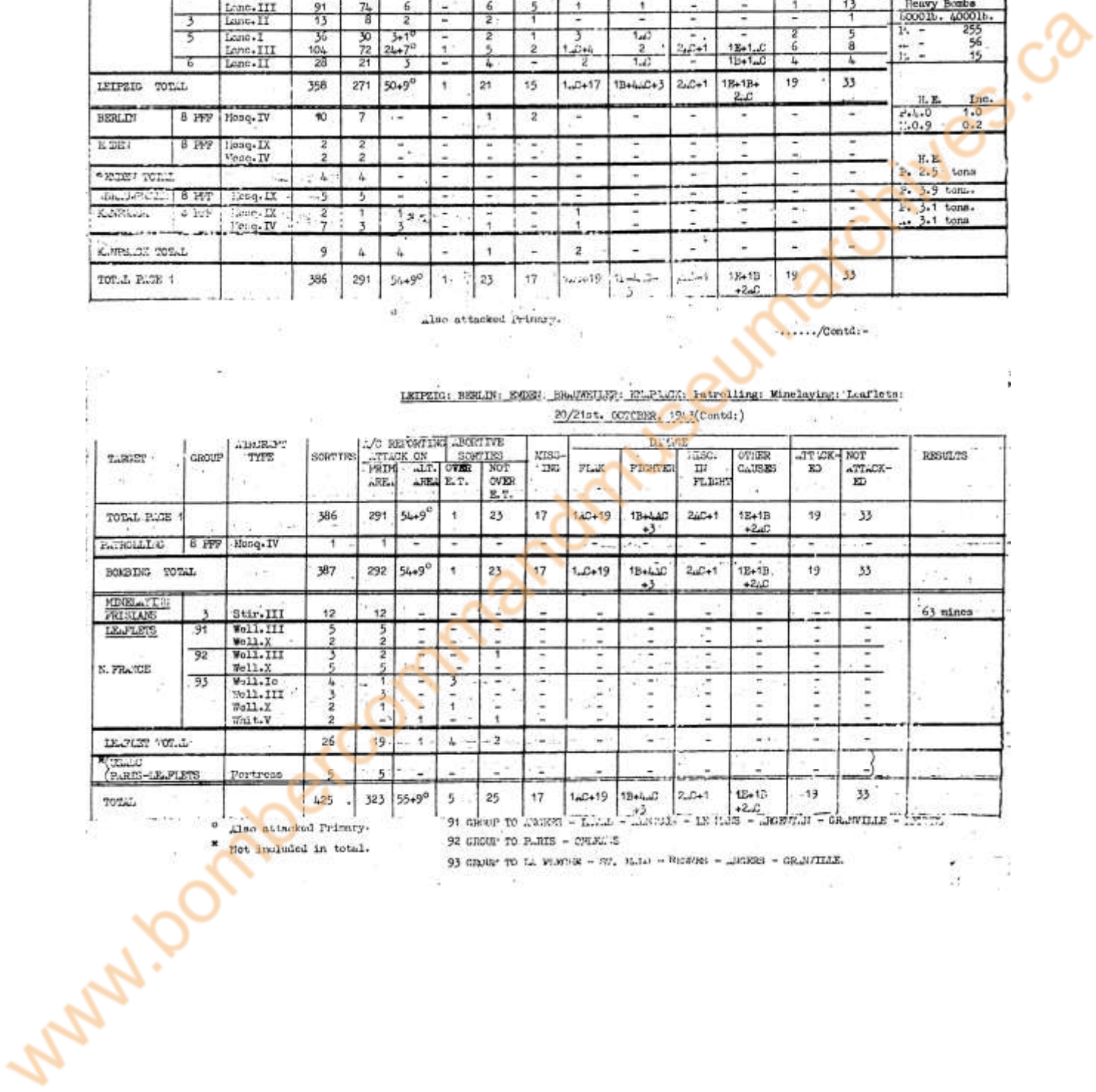
* Also attacked Primary.

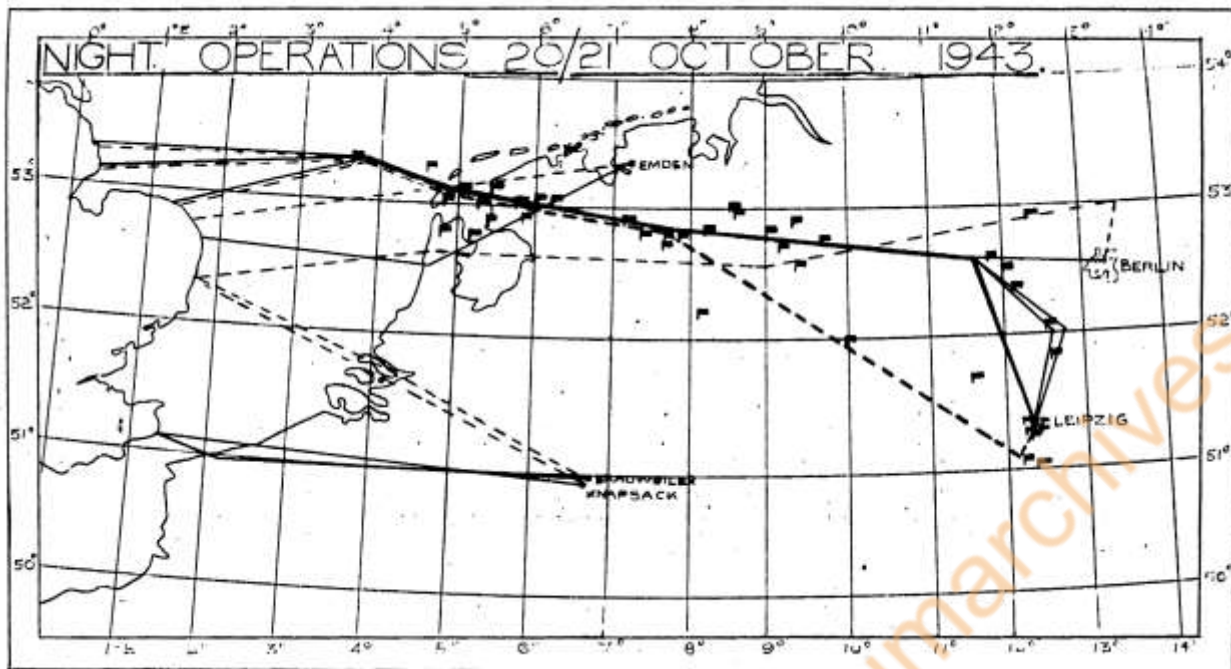
* Not included in total.

91 GROUP TO AMBON - L'ETAL - L'AMON - L'EN HUIS - L'IGNON - GRANVILLE - L'ETAL

92 GROUP TO PARIS - ORL'E'S

93 GROUP TO LA WILSON - ST. JEAN - REIMS - L'IGNON - GRANVILLE.





BOMB PLOT NOT AVAILABLE

BOMBER COMBINED REPORT ON NIGHT OPERATIONS

21/22nd. OCTOBER, 1943.

Budrich: Emden: Dortmund:SUMMARY

4 Mosquitoes, assisted by 2 repeaters, were detailed to carry out the first CROE attack on Emden, a target previously outside the range of this device. 3 completed their task, and one abandoned its mission. 4 CROE sorties were also sent to Buderich; 3 were successful and the fourth aborted on the failure of its precision device. An eleventh Mosquito attacked Dortmund using the GEE/DR technique. All returned undamaged.

WEATHER FORECAST

2. Midnight frontal positions:- cold from 57° 15E to Hamburg to 50 N. 07E. to Limoges to Bordeaux.

Germany:- Cloud to great heights along front. Broken medium and convection cloud to N., tops below 15,000'. Much medium cloud in S.E. with little or no low cloud. Breaks to 7/10ths. are possible in Ruhr early in the night, and at Wilhelmshaven after 0100. 10/10ths. at Berlin all night.

France:- Cloud to great heights in N. and N.W., with thundery showers.

Bases:- Mainly fit all night. Occasional showers. Well broken convection cloud in N., tops generally below 15,000'. Tops to 20,000' in thundery showers further S.

SORTIES

3.	(a)	No. of aircraft despatched.....	11
	(b)	" " " completing mission (including 2 repeaters).....	9
	(c)	" " " reporting attack on alternative area.....	1
	(d)	" " abortive sorties (tech. defect).....	1
	(e)	" " aircraft missing.....	0

WEATHER EXPERIENCED

1. Ruhr: 5-8/10ths. alto-cumulus, tops 20,000', 3-5/10ths. stratus, tops 8,000'. Good visibility.

Emden: 10/10ths. cirrus, tops 30,000'. Good visibility.

No moon during operations.

ENEMY DEFENCES

5. A little reaction by controlled fighters was heard, but none were seen. Fairly accurate flak was encountered from Buderich and Dortmund.

CASUALTIES

6. All our aircraft returned undamaged.

HLN/JT.
EC/S. 26342/6/ORS4,
4th. December, 1943.

REPORT: WRECKAGE REPORT: 2,711,151

21/22nd. OCTOBER, 1943.

100

SABOT	GROUP	AIRCRAFT TYPE	SORTING	W/C REPORTING		AIRCRAFT		WRECKAGE	DAMAGE		DEFECTS			BOOM TONNAGE (K. G.)
				PREL. ACC.	ALL. AREA	OVER R.C.	NOT OVER R.C.		PLANT	PERMANENT	MISC. IN FLIGHT	OTHER CAUSES	APPROX. NO.		REPAIRS
WRECKAGE	B	Heug. IX	4	3	1	-	-	-	-	-	-	-	-	P. 2.3 A. 0.8
WRECKAGE	B	Heug. IV	4	3	-	-	1	-	-	-	-	-	-	P. 2.0
DOSE AND	B	Heug. IV	1	1	-	-	-	-	-	-	-	-	-	P. 0.7
BOMBING	B	Heug. IV	2	2	-	-	-	-	-	-	-	-	-	
TOTAL			11	9	1	-	1	-	-	-	-	-	-	

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7 JAN 1944

BOMBER COMMAND REPORT ON NIGHT OPERATIONS

22/23rd OCTOBER, 1943

KASSEL: FRANKFURT: Knapsack: Dortmund: Minelaying: Leaflets:SUMMARY

1. Kassel The effective attack delivered against Kassel on 3/4th October was followed by another which devastated the entire city. 569 heavies were despatched, but severe conditions en route prevented more than 444 from reaching the target. The blind-markers overshot the aiming-point, but the visual markers concentrated their T.I. most accurately, and were admirably supported by the backscramblers. Little cloud was about, and the main force bombed correctly within the built-up area. Reconnaissance photographs revealed extraordinary destruction. Fighter opposition was strong, and 42 bombers were lost (7.45). 8 enemy aircraft were shot down.
2. Frankfurt 36 Mosquitoes and Lancasters carried out a diversionary raid on Frankfurt. The attack was poorly concentrated, but undoubtedly puzzled the fighter controllers as to the identity of the main target until the attack on Kassel was more than half completed. One aircraft was lost.
3. Knapsack 12 Mosquitos fitted with Mk.I OBOE were detailed on a precision attack against the power station of Knapsack. 4 bombed according to plan, and 4 more on D.R. One aircraft was lost.
4. Dortmund One G-H Mosquito was sent to Dortmund, but bombed on D.R. because its equipment failed. It returned undamaged.
5. Minelaying 15 aircraft, out of a force of 17, laid 56 mines off the Frisians and the Dutch coast. No incidents were reported.
6. Leaflets 2 aircraft dispersed leaflets over Molun and Fontairbleau; 8 others were recalled because of severe icing conditions. No casualties were sustained.

WEATHER FORECAST

7. Midnight frontal positions:- (1) 60 N. 19 E. to Stettin. to Nurnberg to 47½ N 05 E. to tip of wave at 47½ N 00° to Gironde.

Bases:- A trough is likely to cross the British Isles in sympathy with the wave over France. At dusk, cloud amount will generally be less than 5/10ths. with isolated showers. By 2100, rain will have become general, in East Anglia, with average cloud base 1,000'. 8 Group similar; Lines. slightly better, but 4 and 5 Groups will have to divert at least half their aircraft. 4 and 6 Groups will have only slight rain and cloud based above 1,500', but in the latter Group, visibility will locally be poor. 4 Group should have 4 airfields fit besides those required for their own effort. Diversion areas: Cornwall, Valley, Silloth, Prestwick and further N. in Scotland, extreme N.E. England and perhaps Sealand, with slight rain and cloud base about 1,500'.

Germany:- Much medium cloud to great heights in frontal zone. Little cloud elsewhere, including Ruhr, Kassel, Hannover, Bremen and Rostock. Kassel and route: varying amounts of medium and strato-cumulus probably in thin layers, average 5/10ths., locally 10/10ths. Good chance of small amounts over target. Well broken convection cloud, tops below 15,000', over S. North Sea.

...../France:-

France:- Convection cloud, tops above 20,000' in N.W. Cloud to great heights in vicinity of wave. Much broken medium cloud to S.E.

Frisians:- Similar to bases: lowest cloud base 1,500 - 2,000', possibly some showers.

KASSEL

PLAN OF ATTACK

8. Route East Coast-52°15'N. 03°00'E - 51°49'N. 03°51'E - 50°30'N. 06°10'E - 50°33'N. 07°15'E - KASSEL - 52°36'N. 08°29'E - 53°13'N. 04°52'E - N. end of Texel - East Coast.

9. Route-marking 9 blind-markers and 13 backers-up were to drop yellow T.I. at 16 miles/153°/Bremen on the way out, and at 37 miles/205°/Bremen on the return route.

10. Target-marking Blind-markers were to mark the aiming-point with yellow T.I. and were each to drop a string of flares as follows: 1st bundle 30 secs. before T.I., 2nd and 3rd bundles after 6 seconds, 4th bundle with T.I., 5th and 6th at 6-second intervals thereafter. Visual markers were to mark the exact aiming-point with rods, using flares if necessary; if unable to identify with certainty, they were to retain their rods and aim greens at the centre of yellows with 1-second overshoot. Backers-up were to maintain this marking with greens aimed at, in order of preference: rods, centre of yellows and centre of greens, with 1-second overshoot in either of the 2 last-named eventualities. Supporters dropping bombs only were to identify visually if possible, otherwise aiming at rods or the centre of yellows. Main force aircraft were to aim at rods or the centre of greens. All qualified Y-crews were to carry 1 red flare with green stars, for use in favourable cloud conditions; these were to be bombed on a heading of 040°M.

11. Timing Zero hour: 2055 hours Duration of attack: 2049-2111 hours

(a) Groundmarking

Blind-markers	11 Hal. + 3 Lanc. at zero - 6
Visual-markers	2 Hal. + 8 Lanc. at zero - 4
Backers-up	1 Hal. + 3 Lanc. at zero - 2
	4 Lanc. at zero - 1
	17 Lanc. from zero to zero + 16 (1 per minute)

<u>Main Force</u>	112 Hal. + 9 Lanc. from zero to zero + 4
	113 Hal. + 8 Lanc. from zero + 4 to zero + 8
	119 Lanc. from zero + 8 to zero + 12
	119 Lanc. from zero + 12 to zero + 16.

(b) Emergency sky-marking

	13 Hal. from zero - 1 to zero + 3
	7 Lanc. from zero + 3 to zero + 7
	7 Lanc. from zero + 7 to zero + 11
	7 Lanc. from zero + 11 to zero + 15.

12. Marker-loads

Blind-markers	11 Hal. + 8 Lanc. 6 x 4 white flares + 2 yellow T.I. (1 LB)
	5 Lanc. 6 x 4 white flares + 4 yellow T.I. (3 LB)
Visual-markers	2 Hal. + 8 Lanc. 6 x 4 white flares + 10 red T.I. (5 LB) + 1 green T.I.
Backers-up	2 Hal. + 10 Lanc. 4 green T.I. (2 LB)

13. Tactics WINDOW was to be dropped at the rate of one bundle every 2 minutes from 52°09'N. 03°10'E to 51°11'N. 09°06'E; one bundle every half-minute from that point to the target and back to 51°14'N. 09°18'E; one bundle every 2 minutes from that point to 53°19'N. 04°00'E.

...../15 blind-markers

15 blind-markers (red T.I. + white flares), 8 Mosquitos (green T.I. + white drip flare) and 13 supporters were to carry out a diversionary attack on Frankfurt at zero - 25.

SORTIES

14.	(a)	No. of aircraft despatched	569	
	(b)	" " " reporting attack on primary area	444	(78.0%)
	(c)	" " " " " " alternative area	12	(2.1%)
	(d)	" " abortive sorties (technical defect or manipulative error.....39) icing .....20) crew failure 9) .. 71 (12.5%) late 2) cause unknown (a/c crashed on return) 1)		
	(e)	" " aircraft missing	42	(7.4%)

WEATHER EXPERIENCED

15. Bases:- Fit for take-off, with cloud base 2-3,000'. By 1900, an area of rain, with patches of cloud below 1,000', affected 91 and 92 Groups. The rain became more intense and spread rapidly N. and E., covering the country S. of a line Mersy-Number by 2200. By midnight it had penetrated well into Yorkshire, and there was much cloud below 1,000' in Lines. Elsewhere cloud base remained at 2-3,000', and visibility held above 2,000 yards. After midnight, cloud base fell below 1,000' in most areas.

Route:- Medium cloud to 18,000', occasionally to 20-23,000', with much static and moderate to heavy rime in cloud tops. Layers of cirrus above. Beyond 08°E., cloud broke rapidly to nil. On return, cloud tops towered in places to 25,000', and cloud was almost solid for descent over North Sea, with frequent hail. Some crews reported heavy clear ice in cloud tops.

Kassel:- Very small amounts of cirrus and low cloud. Moderate visibility. No moon. Wind at 20,000': 230°/50 n.p.h. Surface wind: S.E./10-15 n.p.h.

NIGHT PHOTOGRAPHIC STATISTICS

16.	No. of photographs showing ground detail	{ plotted within 3 miles 104)	
		{ " outside 3 miles ... 18) .. 12	
		{ unplotted 4)	
	" " " " " " fire-tracks	{ plotted within 3 miles 241)	
		{ " outside 3 miles ... 4) .. 2	
		{ unplotted 33)	
	" " aircraft estimated to have bombed within 3 miles of the aiming point		38
	No. of aircraft reporting attack		44

NARRATIVE OF ATTACK

17. The blind-markers overshot and laid most of their flares 1½-5 miles beyond the aiming-point. But at least 2 sticks of flares were burning over the aiming-point at zero - 5, and these sufficed to enable all the visual markers to pinpoint with certainty. The visual marking was exceptionally accurate and, by zero - 2, 80 red T.I. were burning in a compact group centred ½ mile S.E. of the aiming-point. These burned till about zero + 4, by which time one-third of the main force had attacked; their effort developed to the W. of the T.I. and was centred well over the built-up area. After zero + 4 the primary marking was well maintained by the back-up, although only 139 of the main force claimed to have aimed at greens. Most of the rest reported reds in their bombsights, and the fact that

...../many of

Many of these are plotted in open country away from the main fire area suggests that they were deceived by decoys. This caused some scatter to the S.W. in the latter half of the raid, although the bulk of the attack remained within the 3 mile limit. The incendiary carpet, which at zero + 4 had covered 5 square miles expanded to the S.W. and, by zero + 16, covered 12 square miles, including most of the built-up area of Kassel.

DAY RECONNAISSANCE

18. 7 days after the attack fires were still burning in Kassel and a smoke haze lay over the smouldering ruins of the town. The central city area presented a scene of utter devastation, and damage extended to the industrial districts on both sides of the river Fulda, as well as to the suburbs. In the oldest part of the town, the main business and shopping centre between the river and the Konigs Platz, no building was left intact and few remained standing. In the adjacent districts of Altstadt, Ober Neustadt, where there are many public and administrative buildings, and Unter Neustadt, which is highly commercialised, 96% of all property was destroyed. Flanking this area and extending westwards immediately south of the main station are residential districts laid out in a more modern and less congested pattern; and here the destruction of property amounted to over 48%.

19. Kassel is well known for its locomotive works, and the 3 factories of Henschel und Sohn are the leading producers in Germany, beside manufacturing tanks, A.F.V.'s and lorries on a large scale. All 3 factories were damaged. The main works in the town, a target of the highest priority, had most of its smaller buildings destroyed and its larger workshops damaged, and important workshops of the other 2 were seriously affected. The 3 aircraft works of Piosolor Flugzeugbau G.m.b.H. escaped damage, but 48 other factories were hit, including Salzmann & Co., clothiers to the Wehrmacht, 3 thermometer concerns and at least 5 businesses engaged in the manufacture of precision instruments and special machine tools.

20. The importance of Kassel as a railway centre depends largely on its great railway shops and marshalling yards. The large tranship sheds of the latter were completely burnt out, rolling stock was scattered and still smoking, serious roof damage was caused to the roof of the main wagon shops and end bay of the loco repair shops was partly destroyed. The buildings of the main station, a suburban station and sheds in two neighbouring goods depots were gutted and wagons and passenger coaches destroyed in the sidings. Besides the Henschel works, the firms of Wegmann & Co., and Gelbrouder Crede & Co., both concerned with the production of rolling stock, were damaged, the former being almost completely demolished.

21. Apart from a small electricity works W. of the town and a possible office building of the gasworks, the main gas and electricity services were not affected; but the public buildings suffered severely, including many government offices, police and fire stations and post offices. The Alt Stadt Kaserna, a group of buildings round a large central courtyard W. of the town, was completely destroyed and buildings of another barracks to the S.W. were gutted. Damage was also caused to sheds of a large military stores at Niederkaufungen, 4 miles S.E. of Kassel. Nearly 70 labour camps in various parts of the town were burnt out, mostly near the Henschel Works III, where 39 out of a group of 45 workers' huts were destroyed by fire.

ALTERNATIVE TARGETS

22. 12 aircraft attacked alternative targets in the areas of: Lubel, St. Trun Schouwen (3), Werbury, Oesterhout, Asch, Altonhirchen, Troyse, Dordrecht and the Ruhr. 2 other aircraft which succeeded in reaching the target dropped bombs on Overflakket.

SPECIAL MENTIONS

23. H2S 112 Y-aircraft were despatched. These included 24 blind-markers; 22 reported attack, but only 9 salvos of T.I. and 11 sticks of flares were dropped. The other aircraft retained their markers either because the aiming-point was not clearly indicated on the sets, or because they could not check the A.P.I. reading. The timing was good and, despite a tendency to overshoot to the N.N.E., they illuminated the aiming-point adequately for the visual markers. Altogether,

...../80 Y-aircraft

80 Y

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80 Y-aircraft reached Kassel with their sets in order; 8 were lost.

24. EE The Eastern Chain operated on the Wyoming, and the Southern Chain on the Carolina frequency throughout. The Zanesville and Maryland frequencies were also used by the Eastern Chain from 1925 to 2125 hours. The usual types of jamming were reported. The best results on the outward route were obtained on the Zanesville frequency, the maximum range being 350 miles. On the return, on a more northerly route, the Wyoming frequency was the best, giving a maximum range of 310 miles. The signals on the Maryland frequency were weak, but a few good fixes were obtained on the outward route, the most distant being 300 miles away. The Carolina frequency was not used.

ENEMY DEFENCES

25. Flak and Searchlights Slight to moderate heavy flak was encountered over the target, mostly in barrage form up to 20,000', with moderate to intense light flak bursting at 15,000'. 60-70 searchlights were active, coming targets for predicted fire; but later in the attack, illuminated aircraft were not engaged. Many fighter flares were seen. The intensity of the defences decreased towards the close of the raid. Little opposition was reported en route, except at Tuxel, where moderate heavy flak co-operated with searchlights, and flak-ships were also active. 13 bombers were damaged.

26. Fighters The greater part of the enemy's fighter effort was concentrated over the target and for 100 miles along the return route. 70 interceptions were reported, as many as 33 of these being attacks. The running concentration directed aircraft from Schleswig, Denmark and N. Germany southwards to E. of the Ruhr, while other fighters from Holland and Belgium came round W. of the Ruhr to the Bonn area, and thence on to Frankfurt. Aircraft flying southwards from Bremen were in the Kassel area when the attack on that city began, but the main fighter force was not directed there until zero hour, 14 minutes after the first bombs had fallen. Nearly all the fighters engaged in combat were twin-engined, although a considerable number of single-engined aircraft were also observed. 13 returning aircraft reported fighter damage; 8 fighters were claimed as destroyed. Lancasters claimed 7 victims; a Do. 217, 2 FW 190's, 2 Ju.88's, an Me. 109 and an unidentified twin-engined aircraft. A Halifax claimed another Ju.88.

CASUALTIES

27.	No. of aircraft missing	42 (7.1%)
	" " " damaged	(flak 13)
		(fighter 13) 39
		(British incendiaries 6)
		(other causes 7)

At least 5 losses occurred on the way out, 3 to flak at Antwerp, Bonn and Kassel, and 2 to fighters S.W. of Bonn and S. of Kassel. Many bombers were seen to go down in the target area without evidence of the cause; the concentrated nature of the raid must have provided favourable conditions for fighters, and these were probably mainly responsible, especially as the flak was not very intense. 5 bombers are believed to have been lost to the guns of Kassel, and about 30 to fighters over the target and the first part of the return route.

28. 4 aircraft were destroyed through non-enemy action. A Halifax was wrecked while taking off by the explosion of its bombs, probably caused by a bursting tyre, and another Halifax crashed on early return, with the loss of all its crew. A Lancaster hit high ground while breaking cloud at 400', and another ditched because of fuel shortage. Only one member of these two crews was killed.

FRANKFURT

29. 8 Lancasters and 28 Lancasters, including 14 blind-bombers, were engaged in a diversionary attack against Frankfurt. 31 reached the target, where blind-bombers succeeded in dropping flares and T.I. Visibility was good, with a slight, but a poor concentration was obtained; only 12 aircraft are estimated to have bombed within 2 miles of the aiming-point. No reconnaissance was undertaken.

..../No aircraft

No aircraft was intercepted, although 2 Ju.88's were seen in the target area; this attack undoubtedly puzzled the fighter controllers, who did not decide that Kassel was the chief target until the main effort was more than half completed. 4 aircraft returned early and one was lost; it was seen to be shot down by fighters over Frankfurt. One more aircraft was hit by flak; no other casualties were sustained.

KNAPSACK

30. 12 Mosquitoes, equipped with Mk.I OBOE, were detailed on a precision attack against the power-station at Knapsack. 4 attacked according to plan, 4 more bombed on D.R. after OBOE failures. Of the other 4 aircraft, one attacked Bonn on D.R., one jettisoned when bombed after its equipment had failed, one returned early with engine trouble and one was lost without trace.

DORTMUND

31. One G-H Mosquito was sent to Dortmund. The precision device failed and the aircraft bombed on D.R. It returned undamaged.

MINELAYING

32. 7 Wellingtons laid 14 mines off the Dutch coast. 9 Stirlings and 1 Lancaster were detailed to the Frisians, and 8 reached their target, laying mines. The other 2 aircraft returned early with GEE failure. 2 interceptions by fighters were reported, but no combat resulted; and no losses or casualties were sustained.

LEAFLETS

33. 10 Whitloys and Wellingtons were detailed to disseminate leaflets over various towns in Northern France. Severe weather was encountered on route, and 10 aircraft were recalled. The other 2 completed their mission. No incidents were reported.

MLL/END

BC/S.26342/6/ORS4.,

6th January, 1944.

KASSEL FRANKFURT KNAPSACK DORMMUND MINELAYING LEAPLETS 22/23 OCTOBER 1943.

TARGET	GROUP	AIRCRAFT TYPE	SORTIES	A/C REPORTING ATTACK ON		ABORTIVE SORTIES		MISS-ING.	DAMAGE			INTERCEPTIONS		RESULTS		
				PRIM. AREA	ALT. AREA	OVER E. T.	NOT OVER E. T.		FLAK	FIGHTER	MISC. IN FLIGHT	OTHER CAUSES	ATTACKED	NOT ATTACKED	Tons of Bombs	H.E. Inc.
KASSEL	8	H.L. II	1	-	-	-	-	-	-	-	-	-	-	-	-	-
		P.F.F.														
		H.L. Ia	14	12	1	-	-	-	1	-	1 AC	-	-	-	P	770.7 567.4
		L.NC. III	44	42	-	-	2	-	2	-	-	-	2	1	A	15.2 25.5
		8	H.L. Ia	7	5	-	-	1	1	-	-	-	-	-	M	35.1 90.5
		M.F.														
		L.NC. III	12	9	-	-	3	-	-	-	-	-	-	-	-	-
		L.NC. I	16	14	-	-	1	1	-	1B	1D + 1AC	-	1	-	-	-
		1	L.NC. III	89	76	-	3	4	6	1	1D+2	2L+1	1E	3	-	Heavy Bombs
		3	L.NC. II	6	5	1	-	-	-	-	-	-	-	-	1	-
		4	H.L. II & V	49	31	2	1	8	7	2	-	1	-	1	1	3 25
			H.L. Ia	51	68	2	4	11	6	3	1D	1	1E	3	A	1 1
		5	L.NC. I	22	19	1	-	1	1	-	-	-	1B	4	M	17
			L.NC. III	111	92	1+2 ⁰	1	9	8	1	2L+2	-	1E	6	18	-
		H.L. II & V	59	35	4	1	10	9	1	1B+1	-	1E	3	3	-	
	6	H.L. Ia	26	18	-	-	6	2	1	1 AC	-	-	4	1	-	
		L.NC. II	22	16	-	-	5	1	1	-	-	-	1	1	-	
KASSEL TOTAL			569	444	12+2 ⁰	10	61	42	13	2B+6 AC +5	1B+4 AC +3	4E+1B	33	37		

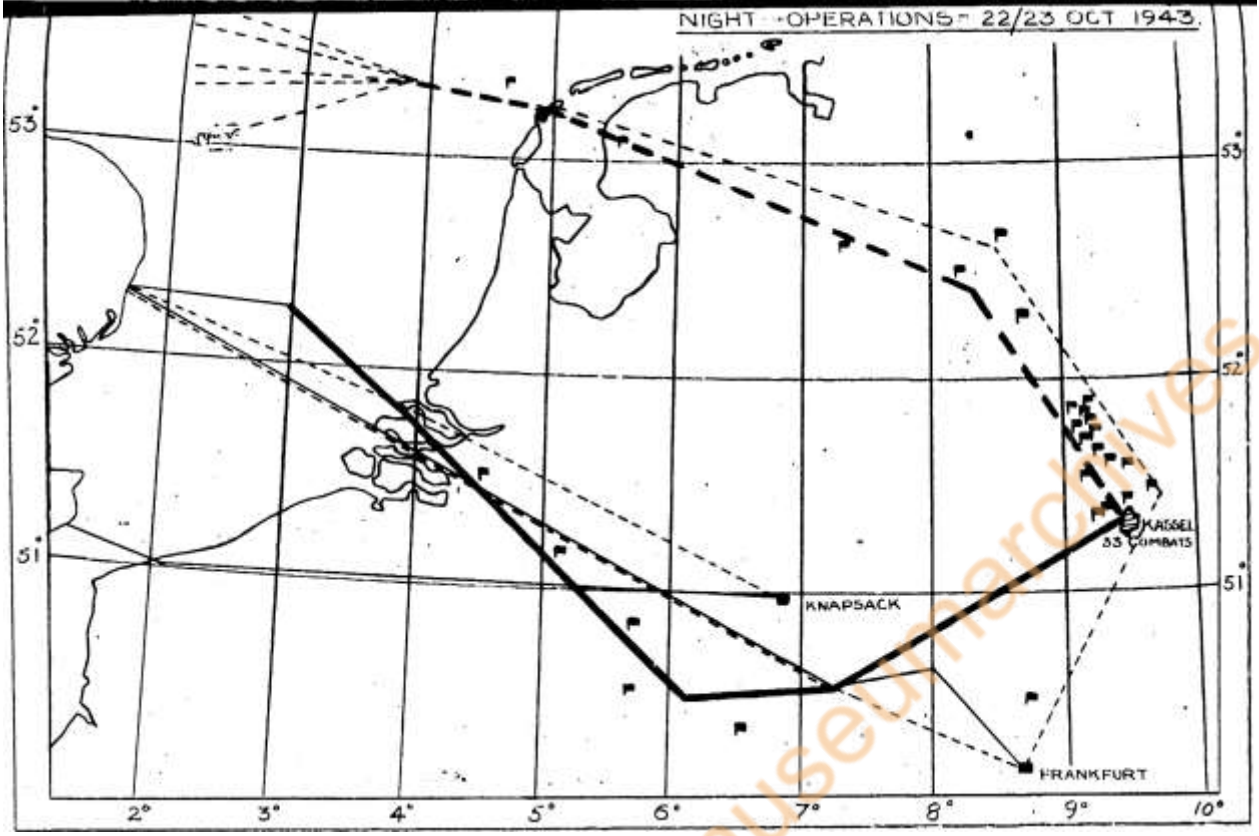
* Also attacked Primary.

KASSEL FRANKFURT KNAPSACK DORMMUND MINELAYING LEAPLETS 22/23 OCTOBER 1943. (Cont.)

TARGET	GROUP	AIRCRAFT TYPE	SORTIES	A/C REPORTING ATTACK ON		ABORTIVE SORTIES		MISS-ING.	DAMAGE			INTERCEPTIONS		TONS OF BOMBS	
				PRIM. AREA	ALT. AREA	OVER E. T.	NOT OVER E. T.		FLAK	FIGHTER	MISC. IN FLIGHT	OTHER CAUSES	ATTACKED	NOT ATTACKED	H.E. Inc.
KASSEL	TOTAL		569	444	12+2 ⁰	10	61	42	13	2B+6 AC +5	1B+4 AC +3	4E+1B	33	37	
FRANKFURT	8	MDSQ. IV.	8	7	-	-	1	-	-	-	-	-	-	-	P 56.7 31.4
	P.F.F.	L.NC. III.	14	12	1	-	1	-	1 AC	-	-	-	-	-	A 3.6 -
	M.F.	L.NC. III.	14	12	-	-	1	1	-	-	-	-	-	-	M 1.7 2.1
FRANKFURT TOTAL			36	31	1	-	3	1	-	-	-	-	-	-	AC 24 lb.
KNAPSACK	8	MDS. IX.	2	2	-	-	-	-	-	-	-	-	-	-	P 6.3
	P.F.F.	MDS. IV.	10	6	2	-	1	1	-	-	1 AC	-	-	-	A 1.8
KNAPSACK TOTAL			12	8	2	-	1	1	-	-	1 AC	-	-	-	
DORMMUND	8	MDS. IX.	1	1	-	-	-	-	-	-	-	-	-	-	P 0.7
DORMMUND TOTAL			618	484	15+2 ⁰	10	65	44	13	2B+7 AC +5	1B+4 AC +3	4E+1B + 1 AC	33	37	
MINELAYING	6	WELL. X.	7	7	-	-	-	-	-	-	-	-	1	-	14 mines
		STER. III.	9	8	-	-	1	-	-	-	-	-	1	-	42 mines
		L.NC. II.	1	-	-	-	1	-	-	-	-	-	-	-	-
MINELAYING TOTAL			17	15	-	-	2	-	-	-	-	-	-	2	56 mines
LEAPLETS		WELL. IC.	3	-	-	-	3 ^A	-	-	-	-	-	-	-	-
		WELL. III.	2	-	-	-	2 ^A	-	-	-	-	-	-	-	-
		Wh. V.	3	2	-	-	1 ^X	-	-	-	-	-	-	-	-
		WHITLEY V.	2	-	-	-	2 ^A	-	-	-	-	-	-	-	-
LEAPLET TOTAL			10	2	-	-	8 ^A	-	-	-	-	-	-	-	-
TOTAL			645	501	15+2 ⁰	10	75	44	13	2B+7 AC +5	1B+4 AC +3	4E+1B	33	39	

www.bombingarchive.ca

NIGHT OPERATIONS 22/23 OCT 1943.



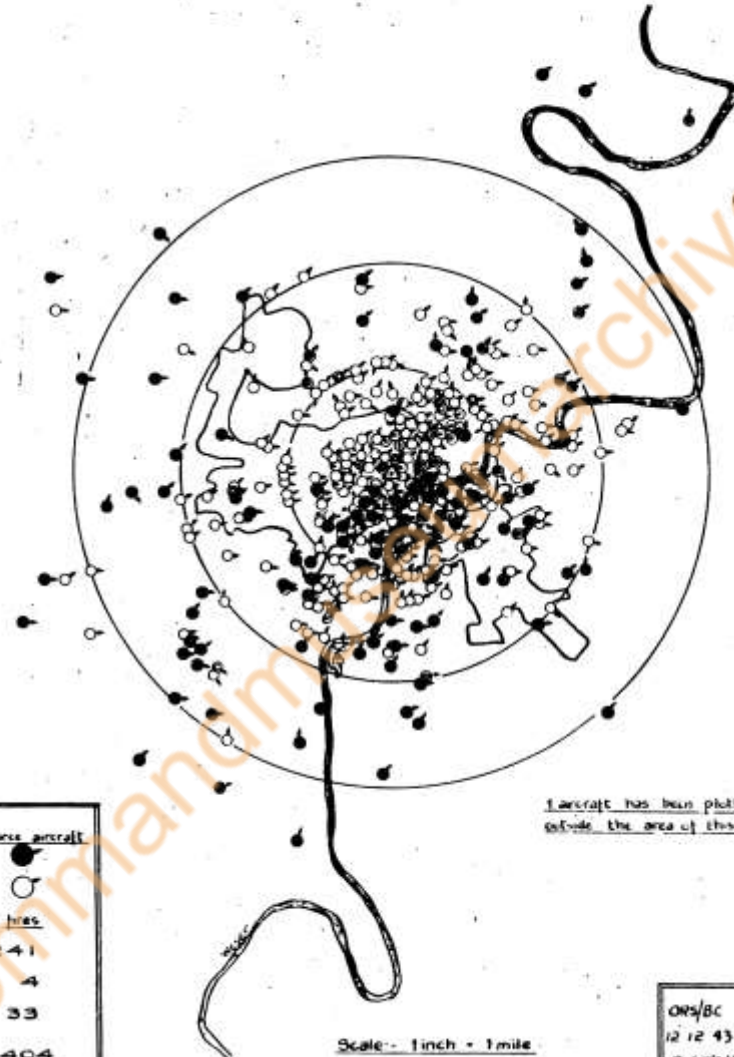
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FINAL PLOT OF NIGHT PHOTOGRAPHS

TAKEN 22/23 OCTOBER 1943. TARGET: KASSEL

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SECRET



Photographs taken with Bombing

	PFF marker aircraft	Main Force aircraft
Plotted by ground detail	●	●
Plotted by fire	⊙	○
<u>Plotted</u>	<u>By ground detail</u>	<u>By fire</u>
Within 3 miles	104	241
Outside 3 miles	18	4
Unplotted	4	33
Number of prints (with bombing) examined - 404		

1 aircraft has been plotted outside the area of this map.

Scale - 1 inch = 1 mile

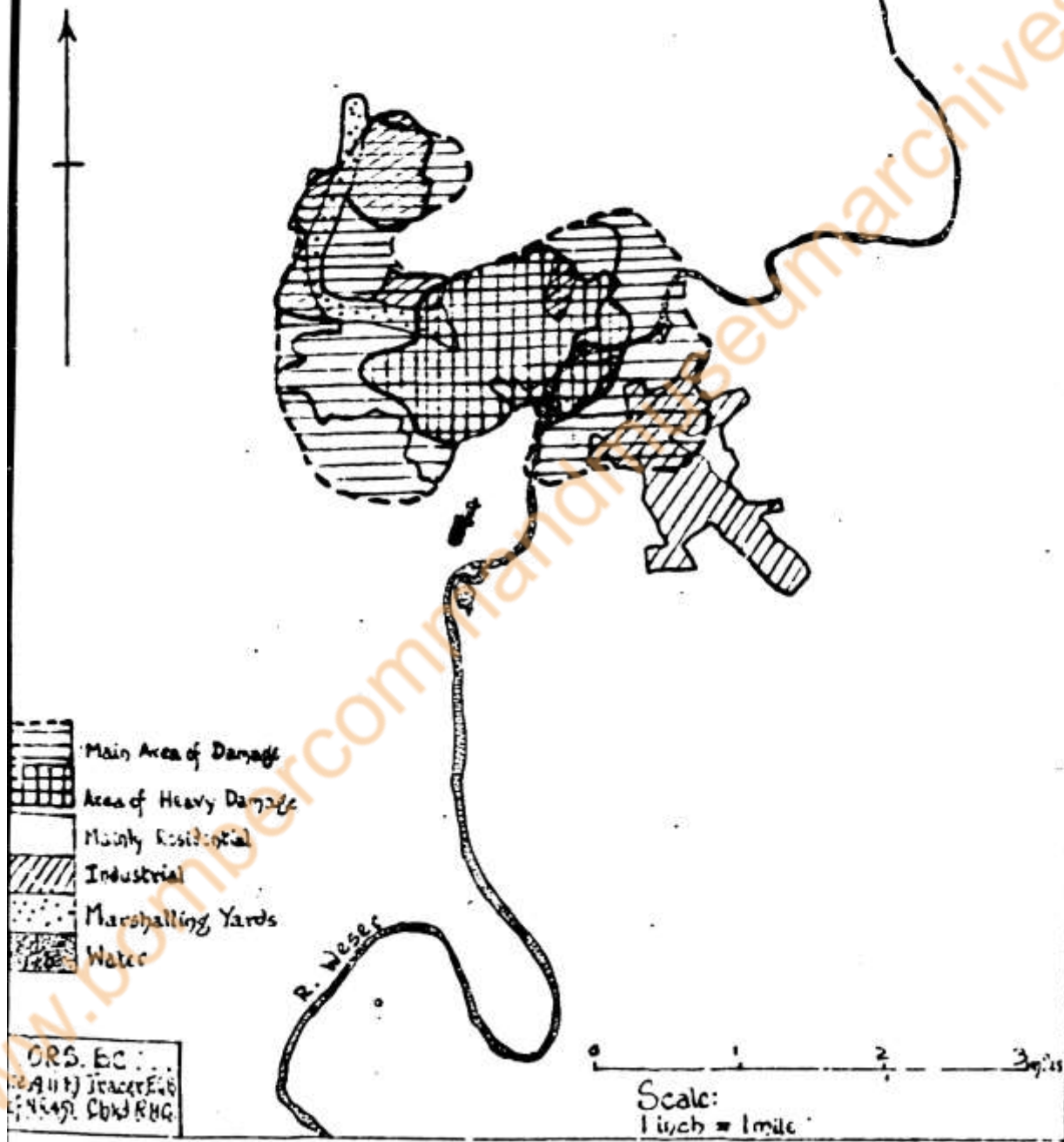
ORS/BC 310 B
12 12 43 Trace 97
Ref WPA 452nd AEC

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SECRET

DIAGRAM SHOWING LOCATION OF ATTACK
AS INDICATED BY DAMAGE
KASSEL 22/23rd OCTOBER 1943

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21 JAN 1944

HIGH SPEED REPORT NO. 452

COPY NO. 16

BOMBER COMBINED REPORT ON NIGHT OPERATIONS

24/25th. OCTOBER, 1943.

Rheinhausen, etc : Emden: Minelaying: Leaflets:

DETAILS

Rheinhausen 3 Mosquitoes equipped with Mk.II OBOE were despatched against the steel-works at Rheinhausen but, owing to a misunderstanding, none were taken over by the ground stations. 2 bombed on D.R., and the third was recalled.

Buderich One Mosquito successfully attacked this target on Mk.II OBOE.

Emden 4 Mk. I OBOE Mosquitoes and 2 repeater aircraft took part in an operation against the port of Emden, which is outside normal OBOE range. The repeaters flew on the log between Cloaden and Emden; but owing to a beam wind of 30 m.p.h. their drift angle was greater than the tolerance allowed by the polar diagram of the aerials, so that the bombers could not be controlled. 3 attacked Emden and one Grimersum, all on D.R.

Dortmund One G-H Mosquito was detailed to attack a steel-works at Dortmund, but the equipment failed and the aircraft bombed on D.R.

Cologne: Dusseldorf. 4 Mosquitoes were despatched on a harassing raid against Cologne, and 4 against Dusseldorf. All attacked according to plan, on D.R.

None of the Mosquitoes was lost; one sustained minor damage from flak over Cologne.

Minelaying 25 aircraft laid 92 mines off the Frisians and the Dutch coast; 5 others returned early. One crashed in flames with the loss of 4 of its crew.

WEATHER FORECAST

Midnight frontal positions: (1) cold front $55^{\circ}\text{N. } 23^{\circ}\text{E} - 50^{\circ}\text{N. } 18^{\circ}\text{E}$. (2) warm front $50^{\circ}\text{N. } 18^{\circ}\text{E} - 50^{\circ}\text{N. } 05^{\circ}\text{E}$. (3) cold front $50^{\circ}\text{N. } 05^{\circ}\text{E} - 45^{\circ}\text{N. } 06^{\circ}\text{E}$.

Bases:- Local fog after 2300, soon becoming widespread. Most bases could just hold until then, with visibility only locally less than 1,500 yards.

Germany:- Thick medium cloud in frontal zone, with tops to 20,000', locally to 25,000'. Medium cloud spreading F. will reach a line Bremen - S. of Berlin by midnight. N. of this line, there will be very well broken residual convection cloud, with good visibility. S.E. of the front: broken medium cloud, dispersing to small amounts in Munich area. Ruhr: 10/10ths. thick medium cloud to 18,000'. Emden: broken low cloud at 1,500', with medium cloud above.

Frisians, Kattegat:- As Emden, with no medium cloud.

...../SORTIES.

SORTIES

		<u>Bombing</u>	<u>Mine-laying</u>
8.	(a) No. of aircraft despatched.....	19	30
	(b) " " " reaching primary area.....	17	25
	(c) " " " reaching alternative area.....	1	0
	(d) " " abortive sorties (recalled.....1).....	1 (tech. defect, 5)	5
	(e) " " aircraft missing.....	0	0
	(f) " " mines laid.....		92

WEATHER EXPERIENCED

9. All German targets:- 10/10ths. cloud to 25-35,000'. Visibility moderate to good.

Dutch coast and Frisians:- Small patches of cloud. Slight haze. Moderate visibility.

No moon during operations.

ENEMY DEFENCES

10. Enemy fighters were mildly active. A Stirling reported a combat with a Me. 110 N. of Ameland. Slight to moderate predicted heavy flak was encountered from most of the target areas, from defended places en route to the Ruhr and from ships lying off the Frisians. One Mosquito was slightly damaged over Cologne.

CASUALTIES

11. All aircraft returned safely except one Stirling, which crashed in flames with the loss of 4 of its crew. The cause of the accident is unknown.

APPENDIX

12. 4 Fortresses of U.S.B.C., operating under the control of 3 Group, dispersed leaflets over Caen, Paris and Rouen without loss.

MLM/JT.

EC/S. 26342/6/OPS4,

29th. December, 1943.

24/24th. CONCOMB. 1943.

TARGET	GROUP	AIRCRAFT TYPE	BOMBS	W/O REPORTING		BOMBING		MISS- ING	CAUSES			OPERATIONS		BOMB TONNAGE H. B.		
				PREL. RE.	ACT. RE.	OVER E. T.	NOT OVER E. T.		FLC. IN FLIGHT	OTHER CAUSES	ATTACK- ED	NOT ATTACK- ED				
NEEDLEURIN	8 FFF	Mosq. IX	3	2	-	1 ⁰	-	-	-	-	-	-	-	-	P. 1.6	
MUNKICH	8 FFF	Mosq. IX	1	1	-	-	-	-	-	-	-	-	-	-	P. 0.8	
BIBI	8 FFF	Mosq. IX	3	2	1	-	-	-	-	-	-	-	-	-	P. 2.0	
		Mosq. IV	1	1	-	-	-	-	-	-	-	-	-	-	A. 0.7	
BIBI TOTAL			4	3	1	-	-	-	-	-	-	-	-	-		
PAVLOVIC	8 FFF	Mosq. IV	2	2	-	-	-	-	-	-	-	-	-	-		
COLOGNE	8 FFF	Mosq. IX	1	1	-	-	-	-	-	-	-	-	-	-	P. 3.1	
		Mosq. IV	3	3	-	-	-	-	1	-	-	-	-	-		
COLOGNE TOTAL			4	4	-	-	-	1	-	-	-	-	-	-		
DUSELDORF	8 FFF	Mosq. IV	4	4	-	-	-	-	-	-	-	-	-	-	P. 3.1	
DORTMUND	8 FFF	Mosq. IX	1	1	-	-	-	-	-	-	-	-	-	-	P. 0.7	
BOMBS TOTAL			19	17	1	1 ⁰	-	-	1	-	-	-	-	-		
MINE LAYING																
S. TIGER	1	Well. X	5	5	-	-	-	-	-	-	-	-	-	-	10 mines	
FRISCH	1	Well. X	6	6	-	-	-	-	-	-	-	-	-	-	12 mines	
	3	Str. III	19	14	-	-	5	-	-	-	-	1E	-	1	70 mines	
MINE LAYING TOTAL			30	25	-	-	5	-	-	-	-	1E	-	1	92 mines	
TOTAL			49	42	1	1 ⁰	5	-	1	-	-	1E	-	1		
US. MC-DAPLETS (PARIS-CLEV-HOOVER)		Patrols	4	4	-	-	-	-	-	-	-	-	-	-	* NOT INCLUDED IN TOTAL	1 ⁰ INCLUDED IN MISSION BY GROUND STATION

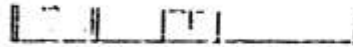
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BOMBER COMBINED REPORT ON NIGHT OPERATIONS

25/26th. OCTOBER, 1943.

Mine-laying

RECAP



22 Stirlings laid 56 mines in the Kattegat and off Lønborg. One other sortie was abortive. All aircraft returned undamaged.

WEATHER FORECAST

Midnight frontal positions:- (1) warm from 54N. 20E. to Berlin to Hanover to 51N. 06E. (2) cold from 51N. 06E. to 50N. 06E. to Dijon to N.W. Spain.

Bases:- General fog by 2200 hours. H. of 6 Group should hold 2,000 yards for most of night, but will be covered with an upper layer of haze. Diversions to N.E. England and E. Scotland.

Germany:- Cloud to great heights, solid on front, layered further N. Good clearances S.E. of a line Mannheim-Berlin: patchy medium and stratocumulus cloud, with persistent local fog.

France:- Variable amounts of layer cloud N. of cold front, with local showers.

Kattegat:- No low cloud, broken medium and high cloud above 15,000'. Moderate visibility. Good visibility en route, cloud tops 8-10,000', base 2,000'.

N. Denmark:- Variable amounts of layer cloud, base about 1,000'.

SORTIES

(a)	No. of aircraft despatched.....	23
(b)	" " " reporting mines laid in primary area.....	22
(c)	" " " abortive sorties (weather).....	1
(d)	" " " aircraft missing.....	0
(e)	" " " mines laid.....	56

WEATHER EXPERIENCED

Bases:- Nearly all unfit with mist and fog after 2100 hours, except for one or two stations in 8 Group, which held until after midnight. Kinloss diversion area fit throughout operational period with good visibility and much medium and broken low cloud above 2,000'.

Kattegat:- Well broken layer cloud above 2,000'. Good visibility. No snow.

ENEMY DEFENCES

Some activity by controlled fighters was heard from N. Denmark, but none were sighted by our crews. No flak was encountered.

CASUALTIES

All our aircraft returned undamaged.

RM/JT.
BC/S. 26341/6/ORS4,
3rd. December, 1943.

UNIT VIII

25/26th. OCTOBER, 1943.

NAME	GROUP	AIRCRAFT TYPE	SERIES	A/C REPAIRS				MIS-USE	DAMAGE				RESULTS		
				BLOCK UP		DAMAGE			FLYING	PICTURE	DIS-PLANT	OTHER DAMAGES		REPAIRS	
				FRONT	REAR	OVER E. V.	NOT OVER E. V.							REPAIRED	NOT REPAIRED
PERLNER, KENNETH	3	Stir. III	20	19	-	-	1	-	-	-	-	-	-	50 mins	
MUDGGS	3	Stir. III	3	3	-	-	-	-	-	-	-	-	-	6 mins	
MIDLANDS TOTAL			23	22	-	-	1	-	-	-	-	-	-	56 mins	

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BOMBER COMBINED REPORT ON NIGHT OPERATIONS

27/28th. OCTOBER, 1943.

Leaflets

SUMMARY

1. 20 Wellingtons dispersed leaflets over allotted areas in Northern France. One other aircraft dropped its bundles over Le Mans instead of Tours, for technical reasons; one sortie was abortive for the same cause. 3 aircraft were damaged by flak, but all returned safely to base.

WEATHER FORECAST

2. Bases:- Warm front will affect Northern bases; midnight position, Ireland to N.E. Scotland. All Groups will be fit at dusk, but fog will cover East Anglia, 8 and 3 Groups by 2100. 1, 4, 5, and 6 Groups will have isolated stations fit until 2300. Diversions to E. Scotland, Orkney and N. Cornwall.

Germany:- Much strato-cumulus, with good breaks over Ruhr and Middle Rhine, but fog in valleys. Very poor visibility in this area. Little cloud over North Sea.

France:- Patches of strato-cumulus. Local fog.

SOORTIES

(a)	No. of aircraft despatched.....	22
(b)	" " " reaching primary area.....	20
(c)	" " " alternative area.....	1
(d)	" " abortive sorties (tech. defect).....	1
(e)	" " aircraft missing.....	0

WEATHER EXPERIENCED

N. France:- Little cloud. Thick haze. No moon. Good visibility.

ENEMY DEFENCES

No controlled fighters were active. Flak was experienced from the usual defended points. 2 aircraft were hit over Paris and one near Rennes.

RESULTS

All our aircraft returned safely. 3 were slightly damaged by flak.

M/JT.
C/S. 26342/6/OPS4,
28. December, 1943.

INCIDENTS

27/28th. OCTOBER, 1963.

TARGET	GROUP	AIRCRAFT TYPE	SERIES	L/C REPORT		EFFECTIVE		MISS- ING	DAMAGE				COLLECTIONS	
				ATTACK ON		POINTS			PLJ	FIGHTER	MISC. BY FLIGHT	OTHER CLAIMS	ATTACK- ED	ATTACK- ED
				PRM. ACFT.	A.T. SER.	OVIA E.T.	HOL OVIA E.T.							
LEGAT'S H. HOUSE	91	Well.III	5	5	-	-	-	-	2	-	-	-	-	-
		Well.X	2	2	-	-	-	-	-	-	-	-	-	-
H. POLICE	93	Well.Ic	6	5	-	-	1	-	-	-	-	-	-	-
		Well.III	2	2	-	-	-	-	-	-	-	-	-	-
		Well.X	7	6	1	-	-	-	1	-	-	-	-	-
LEGAT TOLL			22	20	1	-	1	-	3	-	-	-	-	-

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COPY NO. 16

BOMBER COMBINED REPORT ON NIGHT OPERATIONS

31st. OCTOBER/1st. NOVEMBER, 1943.

Eden: Cologne: Dusseldorf: Oberhausen:EDEN

Eden 4 Mk. I OBOE Mosquitoes were despatched to Eden, accompanied by repeater aircraft. 3 bombed according to plan, but the fourth attacked on D.R. due to the failure of its equipment. All returned safely.

Cologne: Dusseldorf: 6 Mosquitoes were detailed to attack Cologne and Dusseldorf, using the GEE/D.R. technique. 5 completed their task; the sixth was lost without trace.

Oberhausen 4 Mk. II OBOE Mosquitoes were sent to Oberhausen; 2 attacked correctly and 2 on D.R. All returned safely.

WEATHER FORECAST

Midnight frontal positions:- (1) cold from 60° 00'N. to 55° 02'N. to England (2) warm from 57° 04'N. to East Anglia to Calais to 45° 02'N.

Bases:- Low cloud at 1,000' or below, with showers and poor visibility. Wind in several layers on warm front. East Anglia at dusk; much strato-cumulus at 1,500', patches at 1,000' or below with local breaks, visibility 1,000 yards. 8 Group: small amounts of strato-cumulus at 1,000-1,500', 10/10ths. medium cloud in thin layers above 10,000'. Risk of 10/10ths. stratus at 1,000' at most airfields for early return (from Ruhr) by 2100; but some diversions may hold till midnight. Diversions to N.E. Scotland W. of Peterhead.

Germany:- Patches of strato-cumulus with good clearances; also medium cloud in N.W. Ruhr and Eden: probably cloudless apart from cirrus and small amounts of medium cloud; poor visibility.

France:- Much cloud at 1,000' or below in N.E. Broken strato-cumulus over centre and S.

Frisians:- No low cloud. Visibility 1-2 miles.

Kattegat:- 7-10/10ths. strato-cumulus at 1,000-1,500'. Visibility 1 mile.

RESULTS

(a)	No. of aircraft despatched.....	16
(b)	" " " reporting attack on primary area.....	15*
(c)	" " " missing.....	1 (6.33)

* This figure includes 2 repeaters who accomplished their task.

WEATHER EXPERIENCED

P.F.F. Bases:- 10/10ths. at 3,000' during operational period. Slight rain. Visibility 2-4,000 yards.

Ruhr:- No cloud. Hazy. Good visibility.

Eden:- No cloud. Thick industrial haze. Good visibility.

No moon.

..../THIRTY DEFENCES

