

NIGHT REPORT NO 187
 16 JAN 1943
 C. G. Y. Unit
 1st October / 1st November 1942
 MINE LAYING

Bomber Command Report on Night Operations, 1st October/1st November 1942

MINE LAYING

Metecorological Advice Submitted to the Command.

1. 0925 hours. Bases should be clear apart from local visibility troubles and showers on the east coast. The estimated frontal positions at midnight are as follows: (1) occluded from 57°N 3°E to Borkum, then south-westwards along the coast (2) cold from 57°N 3°E to south of Oslo to Stettin to 50 miles west of Mannheim and thence cold to Turin. A depression is developing at the tip of the wave west of Mannheim, giving much thick medium cloud to 15-20,000 feet, with rain; icing index will be moderate to high above 6,000 feet. Medium and broken low cloud will prevail over north Germany behind the cold front and over north France. Over west France, broken low cloud will stay above 1,000 feet. Variable amounts of medium cloud are expected in the Munich area, and small amounts at Breslau and Vilsen.

1300 hours. All eastern bases should be fit, but further inland visibility will fall to one mile by dawn in areas unaffected by smoke pollution. Districts affected by smoke, together with 91, 92 and 93 Groups, expect fog soon after midnight. Bad weather is likely on the Munich route, with thick cloud and rain belts, and high icing index, while heavy cloud is probable over Munich itself. Moreover, winds of 100mph. at 15,000 feet have been reported from Marseilles. Thundery rain is likely over the west coast of France, with cloud based at 1,000 feet. Over Holigoland Bight and the western Baltic, there will be 10/10ths cloud, based at 600 feet.

1630 hours. 4-8/10ths medium cloud is likely over Munich at 10-12,000 feet. The Bay of Biscay should be fit for minelaying, with only thundery showers.

2030 hours. 250 to 300 miles of solid cloud will be encountered on the Munich route. All the bases in 4 Group will be fit till 0600 hours, when visibility troubles will be experienced in the south. The following are suggested as diversion areas; St. Eval, Chivonor, Marston, Bradwell Bay, Exeter, Tangmore and Horne.

Executive Orders.

2. In view of the weather, operations were confined to minelaying in the Bay of Biscay.

Sorties.

3.	(a) No. of aircraft despatched	22
	(b) " " " reporting mines laid in primary area	17
	(c) " " abortive sorties (technical defects... 1) (weather..... 3)	4
	(d) " " aircraft missing	1

Weather Experienced.

4. Mist and fog patches developed after dusk in the London area, Essex, west Suffolk and locally in Lincolnshire. Otherwise, visibility was moderate. Rain over south-west England spread north-east to Lincolnshire during the night, with cloud locally below 1,000 feet. In the Channel there was 10/10ths cloud based from 700 to 1,000 feet, with rain; visibility was poor. Over the Bay of Biscay, 8/10ths convection cloud was based between 900 and 1,500 feet; this increased during showers to 10/10ths with tops rising from 6,000 to 10,000 feet. A severe thunderstorm was reported in the Loire area. Light ice was encountered in precipitation, but none in cloud. Visibility was moderate. The moon was above the horizon and 52% of full.

Results.

Results.

5. 22 aircraft were despatched to lay mines off Lorient, St. Nazaire, La Pallice and the Gironde estuary. 17 reported reaching their targets, and 36 mines were laid, including 18 off La Pallice. Some opposition was encountered from heavy and light flak and from machine-guns, but only one aircraft was hit. One aircraft failed to return from La Pallice, but there is no information to indicate the cause of loss.

BC/S.26342/5/CRS
6th December, 1942

Mine-laying (Night 31st October/1st November 1942)

Target	Group	Type	Sortie	A/C reporting mines laid in primary area	Abortive; not over primary coastal	Missing	Mines laid in primary area	Damage by flak	Interceptions.
LORIENT	1	Well.111	2	1	1	-	2	-	-
	1	Well.4V	*3	2	-	1	4	-	-
ST. NAZAIRE	1	Well.1V	*6	4	2	-	8	-	-
LA PALLICE	3	Well.111	9	9	-	-	18	1	-
GIRONDE ESTUARY	3	Stirling	2	1	1	-	4	-	-
TOTAL			22	17	4	1	36	1	-

* These 9 A/C were not fitted with Gos.

Bomber Command Report on Night Operations, 3/4th November, 1942.

MINE LAYING.

Metecorological Advice Submitted to the Command.

1. 0935 hours. A low pressure centre now over north-east France is moving north-east, and by midnight should be in the Hamburg area, with a cold front to the western Alps. Near this centre there will be an area of continuous rain, with cloud to great heights and high icing index; freezing level 3,000 feet. East of 15°E, there will be little low cloud, and medium cloud will be well broken. Much cloud is expected over the Alps and the Plain of Lombardy. Over France there will generally be small amounts of cloud, but fog will develop inland. Medium cloud will increase over south-west France, associated with a depression to the west of Spain which is moving east. Home bases in south-west England should remain fit all night, but fog will develop early in the Midlands, and there is a threat of low stratus in the north-east.

1245 hours. 1 & 3 Groups should just be fit for a daylight take-off, but diversions on return to safe bases in the south-west will probably become necessary. Take-off conditions in 2 & 3 Groups will be bad, with rain in the early afternoon. The west coast of France will be fit for mining early in the night, with well broken cloud and moderate to good visibility. The Nordholm area of Germany will be in the centre of the depression this afternoon, and serious icing will be encountered above 3,000 feet.

1545 hours. Bases in the south-east corner of Yorkshire are now expected to be available most of the night, and 3 Group entertain the hope of a safe return to their own bases.

Executive Orders.

2. In view of the weather, operations were confined to minelaying in the Bay of Biscay.

Sorties.

3.	(a)	No. of aircraft despatched.....	29
	(b)	" " " reporting mines laid in primary area.....	24
	(c)	" " abortive sorties (technical defect.....1)	4
		(weather.....2)	
		(wrong Gee charts.....1)	
	(d)	" " aircraft missing.....	1

Weather Experienced.

4. 1, 2, 3 and 5 Groups experienced low cloud with rain and poor visibility at dusk. Fog soon became general except in the north of 2 Group and in south-west England, west of 4°W., where visibility remained good. Fine weather was encountered on the route to the Bay of Biscay and over the target areas, where cloud was above 2,000 feet and well broken. There was no moon, however, and visibility was moderate.

Results.

5. 29 aircraft were detailed to lay mines in the Bay of Biscay. 24 of these report having reached the primary areas, and 48 mines were laid, including 18 off La Pallice. In this area, accurate light flak was encountered with searchlights and some heavy flak. One aircraft sustained damage, and one failed to return, but there is no definite information to indicate the cause of loss.

Target.	Group.	Type.	Sorties.	a/c reporting mines laid in primary area.	Abortive sorties over enemy coasts.	not over enemy coasts.	Missing.	Mines laid in primary area.	Damage (flak)	Interceptions
ST. NAZAIRE.	1	Woll.II	1*	1	-	-	-	2	-	-
		1 Woll.III	4	4	-	-	-	8	-	-
LORIENT.	1	Woll.IV.	7*	5	1	-	1	10	-	-
BREST.	1	Woll.III	6	5	1	-	-	10	-	-
LA PALICE.	3	Woll.III	11	9	-	2	-	18	1	-
TOTAL			29	24	2	2	1	48	1	-

* These 8 a/c were not fitted with Gos.

BC/S. 26342/6/ORS.
7th. December 1942.

MCH/VE.

BOMBER COMMAND REPORT ON NIGHT OPERATIONS - 6/7th NOVEMBER, 1942Genoa - minelaying - leaflets.Metorological Advice Submitted to the Command.

1. 0930 hours. It is estimated that the midnight position of fronts will be as follows: (1) occluded from 63°N. 2°E. to north-east Scotland, becoming warm to south-west England and cold to south-west Ireland, (2) occluded from the Ruhr to Hamburg to 53°N. 16°E. becoming warm to 50°N. 22°E. and cold to 50°N. 15°E. to the Alps. At home bases, over north-west France and the coastal areas of north Germany (including the Baltic), there will be much cloud with rain. Over central and south Germany conditions will generally be cloudy, but some breaks may be expected. Over central and south France there will be small amounts of low cloud, and visibility will be moderate to good. Over north-west Italy, layer cloud should be well broken, but no definite forecast is at present possible for Genoa.

1430 hours. At bases local fog is expected in some areas by 2000 - 2100 hours, but this will probably be localised. Conditions in the second half of the night depend on developments from the Atlantic and are as yet uncertain. There is a possibility that the increasing wind will keep most areas fit. The West Frisians and the west coast of France should be suitable for mining in the first half of the night, while the Heligoland Bight may be clear later. This applies also to the Ruhr Valley. Over Northern Italy much medium cloud, probably accompanied by broken strato-cumulus, is expected at about 2000 feet.

1610 hours. Bases should be fit almost everywhere until 0200 hours, when rain and low cloud will affect 4 Group and the Midland areas; but this should not spread to south-east England. Winds will become very strong and conditions towards dawn are doubtful. No serious difficulties should be encountered on route to Northern Italy, although the Alps will be covered with medium cloud. There may be some low cloud over the target.

Plan of attack.

2. The target for tonight is GENOA. The importance of this objective is enhanced by the operations in North Africa.

Zero hours:- 0130 hours.

Period of attack:- (a) Pathfinders (14 aircraft) 0129 to 0135 hours.
(b) Main Force (75 aircraft) 0133 to 0145 hours.

(N.B. 1 Pathfinder will attack with the Main Force).

10 Pathfinders will arrive over the target area from 5 to 10 minutes before zero hour, so as to locate the aiming point with single reconnaissance flares 1 minute before zero hour. All Pathfinders will then release 2 short sticks of flares each across the aiming point. When it has been positively identified it will be marked by red flares emitting green stars. Bomb loads will be as follows:-

Pathfinders: flares + one 4,000 lb. H.C. bomb.

Main Force: One half 4lb. incendiaries only.

One third 4lb. incendiaries + two 1,000 G.-. bombs

One sixth 4lb. incendiaries + one 4,000 lb. H.C. bomb.

Pathfinder with Main Force: 30lb. incendiaries only.

At the close of the attack one crew from each Lancaster Squadron will reconnoitre the target and report on the degree of success achieved.

Gen Instructions.

3. The Southern Chain will operate from 1700 hours.

Route Briefed.....

Route Briefed.

4. The following route was briefed to all Groups (see also accompanying diagram): base - Salsby Hill - Cabourg - Monaco - Genoa - same return.

Sorties.

5.	(a)	No of aircraft despatched.....	73
	(b)	" " " reporting attack on primary area....	65 (69.0)
	(c)	" " abortive sorties (technic 1 defect).....	5
	(d)	" " aircraft missing.....	2
	(e)	Result not known (a/c crashed on return).....	1

Weather Experienced.

6. Bases were fit during the first half of the night, but later rain squalls from the west with much low cloud, and visibility was poor. En route to Genoa, small amounts of cloud were encountered to 49°N., beyond which it increased to 7-10/10ths. medium cloud, base 9,000 feet, tops 10,000 feet. But over the target cloud varied from nil to 3/10ths., with tops at 5,000 feet and, although the moon was below the horizon, visibility was very clear. On the return journey, north of 49°N., heavy rain cloud was met at various levels.

Weight of Bombs Dropped.

7. (by aircraft reporting attack on primary).
H.E. : 54.0 tons. Incendiaries: 59.1 tons.
 (including 20 x 400lb. and 41 x 1,000 lb. bombs).

No. of aircraft carrying 4lb. incendiaries only.....	23
" " " " 4lb. incendiaries + H.E.,.....	31
" " " " flares + H.E.....	<u>11</u>
	65

Timing of Attack.

8. Pathfinders.

No. of aircraft attacking early (3").....	1
" " " " within planned period.....	6
" " " " 0-10" late.....	<u>4</u>
	11

Main Force.

No. of aircraft attacking within planned period.....	17
" " " " 0-10" late.....	20
" " " " more than 10" late.....	<u>17</u>
	54

Night Photographic Evidence.

9. <u>Photographs taken with bombing (see accompanying diagram):</u>	
<u>Plotted by ground detail (within 3 miles..... 28)</u>	
(between 3 & 5 miles.. 2)..	30
Unplotted: (a) with ground detail:	
(probably suburbs of Genoa... 3)	
(see only..... 2).....	5
(b) with no ground detail, but with	
fire tracks that might be plotted.....	11

The night photographs show that a very satisfactory concentration of attack was achieved in the eastern and north-eastern part of the town, having due regard to the size of the attacking force.

Some proportion of the attack also fell on the suburban area further east. At about 0135 - 0140, five minutes after zero hour, flames were photographed half a mile east of the aiming-point and over the eastern suburbs of Genoa, where a few aircraft obtained photographs of ground detail by flare-light. Shortly after this, the main concentration of attack began to build up, and many sticks of incendiaries were recorded in the eastern half of the town.

Narrative of Attack.

10. As usual on this target, a very high proportion of the attacking force reported reaching the primary. Intense cloud was encountered en route to the Alps, but this cleared over Italy and conditions over the target were excellent. The pathfinders were prompt and accurate, and their flares were reported as most effective. In the face of the customarily modest opposition, aircraft were able to bomb with deliberation, and large fires were soon burning in concentration round the aiming-point. As the attack developed, these spread along the coast to half-way round the harbour, and the resultant glow could be seen for 80 miles on the return journey. The Italian communique admitted that damage was "appreciable". 40,000 leaflets were dropped on the target. 2 aircraft failed to return.

Day Reconnaissance.

11. The I.R.U. cover includes nearly all the town, but prints of the northern suburbs are on so small a scale that a detailed assessment of damage in this area is impossible. Areas of devastation are scattered throughout the town, but the eastern quarter suffered most heavily, almost entirely from fire. Most of the damage was done to small residential buildings. 7 large buildings, however, were shown to have been destroyed, including a theatre and a monastery. A number of houses in the northern suburbs are seen to have been gutted or damaged by fire, but it is probable that the majority of these were hit in previous raids.

Defences.

12. Crows reported little, if any, increase in the heavy guns since the attack of 22/23rd October, but the light guns in the docks appeared to have been reinforced. About 20 searchlights were operating in the target area. No effective opposition was encountered, the fire from the light guns being particularly wild. Half the photographs plotted over the target show heavy flak and one-fifth light flak, while none recorded searchlights. Most of these were single-gun, although 2- and 3- gun salvos were recorded.

Navigation Aids.

13. This attack by 5 Group achieved the best God average range to date on either chain, although no unusual maximum ranges were obtained. The absence of jamming on the Southern Chain has restored the original range for Italian raids.

Other Targets Attacked.

14. No claims were made of attacks on other targets than the primary, and there is no evidence of any stray bombing.

Casualties.

15. (a) No. of aircraft missing..... 2 (2.7%)
 (b) " " " damaged:-
 flak 1 (1.4)
 fighter..... -
 not enemy action, ... 2 (2.7)..... 3 (5.3)
 (c) No. of interceptions..... 0

There appears to have been hardly any fighter activity on this night. No sorties by controlled fighters were heard. Our own observations indicate that 2 aircraft collided over Genoa and that both fell in flames.

Summary.....

Summary.

16. Most of the damage was caused to residential property, but on the whole a successful attack by a small force.

MINELAYING.

17. 65 aircraft of the Pathfinders, 1,3 and 4 Groups were despatched to lay mines in the areas of the Gironde estuary, St. Nazaire, Lorient, La Pallice, south of Texel and the Frisian Islands. Conditions were good in the Bay of Biscay, with only 2-3/10ths. cloud, but heavy weather was encountered over the North Sea, where cloud increased to 10/10ths. east of 4°E., based at 1,000 feet and sometimes lower. None of the 3 aircraft detailed for Texel reached their objective, and only 13 of the 26 despatched to the Frisians. In all 42 aircraft report that they accomplished their task, and 123 mines were laid, including 43 in the Gironde estuary and 38 off the Frisians. 2 Stirlings failed to return from the former area, and observations indicate that one of these was shot down by flak at Nantes. Light flak was encountered from several points on the French coast, but no other aircraft was hit.

LEAFLETS.

18. 4 O.T.U. crews were detailed to drop leaflets on Paris, and completed their mission without incident.

BC/S26342/6/CRS.
4th January 1943

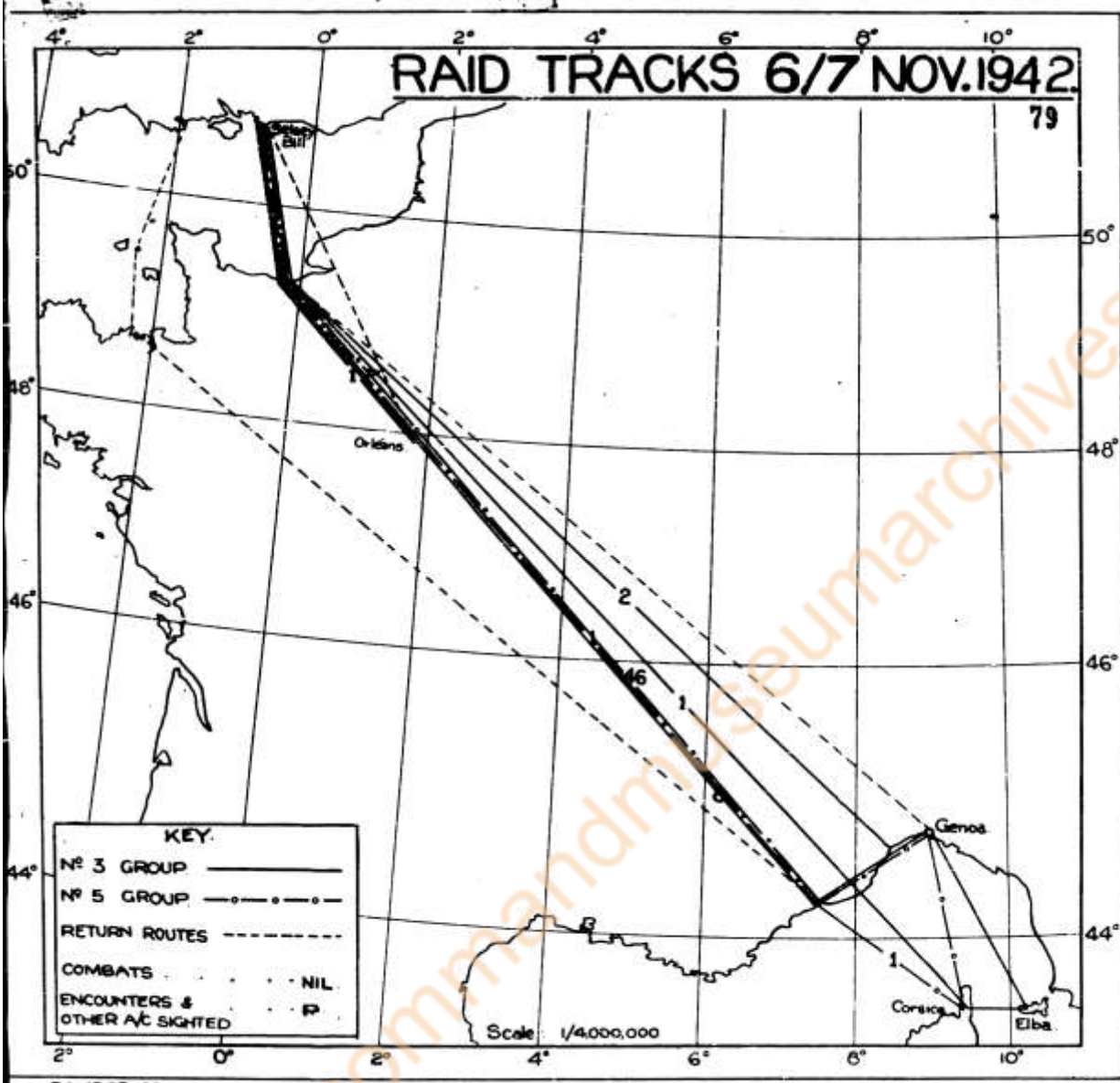
MLM/BMS.

Form - (Continued) dated 27th November 1941

Target	Group	Type	Sorties	w/c reporting attack on		abortive sorties		Result not known	Missing	Mines laid in primary area	Casualties - downed by		Interceptions -		
				primary area	alternative area	over enemy territory	not over enemy territory				flak	fighter	not in action	attack - not	attack -
GONDA	P.P.P.	Lancaster	14	11	-	1	-	-	2	-	1	-	-	-	-
			5	5	-	-	-	4	-	-	-	-	1E	-	-
			1	-	-	-	-	-	1	-	-	-	-	1E	-
TOTAL			75	65	-	1	4	1	2	-	1	-	2E	-	77
<u>MINELAYING</u>															
<u>GIRONDE</u>															
ESTUARY	3	Stirling	14	11	-	-	1	-	2	43	-	-	-	-	-
St. NAZ. ARE	1	Well. III.	5	5	-	-	-	-	-	12	-	-	-	-	-
LIORIENT	1	Well. III.	6	5	-	1	-	-	-	10	-	-	-	-	-
LA PALICE	3	Well. III.	10	10	-	-	-	-	-	20	-	-	-	-	1
Off TEXEL	1	Well. III.	3	-	-	2	1	-	-	-	-	-	-	-	-
<u>FRISIAN ISLANDS</u>															
	P.P.P.	Stirling	5	-	-	4	-	-	1	-	-	-	-	-	-
	"	Halifax	4	-	-	4	-	-	-	-	-	-	-	-	-
	"	Well. III.	4	1	-	3	-	-	-	2	-	-	-	-	-
	4	Halifax	13	9	-	4	-	-	-	36	-	-	1E	-	-
<u>MINELAYING TOTAL</u>			65	42	-	18	2	-	3	123	-	-	1E	-	-
<u>LEAFLETS</u>															
PARIS	92	Well. I.C	4	4	-	-	-	-	-	-	-	-	-	-	-
TOTAL			142	111	-	19	6	1	5	123	1	-	3E	-	1

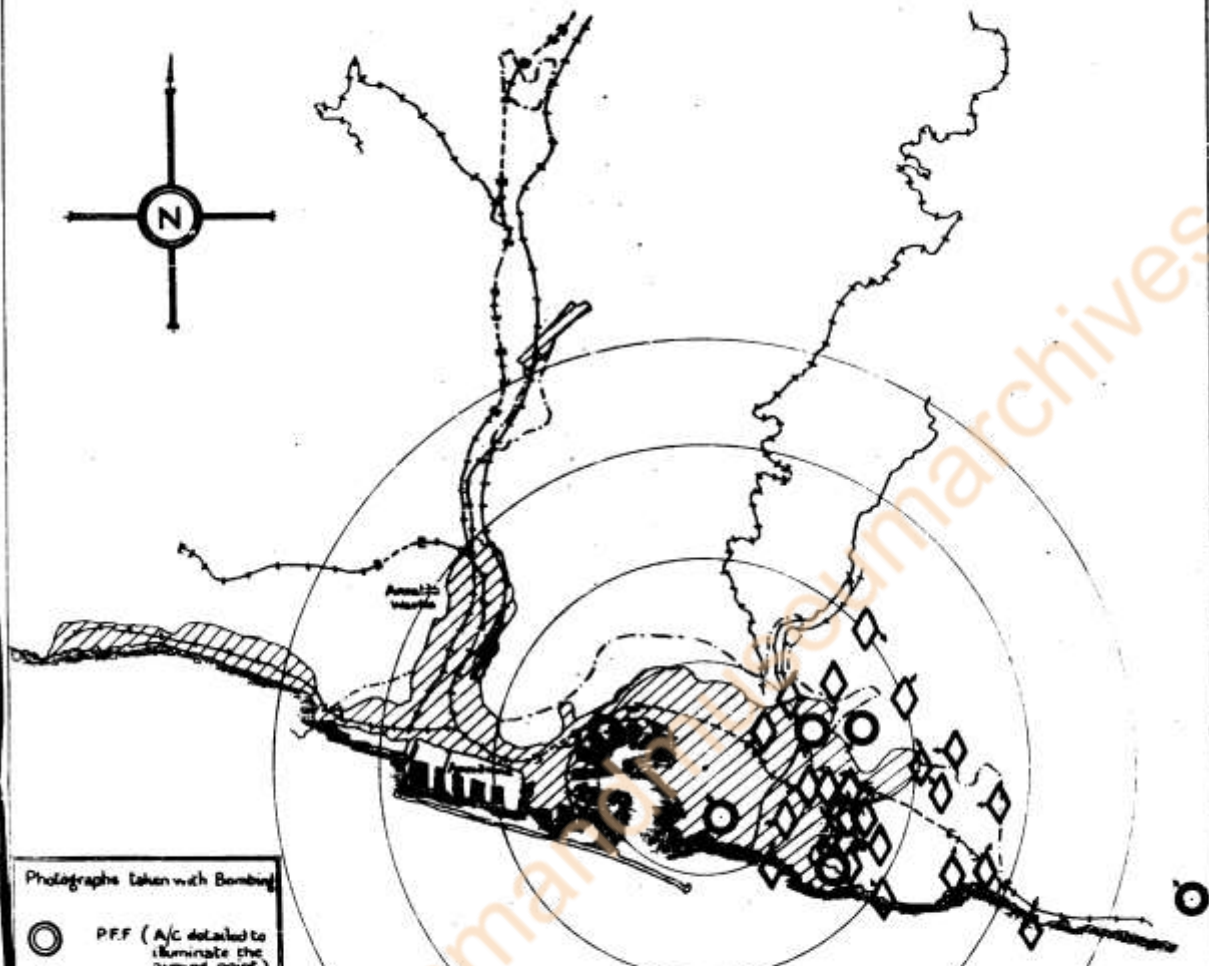
RAID TRACKS 6/7 NOV. 1942.

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BOMBER COMMAND HEADQUARTERS

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Photographs taken with Bombing

- PFF (A/C detailed to illuminate the aiming point)
- ◇ 5 GROUP
- ↑ A/C HEADING
- Limit of suburban areas

D.R.S. (DC) 161A
Date 15/11/42
Ref. to Chart R.154

FINAL PLOT OF NIGHT PHOTOGRAPHS
TAKEN 6/7th NOVEMBER 1942 TARGET GENOA

Scale: 1 inch = 1 mile.

www.bombercommand.com archives.ca

BOMBER COMMAND REPORT ON NIGHT OPERATIONS - 7/8th NOVEMBER, 1942.Genoa - Minelaying.Meteorological Advice Submitted to the Command.

1.

0930 hours. It is estimated that at midnight the frontal positions will be as follows:-

(1) occluded from 60°N. 12°E. to Hamburg to Cologne, becoming cold to La Pallice.
 (2) occluded from 57°N. 12°E. to 55°N. 20°E. At home bases in the north variable cloud is expected with scattered showers and moderate visibility. In contr 1 and south England there will be little cloud, but fog in patches, which may become general in this area by dawn. Over south-west England and north-west France variable convection cloud will prevail. Cloud should be well broken everywhere over Germany and the Low Countries. Northern Italy should be free of cloud.

1305 hours. At home bases, local visibility troubles will be experienced all night, except in south-west England. The route to Northern Italy will pass through the cold front lying between 48°N and 50°N., which may move slowly south-east, with rain and high cloud. Winds at 10,000 ft, will average 30 m.p.h., from a westerly direction. An early operation on Northern Italy is indicated, because (1) visibility troubles at dawn will be more extensive than at 0200 to 0400 hours (2) An early start will give cloud cover over the French coast, and the front can be traversed below freezing level with adequate room for climbing on southern side (3) later in the night cloud may increase over the Alps, and for return the cold front may have reached high ground over France, in which case it is likely to be intensified (4) visibility over the target will decrease during the night. Brest, Lorient and the Frisians should be fit for mining after midnight.

1605 hours. Visibility troubles at bases will mainly be confined to low-lying stations and to areas affected by smoke, but aerodromes north of the Wes should be fit all night, while at least 50% of those further south should be usable by 0300 hours.

Plan of Attack.

2. The target for tonight is GENOA. All aircraft with sufficient range from the Pathfinders, 3, 4 & 5 Groups will go.

Zero hour..... 2130
 Pathfinders.. (about 27 a/c)..... zero - 1 to zero + 15 mins
 Main Force... (a/c of 3, 4, & 5 Groups)..... zero + 3 to zero + 30 "
 (+ 9 Pathfinders)

Pathfinders will, if necessary, open with single flares scattered over the target area just before zero hour, for finding. At zero - 1, 10 aircraft will illuminate the aiming point with scattered short sticks of flares; 4 more will follow at zero + 5, 4 more at zero + 10, and the remaining Pathfinders at zero + 15. No coloured flares or marker inc. flares will be dropped. All aircraft in this section will make up their loads with G.P. or H.C. bombs. All aircraft in the Main Force will attack the centre of the city, except 10 Stirlings, whose objective will be the Ansaldo Ship-fitting Works. These last will carry 1,000 lb (R.D.X. filled) G.P. bombs. One third of the Stirlings attacking the city will likewise carry the maximum load of H.E. bombs. The remainder will carry incendiary bombs, some of them explosive. The Halifaxes will take 1000 lb G.P. bombs as well as 30 lb. and 4 lb incendiaries. All Lancasters will take 4 lb. incendiaries, one-half of the number carrying the maximum weight, while one-third will make up their loads with two 1,000 lb G.P. bombs and one-sixth with one 4,000 lb G.P. bomb.

If the aiming point is well above and ground detail is clearly visible, all aircraft, except those detailed for the Ansaldo Works, will aim to destroy other areas in the town.

H.E. (The attack was originally intended to be made as late as possible but weather conditions necessitated an early start.)

See instructions.....

Gas Instructions.

3. Gas should function up to 500 miles from bases, beyond which positions will have to be checked by astro-position lines and fixes.

Route Briefed.

1. The following route was briefed to all Groups (see also accompanying diagram):-

base - Le Cretoy - St. Julien - GEMONA - turn left - St. Julien - Le Touquet - base.

Sorties.

5.	(a)	No of aircraft despatched.....	176
	(b)	" " " reporting attack on primary area.....	145 (81)
	(c)	" " " " alternative area.....	1
	(d)	abortive sorties (technical defect....18) (icing..... 6) (lack of petrol,.... 1) (sickness of crew.... 1).....	26
	(e)	" " aircraft missing.....	4 (c)
	(f)	Result not known (a/c collided on return).....	2

Weather Encountered.

6. Difficult weather was encountered in the frontal belt from the French coast to just beyond Paris; 10/10ths extended up to 18,000 feet, with rain at low levels and heavy ice between 5,000 and 16,000 feet. Much static was also reported. Beyond this belt, however, cloud broke in layers and dispersed beyond Dijon; the Alps were snow-covered, but in Italy conditions were excellent. Geneva was free of cloud, which was recorded on none of the photographs, and, although the moon was below the horizon, visibility was reported as 5 to 10 miles. A slight surface wind of less than 5 m.p.h. blow from the north-west. On the return journey, the frontal belt was found to have moved south, and the French coast was clear; otherwise, conditions corresponded to those encountered on the outward route.

<u>Winds on route.</u>	5 - 10,000'	250° - 280°	20 - 30 m.p.h.
	15,000'	260° - 290°	35 - 45 m.p.h.
	20,000'	260°	45 m.p.h.
South of Alps.....	10,000'	300° - 330°	25 - 30 m.p.h.

Weight of Bombs Dropped
(by aircraft reporting attack on primary).

7.	<u>H.E. : 112.5 tons</u>	<u>Inconductions. 125.5 tons</u>
	including (15 x 4000 lb)	
	(.2 x 2000 lb)	
	(161 x 1000 lb)	

No. of aircraft carrying	H.E. only.....	11
" " " "	H.E. + 4 lb. incendiaries.....	26
" " " "	H.E. + 30 lb. incendiaries.....	8
" " " "	H.E. + 4 lb. + 30 lb. incendiaries.....	41
" " " "	4 lb. incendiaries only.....	36
" " " "	30 lb. incendiaries only.....	2
" " " "	4 lb. + 30 lb. incendiaries.....	1
" " " "	250 lb. incendiaries only.....	3
" " " "	flares + H.E.....	11
" " " "	flares + 250 lb. incendiaries.....	1
		<u>145</u>

Results.

Night Photographic Evidence.

8. Photographs taken with bombing.

Plotted by ground detail (within 3 miles.....53)	
(between 3 & 5 miles.... 5).....	58

<u>Unplotted:</u> (a) showing ground detail	
(probably suburbs of Genoa...1)	
(sea.....1)	
(open country.....10).....	12

(b) with no ground detail, but with fire-tracks that might be plotted.....	28
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The plot of night photographs shows that again an overwhelming proportion of the attack fell on Genoa, especially the old town and the suburbs to the east. Numerous sticks of incendiaries, some H.P. incendiaries and smoke fire fires were photographed by aircraft plotted within the 3 mile circle. Shortly after zero hour (2130) fires were burning over the aiming point and further east, and the main concentration of attack developed in the next half hour. Despite an attempt to obscure the docks by a smoke screen, dispersed by a westerly wind from generators round the docks, several aircraft located and bombed the harbour precincts. There was a certain amount of scattered bombing by individual aircraft from 2½ to 3½ miles east of the aiming-point towards the end of the attack.

Narrative of Attack.

9. 15 of the 16 Pathfinders report having reached Genoa. Their flares were accurately dropped over the aiming-point, and in the complete absence of cloud the city and docks could be identified with unusual accuracy. Over 80% of the main force claim to have attacked the target, from heights ranging between 7,000 and 16,000 feet. The defences had undoubtedly been strengthened since the previous attack, but those in charge appeared to take shelter as soon as the flares began to fall; 21 out of 24 searchlights dowsed in the first few minutes. A smoke screen was generated from the direction of the docks, but this provided little hindrance, and large fires were quickly started in the harbour area and near the centre of the old city, including at least one on a jetty in the Porto Nuovo, that suggested burning oil. The tongue of land dividing the Porto Nuovo from the Inner Harbour was soon to be well alight, and a considerable blaze was reported in the centre of the Ansaldo works, which had been detailed as a special objective for 10 aircraft. Crews arriving towards the end of the attack found the glare so bright that buildings could actually be seen to topple, and the glow was visible until the Alps were reached. A dummy fire was early reported south-east of the docks, which may offer some excuse for the unwarlike silence of the defences. 750,000 leaflets were dropped on Genoa and Dijon.

Day Reconnaissance.

10. Damage was shown to have been heavier than that caused on the previous night, but considerably less than on 22/23rd October. The centre of the town suffered most heavily, 2 large, 16 medium and about 96 small buildings - mostly public or residential - having been gutted. Industrial damage is small but includes 8 or 9 buildings of the Ansaldo fitting-yards, which had been hit in previous raids, a building of the Unione Industriale Lubrificanti and another small oil works. About four-fifths of the destruction was caused by fire. As on former occasions, a number of buildings have their upper floors only gutted.

Timing of Attack.....

Timing of Attack.

11.	<u>Pathfinders.</u>		
	No. of aircraft attacking within planned period	10	
	" " " " " late, (0-11")	5	
			15
	<u>Main Force.</u>		
	No. of aircraft attacking early	3	
	" " " " " within planned period	116	
	" " " " " late	10	
			128

Defences.

12. As on the previous night, the fire from the heavy guns was inaccurate and lacked co-ordination, though the volume suggested a small increase in their number. Early in the attack there was considerable activity by about 24 searchlights. A cone was formed over the north-west of the town, into which the light guns fired continuously. As H.E. bombs began to fall, the cone broke up and the fire of the light guns fell away. 3 searchlights of superior power (about equal to the German 150 cm. projector) exposed vertically, and agitated violently in elevation through 5 - 10°. A reliable observer reported that they had the effect of illuminating the target area with unusual clarity. These searchlights also seemed seen after the attack began. 3 balloons were reported over the dock area of the lower harbour. Slight A.A. fire with 4 searchlights was encountered from Santa Margherita (12 miles east of Genoa). Considerable flak was encountered on the return journey from Anions, Le Touquet and Boulogne.

13. Photo Evidence. Of the 64 aircraft plotted at Genoa, one half recorded heavy flak, one quarter light flak and less than a quarter searchlights. The overall intensity of heavy flak was 2.2 single gun discharges per aircraft; out of 100 salvoes, 24 were of 2 guns and 99 single discharges. The ground positions of five different batteries have been recognised from the night photographs; that at Fort San Guiliano was recorded in action from 21.37 to 21.44.

Navigational Aids.

14. This operation, the first in which Lancasters accompanied Stirlings, Halifaxes and Wellingtons, produced disappointing Gee results. Meteorological conditions were not abnormal, and the only interference was reported near Paris, yet the average range was only 361 miles, whilst no less than 31 out of 116 crews submitting "useful returns" failed to achieve 250 miles.

Other Targets Attacked.

15.	(a) No. of aircraft missing	4 (2.3%)
	(b) No. of aircraft damaged:-	
	flak	6 (3.4%)
	fighter	0
	not enemy action	7 (4.0%)
		13 (7.4%)
	(c) No. of interceptions:-	
	attacks	4 (2.3%)
	other interceptions	3 (1.7%)
		7 (4.0%)

The proportion of missing aircraft is about average for this target. None of the four attacks caused any damage, and no sorties by controlled night fighters were heard in the areas crossed by our aircraft. Our own observations indicate that one aircraft was shot down by flak near Anions, and that another was lost of unknown causes in the Boulogne - Le Touquet area. There is no evidence to suggest the cause of loss of the other two missing aircraft. Two Lancasters collided in mid-air over their base on returning; both crews were killed, and the aircraft were total wrecks.

Summary

Summary.

16. Another successful raid in excellent conditions. Heavy damage was caused, mainly to the centre of the old city.

DETAILS.

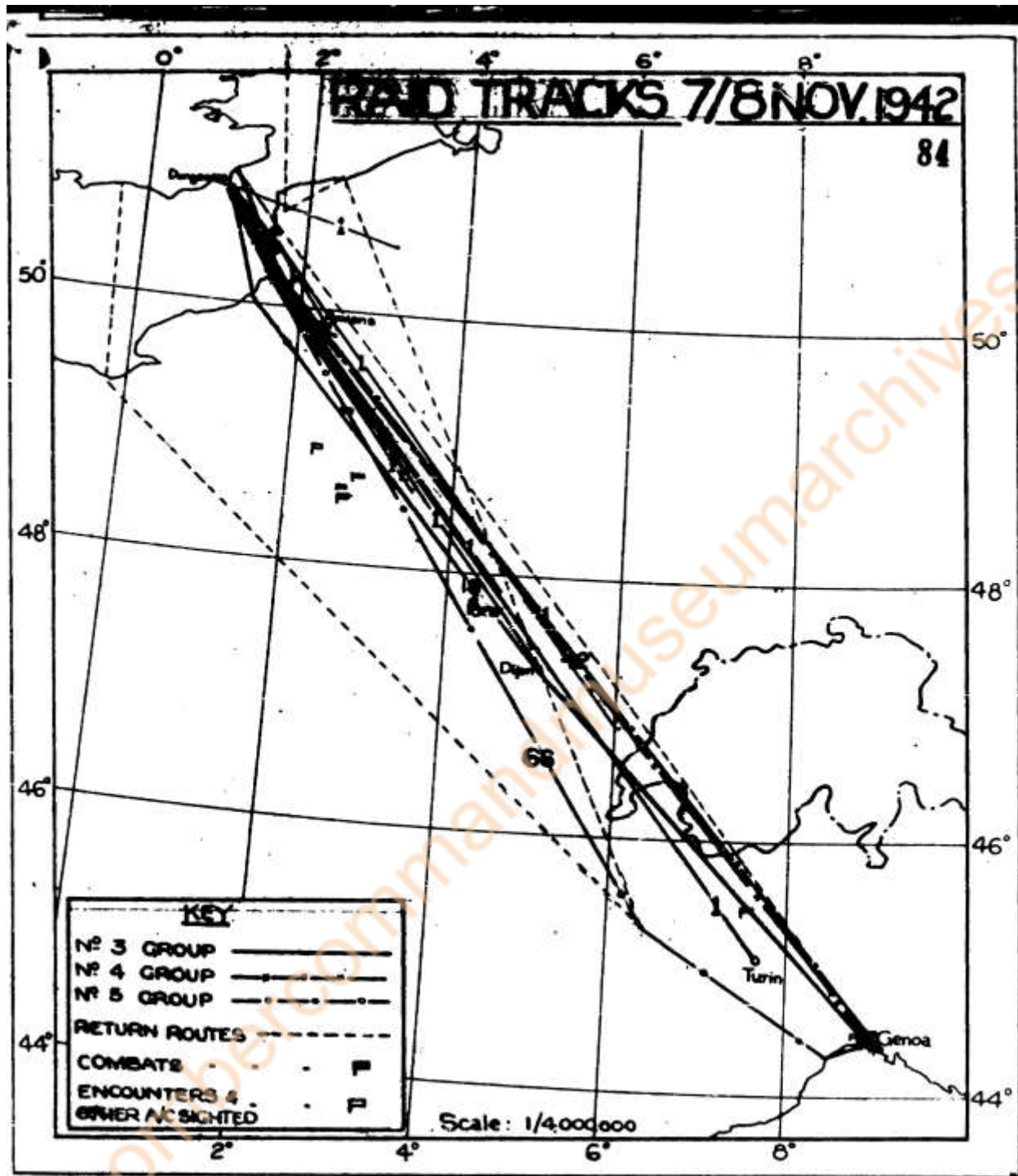
17. 36 Wellingtons of 1. Group were detailed to lay mines in the following areas: St. Nazaire, Lorient, Brest, south of Texel, Frisian Islands, and the Little Belt. 27 of these report completing their task successfully, and 50 mines were laid. Good weather was encountered over the Bay of Biscay and off the Dutch coast, but 10/10ths. heavy cloud prevailed over the western Baltic, with base falling to 200 feet in thunderstorms. 7 aircraft detoured for targets in this area had to abandon their mission, while in flight, unable to reach the Little Belt, was 1 report of a collision in the Kattegat. One aircraft sustained damage from flick-ships off Denmark, and on that failed to return from this target; but there is no evidence of the cause of loss.

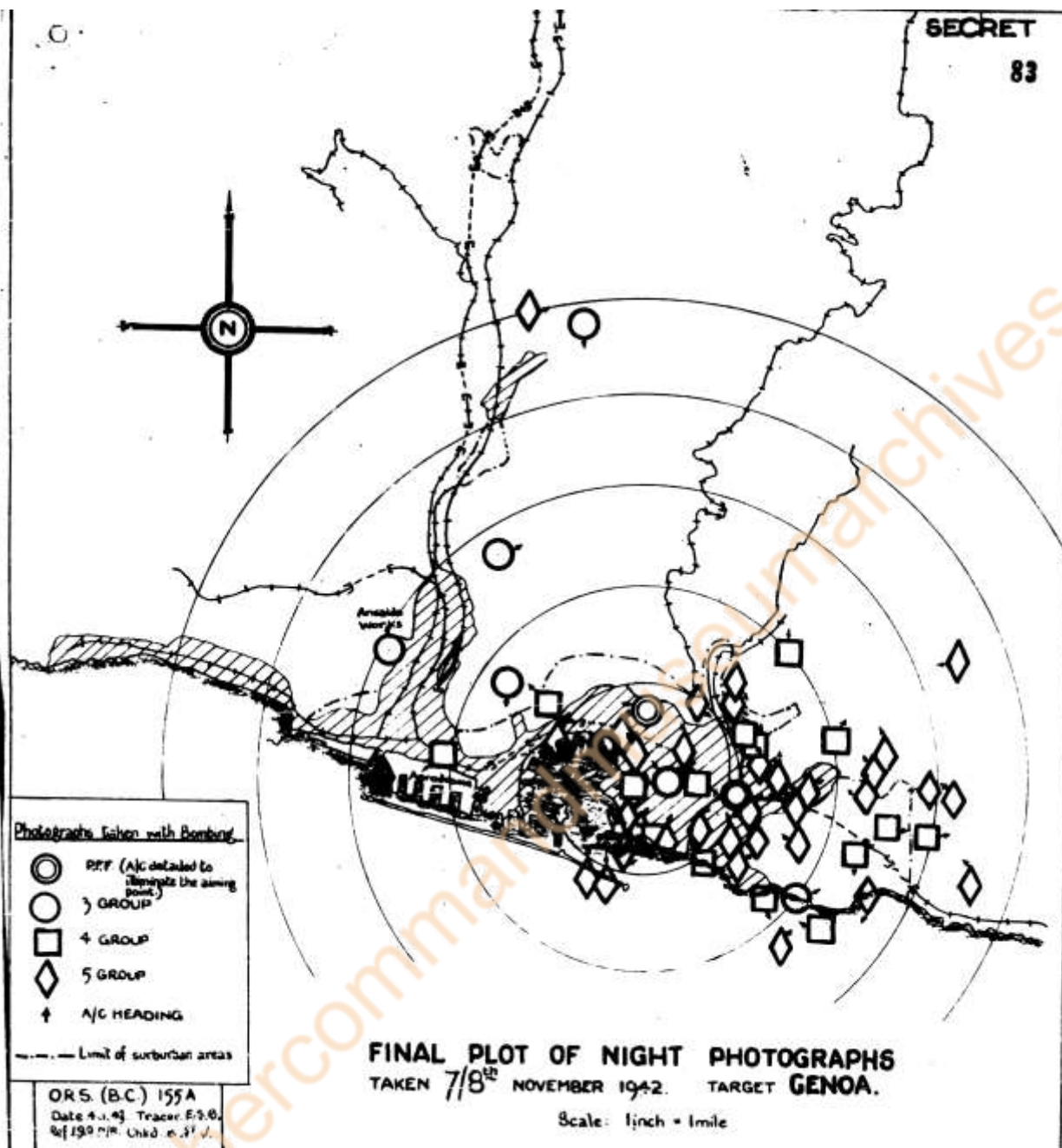
BC/S 26342/3/CR3.
7th January, 1943
ML/BLS.

OPERATIONS (Mines) 7/1-14/1 1943

Target	Group	Type	Sorties	Aircraft reported		Aircraft status		Result	Losses	Aircraft in primary	Operations during			Int. flight	
				primary	alternative	over enemy territory	not over enemy territory				flown	flown	flown	flown	flown
GERM.	P.P.P.	Stirling	8	7	-	1	-	-	-	-	-	-	-	-	-
		Benetton	2	4	-	-	-	-	-	-	-	-	-	-	-
		Well.III.	4	4	-	-	-	-	-	-	1	-	-	-	-
		Stirling	28	16	1	14	1	-	-	-	1-1E	-	-	-	-
		H-100	41	41	-	2	1	-	2	-	-	-	18-2E	1	2
		Benetton	81	61	-	3	7	2	1	-	2	-	18-2E	3	1
P.P.P.	Stirling	3	3	-	-	-	-	-	-	1	-	-	-	-	
		Well.III.	2	-	-	-	1	-	-	-	-	-	-	-	
TOTAL			177	143	1	15	14	2	4	-	5-1E	-	28-1E2	4	3
OPERATIONS (Mines) 7/1-14/1 1943															
ST. NAZ.	1	Well.IV	19	5	-	-	-	-	-	14	-	-	-	-	-
LORIENT		Well.IV	28	2	-	-	-	-	-	4	-	-	-	-	-
BREST		Well.III.	6	5	-	-	-	-	-	18	-	-	-	-	-
S. OF TEXEL		Well.III.	4	2	-	1	-	-	1	4	1-1E	-	-	1	-
FRISIAN I.S.		Well.II.	19	1	-	-	-	-	-	2	-	-	-	-	-
LITTLE BELT	1	Well.III.	4	4	-	-	-	-	-	6	-	-	-	-	-
		Well.IV.	2	2	-	-	-	-	-	4	-	-	-	-	-
		Well.III.	7	4	1	1	1	-	-	6	-	-	-	-	-
Well.IV.	8	1	-	4	-	-	-	2	-	-	-	-	-	-	
TOTAL			36	17	1	6	1	-	1	94	1-1E	-	-	1	-
TOTAL			212	170	2	22	11	2	5	-	5-1E2	-	28-1E2	5	3

* These 10 aircraft were not fitted with Goo.





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NIGHT REPORT REFERENCE NO. 191

COPY 16 EB 343

TIME 2/24

BOMBER COMMAND REPORT ON NIGHT OPERATIONS - 8/9th NOVEMBER 1942.

Mine-laying - Leaflets - Anti-shipping Strikes 1943

Meteorological Advice Submitted to the Command.

1. 0920 hours. At midnight a cold front will lie from Sweden to Breslau along the Alps to Marseilles, giving much medium and low cloud, with rain. Heavy cloud will prevail over Berlin till late in the night, and the north-west German coast will be covered with strato-cumulus only slightly broken, but the Ruhr will be rather better than usual, though haze will gradually thicken. All mining areas will be fit, including the western Baltic. At home bases, fog will become widespread late in the night, but bases in the south-west should not be seriously affected.

1235 hours. The northern half of the western Baltic may be disturbed by bad weather hanging back over south Norway, and targets further south will be preferable.

1600 hours. Conditions in the above-mentioned areas are still very uncertain, but should be good elsewhere. All bases should be fit until 0200, except for local troubles.

Mine-laying.

Sorties.

2.	(a)	No. of aircraft despatched.....	71
	(b)	" " " reporting mines laid in primary area.....	55(77.5%)
	(c)	" " " " " " " alternative area...	2
	(d)	" " abortive sorties (technical defect4)	
		(weather4)	
		(flak1)	
		(accident on take-off.... 1)....	10
	(e)	" " aircraft missing.....	4(5.6%)

Weather Experienced.

3. Conditions generally were excellent, although there was no moon. Little cloud was encountered, and never below 1,000 feet. Patches of fog spread from France over the Bay of Biscay, otherwise visibility was good.

Results.

4. 71 aircraft of the Pathfinder, 1, 4 and 5 Groups were despatched to lay mines in areas ranging from the Baltic to the Bay of Biscay. Under excellent conditions 55 of these claim to have reached their targets, and 132 mines were laid, including 58 off the Frisians. Flak was encountered from known defended areas, but only 2 aircraft sustained damage, in both cases minor. 4 aircraft failed to return. There is little evidence of the causes of loss; observations of other crews suggest that one was shot down by flak at Borkum, and another at Vannes.

Leaflets.

5. 27 Stirlings of 3 Group were detailed to drop 12,000,000 leaflets, relating to the operations in North Africa, and in particular to General Eisenhower's speech, over 15 towns in occupied and unoccupied France. All completed their task successfully and without incident, except one which broke a wing while taking off, and 2 which had to return because of technical defects. One aircraft crashed on returning from Toulon, but none of the crew was killed.

Anti-shipping strikes.....

Anti-Shipping Strike

6. 3 Halifaxes of 4 Group were despatched on an anti-shipping strike up the Gironde. One bombed the wake of a ship and another the docks at Malle. In neither case could results be observed. The third aircraft was unable to identify an objective. All returned safely.

BC/S. 26342/3/CRS.

2nd January 1943

INTEL. YING - RESULTS - ANTI-SHIPPIING STRIKE (8/24th N.Y. - JAN 1943)

Target	Group	Type	Sorties	M/o reporting mines		Effective Sorties		Missing	Mines laid in primary area	Casualties - Cause by			Interactions	
				laid in primary area	alternative area	Over enemy escorts	not over enemy escorts			Flak	Fighter	Not enemy action	Attacked	Not Attacked
<u>(Following)</u>														
OKLAHOMA	FFF.	Halifax	4	3	-	-	1	-	6	-	-	-	-	-
Frisian Islands	FFF.	Wdl.III.	4	4	-	-	-	-	8	-	-	LAC	-	-
	4	Halifax	10	8	-	-	-	2	32	1	-	-	-	-
	4	Wdl.III.	10	7	-	3	-	-	14	LAC	-	-	-	36
	1	Wdl.IV.	20	2	-	-	-	-	4	-	-	-	-	-
Little Bolt	1	Wdl.III.	6	4	1	-	1	-	8	-	-	L.A.	-	-
	1	Wdl.IV.	30	3	-	-	-	-	6	-	-	-	-	-
Little Bolt K.	1	Wdl.IV.	30	2	-	-	-	1	4	-	-	-	-	-
Elbe Estuary	1	Wdl.IV.	20	2	-	-	-	-	4	-	-	-	-	-
Wiltshire	1	Wdl.III.	10	1	-	-	-	-	2	-	-	-	-	-
Bight	1	Wdl.III.	7	6	-	-	1	-	12	-	-	-	-	-
Beest	1	Wdl.IV.	30	4	-	1	1	-	8	-	-	-	-	-
Coriant	1	Wdl.III.	6	4	-	-	-	-	8	-	-	-	-	-
St. Nazaire	1	Wdl.III.	6	3	-	1	1	1	6	-	-	-	-	-
Gironde Estuary	3	Wdl.IV.	30	2	1	-	-	-	10	-	-	-	-	-
<u>TOTAL</u>			71	55	2	5	5	4	132	1-LAC	-	12-LAC	-	-

* These 17 aircraft were not fitted with Gou.

Target	Group	Type	Sorties	No reporting		Sortie #/Sorties		Missing	Bombs laid in primary area	Casualties / Damage by			Interactions	
				primary area	alternative areas	over enemy assets	not over enemy assets			link	fighter	not enemy action	Attacked	Not attacked
(Lorraine) WTL	3	Stirling	2	-	-	-	1	-	-	-	-	-	-	-
St Etienne	3	Stirling	1	1	-	-	-	-	-	-	-	-	-	-
Carreilles	3	Stirling	1	1	-	-	-	-	-	-	-	-	-	-
Lirey	3	Stirling	1	1	-	-	-	-	-	-	-	-	-	1
Nantes	3	Stirling	1	1	-	-	-	-	-	-	-	-	-	-
Rheims & Reims	3	Stirling	1	1	-	-	-	-	-	-	-	-	-	-
Paris	3	Stirling	4	4	-	-	-	-	-	-	-	-	-	-
Toulous	3	Stirling	2	1	-	1	-	-	-	-	-	-	-	-
Orleans	3	Stirling	1	1	-	-	-	-	-	-	-	-	-	-
Lyon	3	Stirling	2	2	-	-	1	-	-	-	-	1B	-	-
Strasbourg & Nancy	3	Stirling	1	1	-	-	-	-	-	-	-	-	-	-
Bordeaux	3	Stirling	1	1	-	-	-	-	-	-	-	-	-	-
Clermont-Morrand	3	Stirling	1	1	-	-	-	-	-	-	-	-	-	-
Toulon	3	Stirling	2	2	-	-	-	-	-	-	-	1B	-	-
Vieux	3	Stirling	2	2	-	-	-	-	-	-	-	-	-	-
L.P. 73 WTL			27	24	-	1	2	-	-	-	-	1B, 1B	-	1
INT-SHIPING														
Gironde	4	Hr. 1500	3	2	-	1	-	-	-	-	-	-	-	-
WTL			101	31	2	7	7	4	132	1+1B	-	1B+1B	-	1

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BOMBER COMMAND REPORT ON NIGHT OPERATIONS - 9/10th November 1943.

Harburg - leaflets. 6 18 1943

Meteorological Advice Submitted to the Command.

1. 0925 hours. An anti-cyclone now over south-east England and north France is moving east, and will to-night be centred over Germany. Over England, the pressure gradient is expected to increase, and bases should remain fit, except in south-east England and on the lee side of industrial areas. Germany will generally be free of cloud, but industrial haze will thicken during the night; there is a minor threat of strato-cumulus over the North Sea coast, which requires a special reconnaissance later in the day. There will be fine weather with local haze over France, but here too strato-cumulus may gather in the north-west. Little cloud is expected over the Alps, and bases may well be clear; but over the Plain of Lombardy conditions are rather uncertain and the prospects for Milan and Turin are not too good.

1300 hours. At home bases, local visibility troubles may be experienced soon after dusk, but these should not become general until after 0000. The Ruhr will be free of cloud, but hazy. Hamburg has a good chance of clear skies, possibly with small patches of mediae cige, but visibility is likely to be moderate.

1620 hours. All groups expect local visibility troubles at dusk, due to smoke, and south of Yorkshire these will become widespread by 2200, but 91 and 92 Groups and Boscombe Down should be fit until 0000. 3 and 5 Groups may require diversions; the north of 4 Group, south-west England and localities on the south coast are suggested for this purpose. Cloud conditions at Harburg are doubtful. There is a chance of less than 5/10ths strato-cumulus, but this may be as much as 8-10/10ths., and there is sure to be some ground haze.

Plan of attack.

2. The target for to-night is HAMBURG. Zero hour will be at 2030. Period of attack: Pathfinder Force (29 aircraft).....zero - (zero + 20) Main Force (1,3,4 and 5 Groups, a 10 B.P.F.w/t).....(zero + 3)-(zero + 25)

3. All Pathfinders will release 2 bundles of 2 white flares and 1 green (omitting red stars) over Ratsburg, at the southern tip of the lake of the same name 32 miles east-north-east of Harburg, in order that an accurate line of run may thence be made to the target. They will then find and illuminate the target in the following order:

- Finders: 6 Stirlings)
- 4 Wellingtons).....zero - 1
- 4 Halifaxes)
- Illuminators: 4 Halifaxes)
- 2 Lancasters).....zero + 1 hour
- 3 Halifaxes)
- 1 Wellington).....zero + 5.
- 3 Halifaxes).....zero + 10
- 1 Halifax)
- 2 Lancasters).....zero + 15
- 2 Lancasters).....zero + 20

4. The finders will lay sticks of flares (Stirlings at 5-second and Wellingtons at 8-second intervals) towards the starting point in 4 directions, namely:

- (i) 53°35'N.10°03'E. to 53°35'N. 09°52'E.
- (ii) " " " " 53°32'N. 09°52'E.
- (iii) 53°34'N.10°04'E. to 53°31'N. 09°53'E.
- (iv) 53°33'N.10°04'E. to 53°31'N. 09°54'E.

5. If necessary, these flares may be released on D.R.; but if the target is definitely identified, the finders may act as illuminators. The latter will release short sticks of flares, at 2-to 3-second intervals, concentrated on the aiming point, i.e. about $\frac{1}{2}$ mile north of the Binnen Haven. Bomb loads:

6. Pathfinders. Finders.....flares only
 Illuminators.....flares + G.P. bombs
- Main Force. 1 Group: (Wellington 423's.....) 1X4000 lb. H.C. bomb
 (other aircraft.....) 4 lb. incendiaries
- 3 Group: Stirlings.....various incendiaries
- 4 Group: (Wellington 423's.....) 1X4000 lb. H.C. bomb
 (Halifaxes.....) 4 lb. + 30 lb. incendiaries
 + 1000 lb. G.P. bombs
- 5 Group: Lancasters.....1X4000 lb. H.C. bomb + 4 lb.
 incendiaries
- P.F.F.(w/t): Stirlings, Halifaxes, Wellingtons.. various H.C.
 or G.P. bombs.

Navigational Instructions.

7. Target co-ordinates B. 4.35
 C. 39.37

Navigators should make full use of astro-fixes to assist D.R. navigation, when outside Gee coverage. The run from Lohr Ratzburg must be timed with extreme care, and evasive action must be kept under constant supervision to ensure that a correct average course is steered. The E.T.M. must be calculated and adhered to with an accuracy of $\frac{1}{4}$ minute.

Route.

8. All Groups: base - 54°30'N.08°00'E. - Ratzburg See - HAMBURG - Tostedt -
 54°25'N.07°00'E. - base.

* * *

Sorties.

9. (a) No. of aircraft despatched.....212
 (b) " " " reporting attack on primary area.....133(62.7%)
 (c) " " " reporting attack on alternative area..... 17(8.0%)
 (d) " " abortive sorties:
 (technical defect.....30)
 (weather.....11)
 (sickness of crew.....2)
 (hit by flak.....1)
 (approached by fighter.....2)..... 46(21.7%)
 (e) Result not known (aircraft crashed on return)..... 1
 (f) No. of aircraft missing..... 15(7.1%)

Weather Experienced.

10. Over the North Sea, well broken layer cloud increased to 8-10/10ths., based at 2-3,000 feet with tops 15,000 feet; heavy, clear icing was encountered over the Bight. 10/10ths. cloud prevailed over the target in two layers between 3,000 and 15,000 feet, with severe icing above 9,000 feet. There was no moon, and visibility was poor. At home bases, patches of fog developed soon after dusk in East Anglia, Yorkshire and Lincolnshire, but visibility improved in the two last named areas after midnight. Winds:

11. North Sea: 10,000 feet. 310° 16 m.p.h.
 15,000 feet 220° 25-30 m.p.h.
 18,000 feet 340-360° 15-20 m.p.h.
- Hamburg: 2-5,000 feet 200-220° 25-10 m.p.h.
 8-10,000 feet 250-260° 10-15 m.p.h. veering to 310-340° and
 12-15,000 feet " 20 m.p.h.) of S-E.

Weight of Bombs Dropped.

(by aircraft reporting attack on primary target).

12. H.E.: 157.6 tons (including 1 X 8000 lb. 63 X 4000 lb. 2 X 1900 lb. 84 X 1000 lb.).

Incondiariums: 184.9 tons.

No. of aircraft carrying H.E. only.....	19
" 4 lb. incendiaries only.....	26
" H.E. + 4 lb. incendiaries.....	50
" 4 lb. + 30 lb. incendiaries.....	1
" H.E. + 4 lb. + 30 lb. incendiaries.....	25
" flares only.....	2
" H.E. + flares.....	11
	133

* including 1 a/c of the Main Force, which carried a special flare load.

Timing of Attack.

13. <u>Pathfinder Force</u> No. of aircraft attacking early.....	1
" " " within planned period.....	6
" " " 0-20" late.....	5
	12
<u>Main Force</u> No. of aircraft attacking 10-0" early.....	5
" " within planned period.....	104
" " " 0-20" late.....	12
	121

Night Photographic Evidence.

14. Of the 21 photographs returned by aircraft, only 4 recorded any ground detail. These are all of open country, and the position of one only, on the island of Ireland off the Dutch coast, has been plotted. The remainder show a uniform layer of dense cloud or mist.

Narrative of Attack.

15. A special meteorological reconnaissance revealed the possibility of a cloud layer forming over Hamburg, but this was not expected to be worse than 5/10ths. Soon after the take-off, a report was received that the target had been found to be covered by 10/10ths. cloud between 2,000 and 3,000 feet. It was hoped, however, that this would disperse at dusk and, in the absence of any likelihood of arranging a diversion, the attack was allowed to proceed. The weather gradually deteriorated on route until, over northern Germany, 10/10ths. cloud was encountered in two layers, the lower with tops at 7,000 feet. One crew reported a third layer of 5/10ths. at 2-3,000 feet. Icing was also experienced. Under these circumstances aircraft could do no more than bomb flak defences on E.T.A. Roughly half the force despatched claim to have attacked the primary, and later aircraft reported a dull glow through the clouds from the believed target area, but no sort of visual identification was possible. 5,000,000 leaflets relating to General Eisenhower's recent speech were dropped over enemy territory. 15 aircraft failed to return.

Day Reconnaissance.

16. No. P.R.U. cover has to date been undertaken for this operation.

Defences.

17. No information of value was gained concerning the strength or disposition of the defences. Failure to saturate them resulted in many aircraft encountering intense flak in the gun-defended areas over which they passed. Volume rather than accuracy characterized the "unseen" fire, and the fact that many searchlight were exposed despite the cloud suggests that the "deterrent fire" drill for cloud weather may have been employed. One experienced observer noticed a tendency for the light guns to fire "single shot". This was perhaps due to a desire to economise ammunition in view of the improbability of engaging unseen targets accurately. Many crews reported a new type of heavy flak burst, the shell

.../breaking

breaking into a number of luminous pieces. There seems to be two possible explanations:

(a) Some new ingredient has been introduced into the H.E., either for its lethal effect or for its deterrent effect, or both. These shells were certainly more deterrent than the normal type where explosion is more complete.

(b) The ammunition recently delivered to this area is faulty, and the result is a partial explosion and a partial combustion instead of a complete explosion.

Navigation Aids.

18. Severe jarring was experienced above 300 miles, only a few crews achieving higher ranges than 350. Two notable exceptions were provided by a Lancaster of 8 Group and a Pathfinder Stirling, which obtained fixes at 426 and 408 miles respectively. The average range was 309 miles.

Other Targets Attacked.

19. The heavy cloud and the violent change of wind over Denmark prevented 32 aircraft that reached enemy territory from finding the primary area. 13 of these attempted to locate alternative targets, and are believed to have attacked the following towns: Bremen (4), Hanover (3), Rendsburg, Husum, Nordholz, Rocklinghausen, Sylt and Schiermonnikoog. 4 others bombed unidentified flak concentrations. In no instance could any results be observed.

Casualties.

20.	(a) No. of aircraft missing.....	15(7.1%)
	(b) No. of aircraft damaged:-	
	flak.....	26(12.3%)
	fighter.....	-
	not enemy action.....	9(4.2%).....36(16.8%)
	(c) No. of interceptions:-	
	attacks.....	1(0.5%)
	other interceptions	9(4.2%).....10(4.7%)

Despite the unfavourable weather conditions, the proportion of aircraft missing is less than the average for the two previous raids on Hamburg, in July. The percentages of flak and non-enemy action damage are greater than the corresponding figures for the previous raids, but of attacks and other interceptions are less, and no fighter damage was incurred. This suggests that on the night under consideration flak was more intense, but less accurate on account of the weather, and that fighter activity was considerably hampered. Cloud conditions made observations of falling aircraft difficult and only the following results were observed. Two aircraft were destroyed by flak, one 15 miles south-west of Kiel and one 40 miles north-west of Hamburg. Another aircraft was lost near Lubeck. Other possible losses are two to flak at Putzberg and near Nordensy, and one to fighter west of Terschelling. Approximately 15 sorties were flown by controlled night fighters, but no claims were heard. Losses may therefore be assessed as 4 possible to flak, 1 possible to fighters, and 10 to causes unknown, to which the weather may largely have contributed.

Summary.

21. Weather conditions encountered during this operation were unexpectedly bad. Hamburg was covered with dense cloud, and a big local change in wind made navigation extremely difficult. 62.7% of the force despatched report having bombed the primary area, but in no case was the target visually identified. In the absence of any photographic evidence it is impossible to estimate how much damage was caused. 15 aircraft (7.1%) failed to return.

LESSONS.

22. As on the previous night, leaflets relating to the proceedings in North Africa, and especially to General Eisenhower's speech, were dropped over a number of French towns. These numbered over 5,000,000. All the 15 aircraft despatched at this operation completed their sorties with no incident. Photographic evidence indicated clear weather and the black-out was everywhere reported as conveniently

Group - 10 (Total night 9/1-11 November 1942)

Target	Group	Type	Location	No reporting attack on		Active sorties over		Result not known	Missing	Casualties - damaged by			Interceptions	
				primary	alternative	territory	enemy territory			flok	fighter	not enemy action	attacked	not attacked
B-24102 (1-1)	PPP	Stir.	8	1	-	4	1	-	2	1	-	-	-	1
	PPP	Helix	4	9	1	-	1	-	-	-	-	-	-	1
	PPP	Helix	5	1	1	-	3	-	-	-	-	-	-	-
	PPP	Stir.	5	1	-	3	1	-	-	-	1+1LC	-	-	-
	1	Stir.	5	5	-	-	-	-	-	-	2	-	-	-
	1	Stir.	25	10	2	2	3	-	2	-	2	-	-	3
	1	Stir.	14	7	1	1	5	-	-	3	-	-	-	1
	3	Stir.	9	1	6	1	-	-	1	-	-	1	-	-
	4	Helix	35	25	1	1	6	-	2	3+1LC+1A	-	1B	-	1
	4	Stir.	21	11	1	-	6	1	2	-	-	1E	-	-
	5	Helix	07	60	4	1	7	-	5	10+1B	-	-	1	1
	w/t	Stir.	2	1	-	-	-	-	1	-	-	-	-	-
	w/t	Helix	2	2	-	-	-	-	-	-	-	-	-	-
w/t	Stir.	3	3	-	-	-	-	-	-	-	-	-	-	
T-TL			212	135	17	13	33	1	15	24+1LC+1B	-	6+1LC+1B+1E	1	9

* Memo 10 - Stir. It was not fitted with Geo.

Group - 10 (Total night 9/1-11 November 1942)

Target	Group	Type	Location	No reporting attack on		Active sorties over		Result not known	Missing	Casualties - damaged by			Interceptions	
				primary	alternative	territory	enemy territory			flok	fighter	not enemy action	attacked	not attacked
LEWIS & CLARK	3	Stirling	1	1	-	-	-	-	-	-	-	-	-	-
WILSON & TOLSON	3	"	3	3	-	-	-	-	-	-	-	-	-	-
WELLES & KURTZ	3	"	1	1	-	-	-	-	-	-	-	-	-	-
CLYDE & BOND & ST. JAMES	3	"	1	1	-	-	-	-	-	-	-	-	-	-
YOHY	3	"	1	1	-	-	-	-	-	-	-	-	-	-
COUGHS	3	"	1	1	-	-	-	-	-	-	-	-	-	-
ROBERT & LIGGS	3	"	1	1	-	-	-	-	-	-	-	-	-	-
WIS & LUT	3	"	2	2	-	-	-	-	-	-	-	-	-	-
WELLS, WOOD & STUBBS	3	"	1	1	-	-	-	-	-	-	-	-	-	-
WOLF	3	"	1	1	-	-	-	-	-	-	-	-	-	-
T-TL			15	15	-	-	-	-	-	-	-	-	-	-
T-TL			257	148	17	13	33	1	15	24+1LC+1B	-	6+1LC+1B+1E	-	9

NIGHT 5. 10/11th NOV 1943
 COPY NO. 11
 3 FEB 1943

BOMBER COMMAND REPORT ON NIGHT OPERATIONS - 10/11th NOVEMBER 1943.

Miscellaneous.

Meteorological Advice Submitted to the Command.

1. 0930 hours. The midnight frontal positions are estimated as follows: (1) cold from west Norway to Spurn Head to south-west England, then south-westwards (2) cold from north to south at 10°E. At home bases, the frontal belt of rain and low cloud is expected to be narrow, and behind the front cloud will lift and break; but fog patches are expected to develop. South of the front there will be much medium cloud, and visibility will generally be moderate. Over Germany, north of 50°N. and west of 15°E., a good deal of cloud is expected at various levels, but this should break further east, and south of 50°N. and west of 10°E. there will be well-broken layer cloud. Near front (2) much cloud will prevail, with occasional rain or snow. Over France and north Italy there will be lit lo cloud, but visibility will be moderate, and in north-west France medium cloud is expected to increase.

1250 hours. Visibility at home bases will be poor at dusk, with rain or drizzle. Fog will form in 4 Group by 0200 hours. 8/10ths strato-cumulus will prevail over the Frisians, based at 2,500 feet. Visibility over east Denmark and the Baltic will be bad, but good conditions are expected in the Gironde area.

1600 hours. At midnight the frontal belt will lie from Flamborough to Pembroke, with 10/10ths at 1,000 feet and rain. South of a line from Ormer to Exeter, skies will be clear, but by midnight fog will have become widespread. Strato-cumulus will prevail in the intervening area. Visibility will generally be poor. The south coast should be safe for diversions. 8/10ths strato-cumulus is expected over the Frisians and Heligoland, with base and freezing level at 2,500 feet, and patches of lower cloud at about 800 feet.

Sorties.

2. (a) Aircraft despatched	42
(b) " reporting mines laid in primary area.....	37 (88.1%)
(c) Abortive sorties (technical defect..... 1)	
(weather 2).....	3
(d) Aircraft missing.....	0
(e) Result not known (aircraft crashed on return.....	2

Weather Experienced.

3. 10/10ths cloud was encountered over all target areas. The moon was 8% of full and above the horizon. Fog became general at bases by 0300 hours.

Results.

4. 30 aircraft of 3 and 4 Groups were despatched to lay mines off the Frisians. Despite poor weather, all report reaching the primary area, where 167 mines were laid. In addition, 18 Lancasters of 5 Group were detailed to the Bay of Biscay, but only 7 are known to have reached the target area. No aircraft was missing, but 2 Lancasters crashed on return and the crews of both were killed.

Q.P.Y. No.
 DATE 11 FEB 1943
 TIME

BOMBER COMMAND REPORT ON NIGHT OPERATIONS - 11/12th NOVEMBER 1943

Mislaying.

3 FEB

Mete-ological Advice Submitted to the Command.

1. 0930 hours. It is estimated that at midnight the frontal positions will be as follows: (1) warm front 52°N. 15°E. to west Scotland to north-west Ireland (2) cold front 60°N. 15°E to 56°N 05°E to the Wash to the Bristol Channel (3) occluded front 50°N 15°E. to 45°N. 08°E. At home bases, fog will develop early. This may be delayed near the front by cloud, and in Yorkshire by an increase of gradients; but the front is dissolving, and it is uncertain how much cloud will remain tonight. The distribution of cloud over targets cannot yet be accurately estimated owing to lack of data. Little is expected over France and the Baltic coast, east of 15°E but elsewhere in Germany there will be much layer cloud with few breaks and occasional fog.

1245 hours. Visibility over the Frisians is likely to be poor, although cloud will remain above 1,000 feet. The west coast of France, however, with broken cloud at 2,500 feet, should be fit for mining. Apart from visibility, flying conditions will generally be good. At bases, visibility will generally be poor, with local fog in smoky areas at dusk, and will deteriorate rapidly except in the north of 4 Group and probably in 5 Group. The north coast of Cornwall should provide a reliable diversion track.

1545 hours. Operating Groups will be fit for take-off at dusk, but fog will become widespread by 2300 hours. The northern half of 4 Group will hold till midnight, and probably later. The only good diversions are St. Eval, Chivenor, Pembrok and northwards; none of these are absolutely certain, but there is considerable confidence in them until midnight. Mining areas for this morning.

Sorties.

2.	(a) Aircraft despatched	31
	(b) Aircraft reporting mines laid in primary area.....	20 (66.4%)
	(c) Abortive sorties (weather).....	11
	(d) Aircraft missing.....	0

Weather Experienced.

3. Mist, fog and low stratus spread over most of England by dusk, becoming widespread south of Scarborough - Liverpool and east of Liverpool-Swansea-Plymouth by 2100 hours, except for a few clear areas along the south and east coasts. 4-6/10ths. strato-cumulus, base 2,500 feet, was encountered over Terschelling, Brest and La Pallice, but Lorient and St. Nazaire were free of cloud. The moon was above the horizon and 16% of full.

Results.

4. 31 aircraft were despatched to lay mines in the Bay of Biscay and off the Frisians. Thick, low cloud made it impossible to pinpoint in the latter area, and no mines were laid there, but 20 aircraft claim to have reached their targets in the Bay of Biscay. 60 mines were laid, 12 of them off La Pallice. No damage was suffered and there were no casualties.

Region	Type	Year	Total	Aircraft carrying		Aircraft not carrying		Aircraft	Aircraft in inventory	Classification	Intelligence
				primary	AT inactive	primary	not over				
1	1	1944	5	5	-	-	1	-	1	-	-
2	1	1944	5	5	-	-	1	-	1	-	-
3	1	1944	5	4	-	-	-	-	1	-	-
4	1	1944	5	4	-	-	1	-	1	-	-
5	1	1944	5	5	-	-	-	-	1	-	-
6	1	1944	5	5	-	-	-	-	1	-	-
7	1	1944	5	5	-	-	-	-	1	-	-
8	1	1944	5	5	-	-	-	-	1	-	-
9	1	1944	5	5	-	-	-	-	1	-	-
10	1	1944	5	5	-	-	-	-	1	-	-
11	1	1944	5	5	-	-	-	-	1	-	-
12	1	1944	5	5	-	-	-	-	1	-	-
13	1	1944	5	5	-	-	-	-	1	-	-
14	1	1944	5	5	-	-	-	-	1	-	-
15	1	1944	5	5	-	-	-	-	1	-	-
16	1	1944	5	5	-	-	-	-	1	-	-
17	1	1944	5	5	-	-	-	-	1	-	-
18	1	1944	5	5	-	-	-	-	1	-	-
19	1	1944	5	5	-	-	-	-	1	-	-
20	1	1944	5	5	-	-	-	-	1	-	-
21	1	1944	5	5	-	-	-	-	1	-	-
22	1	1944	5	5	-	-	-	-	1	-	-
23	1	1944	5	5	-	-	-	-	1	-	-
24	1	1944	5	5	-	-	-	-	1	-	-
25	1	1944	5	5	-	-	-	-	1	-	-
26	1	1944	5	5	-	-	-	-	1	-	-
27	1	1944	5	5	-	-	-	-	1	-	-
28	1	1944	5	5	-	-	-	-	1	-	-
29	1	1944	5	5	-	-	-	-	1	-	-
30	1	1944	5	5	-	-	-	-	1	-	-

Table 1. Aircraft Inventory by Region, 1944

www.bombercommandmuseumarchives.ca

NIGHT	A. M. 11
DATE	16
TIME	1943

SOME OF THE INFORMATION ON THESE OPERATIONS - IS ...

Index - Intelligence

Metereological Advice & related to the ... 6 ...

1. 095- hours. Main force will ... visibility, and ... clouds ...

130- hours. Clouds should ... visibility ...

Plan of Attack.

The target for tonight is ...

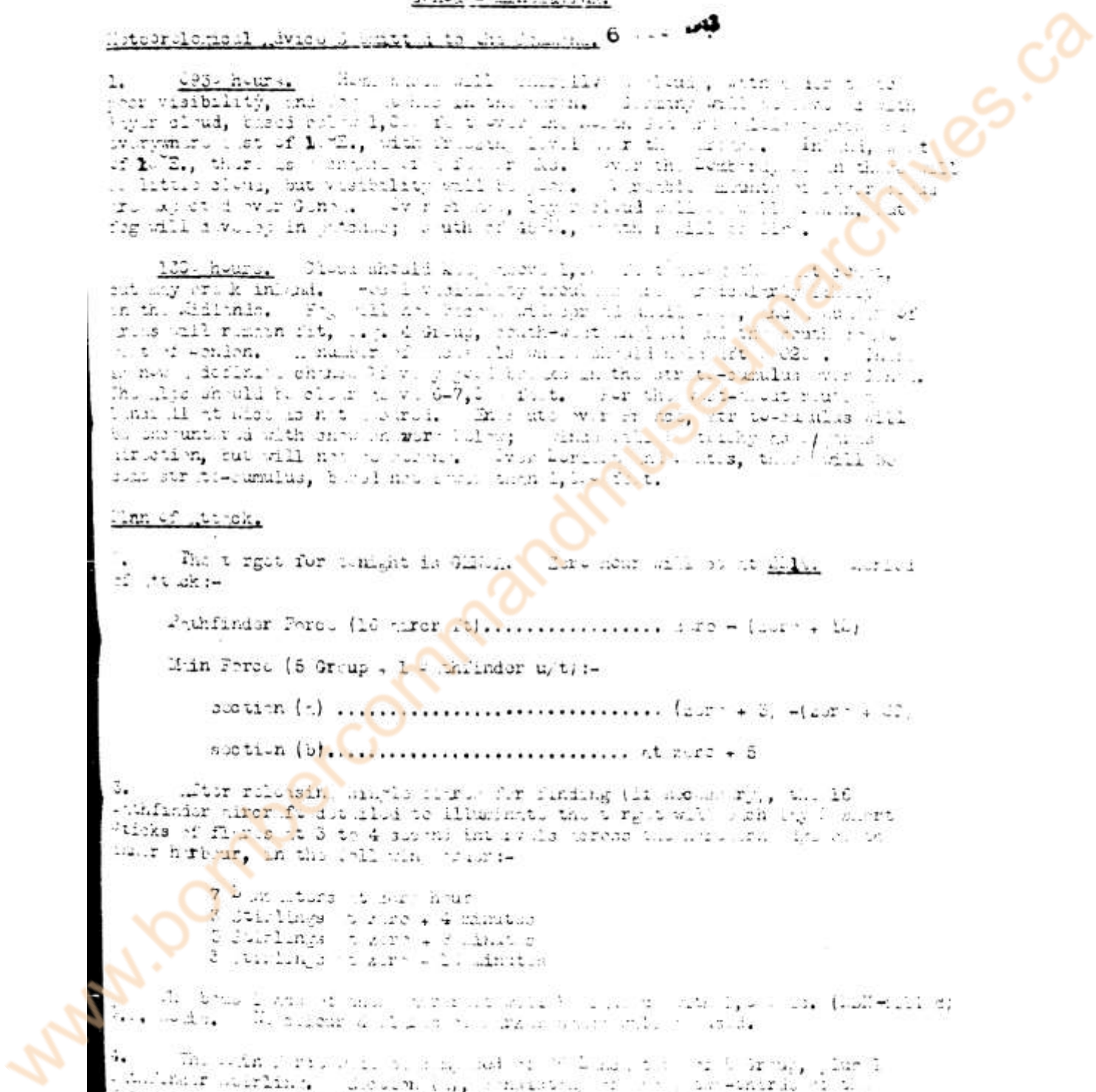
- Raid Force (10 aircraft)..... (part + 10)
- Main Force (5 Group + 1 Pathfinder w/t):-
 - section (a) (part + 3) - (part + 3)
 - section (b)..... at part + 5

3. After releasing ... Pathfinder aircraft detailed to illuminate the target with ...

- 7 ...
- 3 ...
- 3 ...
- 3 ...

All ...

4. The main ...



Navigation Instructions.

5. Southern Chain will operate from 1600 hours.

Route.

6. All Groups: base-Cobourg - Geneva - Savona - GENOA - same return.
(N.B. For details of routes taken, see accompanying diagram).

Sorties.

7.	(a) No. of aircraft despatched.....	76
	(b) No. of aircraft reporting attack on primary area.....	70 (32.1)
	(c) No. of abortive sorties (technical defect).....	6
	(d) No. of aircraft missing.....	0

Weather Experienced.

8. 10/10ths. layer cloud, tops 6-7000 feet, was encountered on route over France, but the Alps were clear and Geneva was free of cloud. The moon was 36% of full and visibility was good. Wind velocity at 12-15,000 feet was 10 m.p.h. from 250° - 260°, and there was a north-easterly surface wind of 10 m.p.h. At bases, mist and fog developed soon after dark in East Anglia and in a belt from Dorset to the Midlands to Lancashire, gradually becoming widespread until areas south of Hull-Liverpool and east of Liverpool-Exeter became affected. Some stations on the south and east coasts, however, remained fit.

Weight of Bombs Dropped.

(by aircraft reporting attack on primary area).

9. H.E. : 79.0 tons. Incendiaries: 46.6 tons.

Including (8 x 4000 lb.)
(145 x 1000 lb.)

No. of aircraft carrying H.E. only	18
" " " " 4 lb. incendiaries only.....	17
" " " " H.E. + 4lb. incendiaries.....	22
" " " " 30 lb. incendiaries only.....	1*
" " " " H.E. + flares.....	5
" " " " H.E. + 30 lb. incendiaries + flares... ..	7
	<u>70</u>

* This aircraft, a Pathfinder attacking with the Main Force, set out with a mixed load of 30 lb. and 4 lb. incendiaries, but was forced to jettison the latter over France in order to climb the Alps.

Timing of Attack.

10. Pathfinder Force.

No. of aircraft attacking within planned period.....	7
" " " " 0 - 10" late.....	5
	<u>12</u>

Main Force.

Section (a)

No. of aircraft attacking 5-0" early.....	2
" " " " within planned period.....	25
" " " " 0 - 10" late.....	10
" " " " more than 10" late.....	2
	<u>39</u>

Section (b) (Lineal Work).

No. of aircraft attacking within 5" of zero + 5	0
" " " " 5 - 15" after zero + 5	10
" " " " more than 15" after zero + 5	9
	<u>19</u>

Night Photographic Evidence.....

Night Photographic Evidence.

11. Number of photographs taken with bombing that have been plotted (see accompanying diagram) :-

by ground detail 37 within 3 miles 37

Allowance has been made for the fact that certain squadrons were given the Ansaldo Works as their aiming point.

Unplotted photographs (taken with bombing) :-

that show ground detail (probably suburbs of Genoa 3
(sea only..... 2
(open country..... 5

with no ground detail, but with fire tracks that
might be plotted..... 11
21

The plot of the night photographs shows that the main weight of the attack fell on the north-eastern side of the harbour and old town, with another, though smaller concentration, on the Ansaldo works. Flares were photographed in many places over the target area; the majority were correctly placed, though there were a few about 2 miles north-west of the Ansaldo works which may have caused the small diversion of effort on to open country therabouts. Many sticks of incendiaries and smoke from fires were recorded both in the old town and the Ansaldo works. The smoke screen round the docks, photographed during the raid on 7/8th November, was not in action.

Narrative of Attack.

12. 9 Stirlings and 6 Lancasters of the Pathfinders, and 61 Lancasters of 5 Group were despatched to Genoa. 10/10ths. cloud was encountered over France, but this cleared beyond the Alps, and visibility over the target was excellent. The Pathfinder flares were very successful in illuminating the town, and a concentrated attack was delivered on the docks and the built-up area. Numerous fires were observed in the target area, especially along the harbour. The Ansaldo works were easily identified, and several crews reported direct hits on the buildings. 120,000 lb. flots were dropped on the city.

Day Reconnaissance

13. Much scattered damage is shown throughout the town, mostly by fire, but there are no large areas of devastation. The Ansaldo works suffered little, although one large multi-bayed building was extensively damaged. A number of fresh incidents are noticeable in the dock area, and a ship which appears to have been in the process of conversion to an aircraft-carrier was hit on its superstructure. Altogether 3 large, 3 medium and 124 smaller buildings, chiefly public and residential, have been destroyed and about 26 others seriously damaged.

Defences.

14. The night photographs suggest that flak activity was much greater than had previously been experienced at Genoa, and both heavy and light defences appear to have been strengthened since the attack on the 7/8th. A cone of about 12 searchlights was exposed, but these were directed as soon as the bombs began to fall, and the inaccuracy of the defences inspired one pilot to suggest that they were "remotely controlled from air-raid shelters".

15. Of the aircraft plotted at Genoa, two-thirds recorded heavy flak, nearly one-half recorded light flak and one-quarter recorded searchlights. The ground position of 4 different batteries have been recognised from night photographs; that at Male Duch de Galliera was recorded in action from 2321 hrs. to 2245 hours.

Navigation-1 Miss.

16. The average 600 range was 399 miles - rather below the average for this target.

Other Targets Attacked.

17. No claims were made of attacks on other targets, and there is no evidence of any diversion of effort.

Casualties.

18. No aircraft were lost and, although 3 aircraft were hit by flak over the target, no serious damage was sustained.

Summary.

19. The evidence of crews and of the night photographs indicated a highly concentrated attack, and day reconnaissance showed considerable though scattered damage. Residential areas suffered most heavily. The operation was completed without loss.

MINELAYING.

20. 12 Wellingtons of 1 Group were despatched to lay mines in the Bay of Biscay. Despite 9/10ths cloud and moderate visibility, 9 report reaching their targets, and 18 mines were laid. One aircraft suffered slight damage from flak off Lorient; otherwise the operation was without incident.

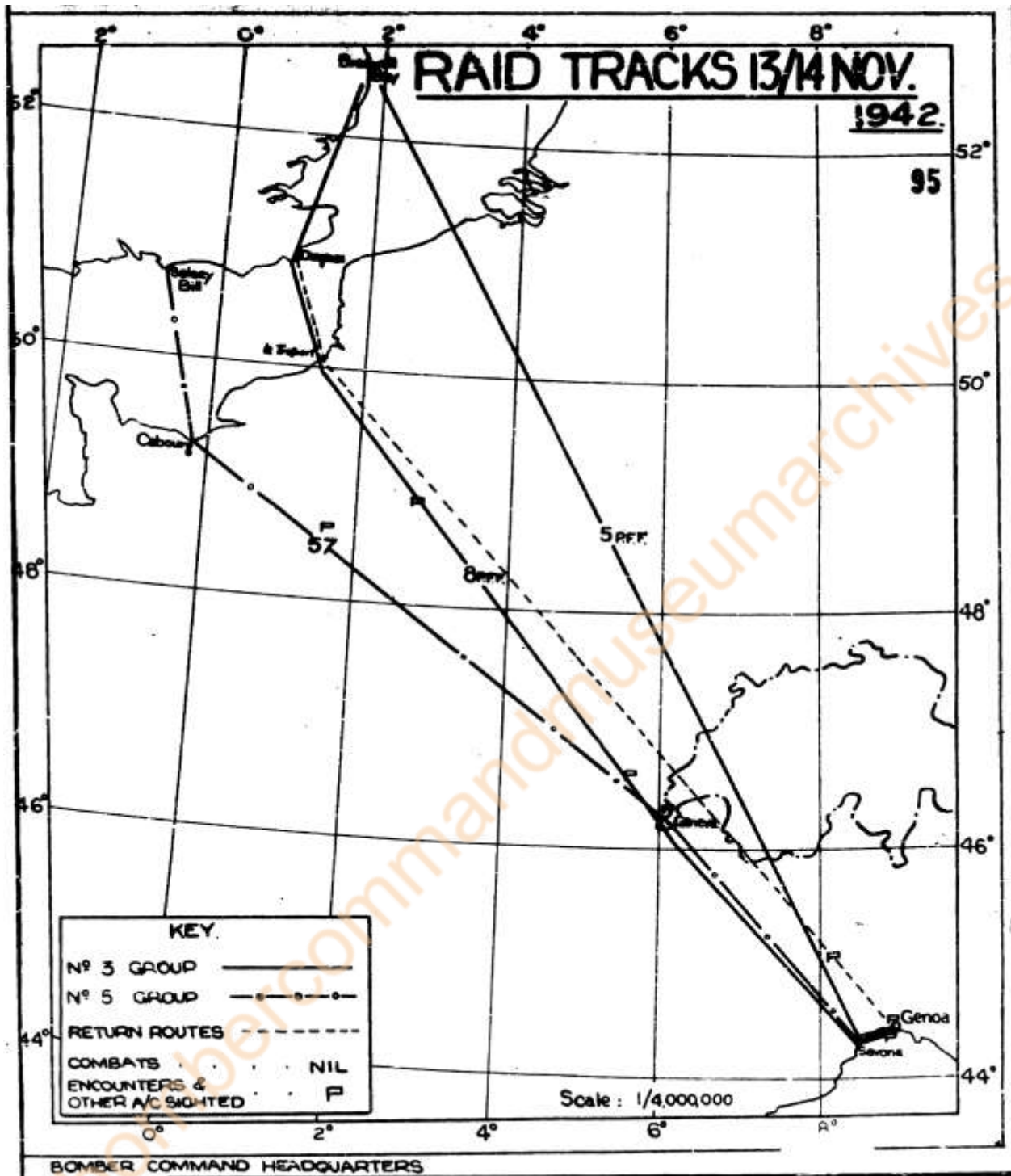
BC/S 26342/1/OKS.
5th January 1943

MLM/BS.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.

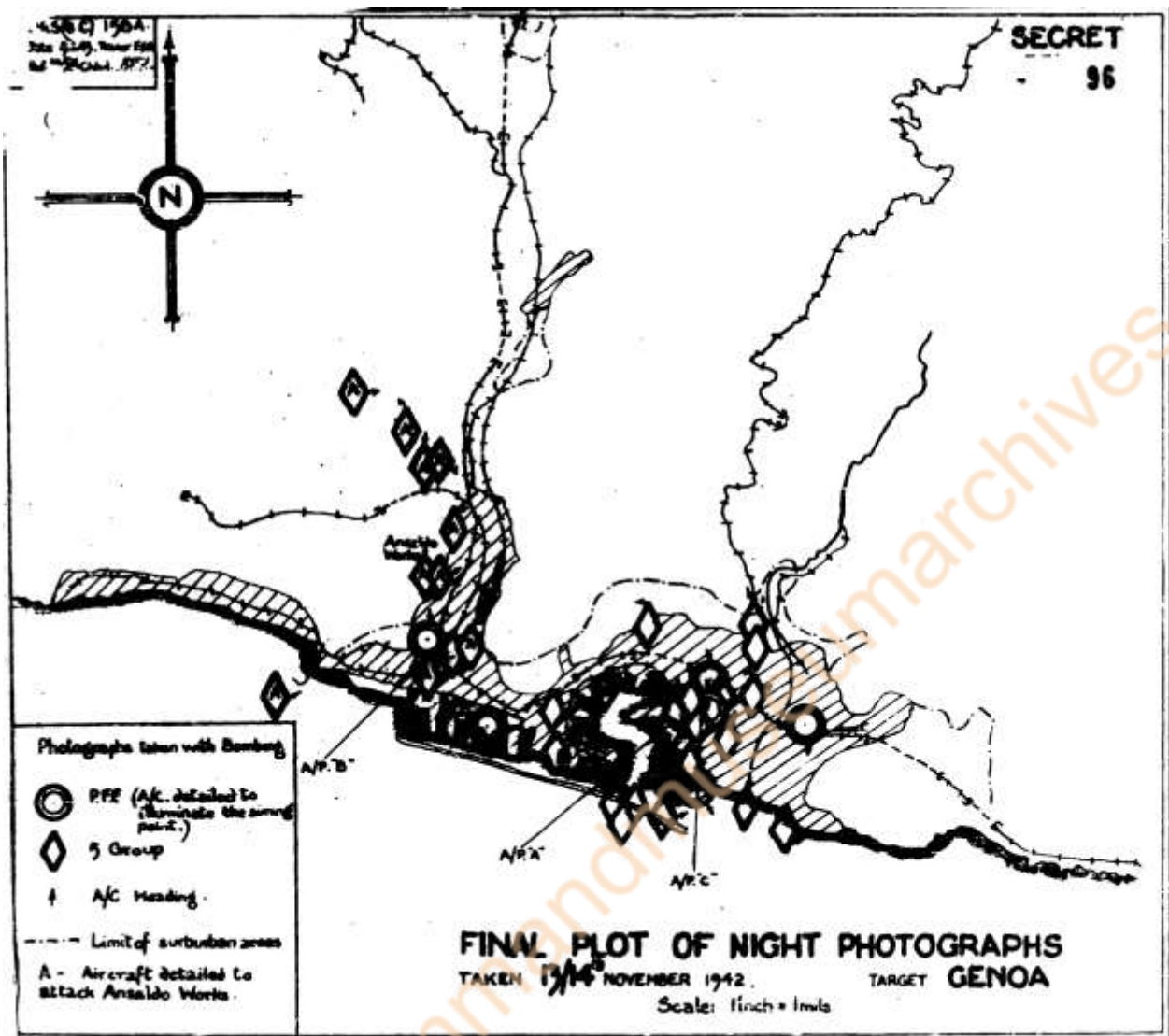
| Target | Group | Type | Aircraft | Aircraft reporting attack on | | Aircraft parties | | Missing | Mines laid in primary area | Casualties - inflicted by | | | Interceptions | |
|----------|--------|------------|----------|------------------------------|------------------|----------------------|--------------------------|---------|----------------------------|---------------------------|---------|------------------|---------------|--------------|
| | | | | primary area | alternative area | over enemy territory | not over enemy territory | | | Flak | fighter | not enemy action | Attacked | Not attacked |
| GUYA | PPF | Stirling | 8 | 7 | - | - | 1 | - | - | - | - | - | - | - |
| | PPF | Handicraft | 6 | 5 | - | - | 1 | - | - | - | - | - | - | 94 |
| | PPF/wt | Stirling | 1 | 1 | - | - | - | - | - | - | - | - | - | - |
| | S | Handicraft | 11 | 7 | - | - | 4 | - | - | 2.18 | - | 3.1AC +1B | - | 1 |
| BUBINE | WTL | | 76 | 76 | - | - | 6 | - | - | 2.18 | - | 3.1AC +1B | - | 1 |
| THRELYNE | | | | | | | | | | | | | | |
| St. Azul | 1 | Well.III | 5 | 5 | - | 1 | - | - | 10 | - | - | - | - | - |
| LORIENT | 1 | Well.IV | 6 | 1 | - | 2 | - | - | 8 | 1 | - | - | - | - |
| | | | 12 | 9 | - | 3 | - | - | 18 | 1 | - | - | - | - |
| T-T-L | | | 82 | 79 | - | 3 | 6 | - | 10 | 3.18 | - | 3.1AC +1B | - | 1 |

* Three 6 aircraft were not fitted with Gou.



4582 196A
Date 12/19/42
By Major G. P. P.

SECRET
96



Photographs taken with Bombers

- ⊙ PFE (A/C detailed to illuminate the target point.)
- ◇ 5 Group
- † A/C heading.
- - - Limit of suburban areas
- A - Aircraft detailed to attack Ansaldo Works.

FINAL PLOT OF NIGHT PHOTOGRAPHS
 TAKEN 13/14 NOVEMBER 1942. TARGET GENOA
 Scale: 1 inch = 1 mile

www.bombercommand.com archives.ca

BOMBER COMMAND REPORT ON NIGHT OPERATIONS - 15/16th NOVEMBER 1942.

Genoa - Main target.

Meteorological Advice Submitted to the Command.

1. 0930 hours. At midnight a cold front will lie from Copenhagen to 55°N, 05°E. to Newcastle, and perhaps further south. This will mean a stronger wind, which should clear the majority of haze bases by tonight. 4 Group will experience occasional rain with cloud just above 1,000 feet, if the front extends as far south. The whole of Germany will be covered with layer cloud and the only possible target appears to be Genoa, where good breaks are expected. Fog will develop inland, and visibility is likely to be less good at Turin and Milan. Much cloud below 1,000 feet will be found over the Frisians, and the route to the Baltic will be very bad; but the west coast of France should have broken layer cloud above 1,000 feet.

1300 hours. Bases will be very uncertain for return, and at this stage it seems doubtful if any diversions can be arranged south of 1 Group. There is now a threat of cloud south of Genoa, which may drift north this evening. Winds will be variable, mainly about 40 m.p.h. Low stratus will prevail over the Bight area, but this may clear later. 8-10/10ths. is expected over the west coast of France, based at 1,800 feet. Visibility: 3 miles.

1600 hours. All Groups will be fit for take-off at dusk, although visibility will generally be poor. Local fog will prevail in the south and midlands, and possibly also in 3 Group. 1 & 4 Groups will be fit for return all night, together with some stations in east Norfolk and 91 Group, e.g., Wersham, Birington, Farningley and Wymondley. The south coast and areas in the south-west are not recommended for diversions, on account of low cloud and fog respectively. En route to Genoa, strato-cumulus will prevail almost continuously over France, but the Alps will be well clear of cloud. Cloud conditions over Genoa are doubtful, but there will probably be only small amounts of medium and strato-cumulus. Over the west coast of France (for mining) patches of cloud will be found below 1,000 feet, and haze is likely. Visibility over the Frisians and Heligoland Bight will be very poor.

Plan of Attack.

2. The target for tonight is G.M.O.. On return, a diversion to the north of England may be necessary; all aircraft with sufficient range to allow for this will take part in the operation.

3. Zero hour will be at 2200 hours. Period of attack:

Pathfinder Force (20 aircraft)..... zero to zero + 15
Main Force (4 & 5 Groups)..... zero+3 to zero+30

After releasing single flares for finding, if necessary, the 20 Pathfinder aircraft detailed to illuminate the target will each lay two short sticks of flares to centre 800 yards at 70° from the aiming-point (due east of the inner harbour entrance and 500 yards south-west of the old city centre) If weather conditions are poor but the target can still be definitely identified, each marker aircraft will drop one green steady flare to indicate the position of the aiming-point to the rest of the attacking force. The target will be illuminated according to the following plan:-

| | |
|--------------------|-----------------------|
| 6 Lancasters) | zero hour |
| 3 Stirlings) | zero hour - 5 minutes |
| 3 Stirlings..... | zero + 10 " |
| 3 Wellingtons..... | zero + 15 " |
| 3 Wellingtons..... | zero + 15 " |
| 2 Stirlings..... | zero + 15 " |

4. The.....

4. The first 9 aircraft will arrive 5 minutes early, to allow a time margin for searching. The bomb loads of all Pathfinders will be made up with 1000 lb., 500 lb. and 250 lb. G.I. bombs. The Main Force will consist of Halifaxes and Lancasters of 4 and 5 Groups. All Halifaxes will carry three 1000 lb. G.I. bombs + the maximum economical load of 30 lb. incendiaries. All Lancasters will take 30 lb. incendiaries, completing their load either with one 4000 lb. H.C. bomb or with 1000 lb. G.I. Bombs.

Navigation Instructions.

5. The Southern Chain will operate from 1500 hours.

Route.

6. All Groups: base - Le Crotoy - St. Julien - Savona - G.I.K.A. - same return. For routes taken see route-map.

Sorties.

| | | |
|----|--|-----------|
| 7. | (a) No. of aircraft despatched..... | 78 |
| | (b) " " " reporting attack on primary area..... | 68 (87.2) |
| | (c) " " abortive sorties (technical defect....9)
(petrol shortage.....1)..... | 10 |
| | (d) " " aircraft missing..... | 0 |

Weather Experienced.

8. Much mist and fog developed during the early part of the night in 2 and 3 Groups and in Kent, and, to a lesser degree, in Lincolnshire, but after midnight conditions gradually improved. Cloud soon became well broken in the north of England, and also, towards dawn, in the south. Visibility was generally moderate. En route to Genoa, much cloud was encountered over north France in two layers, one at about 4,000 feet and the other, more broken, at 10,000 feet. Over the rest of France and the northern Alps there was 10/10ths strato-cumulus, but this dispersed over the plain of Lombardy and Genoa was clear of cloud. The moon was 58% of full, and visibility was excellent. At the target there was a northerly wind at ground level.

| | | | | |
|----|-------------------------------|--------------|-----|--------------|
| 9. | Wind summary: 10-15,000 feet. | North France | 20° | 20 m.p.h. |
| | " | Alps | 50° | 25-35 m.p.h. |
| | " | Genoa | 30° | 30 m.p.h. |

Weight of Bombs Dropped.

10. (by aircraft reporting attack on primary area).

| | |
|-------------------------|---------------------------------|
| <u>H.E., 75.2 tons.</u> | <u>Incendiaries: 29.4 tons.</u> |
|-------------------------|---------------------------------|

(including 8 x 4,000 lb. and 133 x 1,000 lb.)

| | |
|---|-----------|
| No. of aircraft carrying H.E. + flares..... | 12 |
| " " " " 30 lb. incendiaries only..... | 1 |
| " " " " H.E. + 30 lb incendiaries..... | <u>55</u> |
| | 68 |

Timing of Attack.

| | |
|--|----------|
| 11. <u>Pathfinders.</u> | |
| No. of aircraft attacking within planned period..... | 12 |
| " " " " late (4")..... | <u>1</u> |
| | 13 |

Main Force.

| | |
|--|----------|
| No. of aircraft attacking within planned period..... | 54 |
| " " " " late (10")..... | <u>1</u> |
| | 55 |

.....Night Photographic Evidence.....

Night Photographic Evidence.

12. Number of photographs taken with bombing that have been plotted (see accompanying diagram):-

| | | | |
|---|----|--------------------------|----------------|
| by ground detail..... | 45 | (within 3 miles.....) | 44 |
| by fire tracks..... | 6 | (between 3 & 5 miles...) | <u>1</u>
25 |
| Unplotted photographs (taken with bombing):- | | | |
| that show ground detail (probably suburbs of Genoa..) | | | 2 |
| (see only.....) | | | 1 |
| with no ground detail but fire tracks that might | | | |
| be plotted..... | | | <u>2</u>
7 |

The photographic evidence this night is considered to be 60 useful films being returned. Three-quarters of the attempts at photography were in the first 15 minutes of the attack. The plot accompanying this report shows that a very remarkable localisation of bombing was achieved, all but two plottings lying within two miles of the centre of Genoa, with the main concentration over and around the central city area on the east side of the harbour. Flares were photographed soon after zero hour, throughout an area from the inner harbour eastwards to Porto Wigo. The illumination was so good that a cinematograph film exposed during the early stages of the attack revealed in some detail the entire ground plan of the old town by the light of flares alone. The flames of five of the eight 4,000 lb. H.E. bombs carried were recorded and nearly all the sticks of incendiaries can be accounted for. The late photographs show well-established fires within a two-mile radius of the city centre.

Narrative of Attack.

16. Weather conditions over the target were excellent. The Pathfinders placed their flares accurately, beginning precisely at zero hour, and all but 2 aircraft dropped their bombs within the next 25 minutes. The town and docks could be easily identified in the clear moonlight, enabling a concentrated attack to be delivered on the aiming point. A very large fire developed just east of the harbour with black smoke rising to 5,000 ft. Flares were also observed at the Ansaldo works and in the area of the marshalling yards. One pilot saw his bombs hit a large ship which was later reported to be ablaze. The defences were, as usual, ineffective and all our aircraft returned safely. The Italian communique admitted considerable damage, asserting that it was confined to residential areas. 228,000 leaflets were dropped over the target.

Day Reconnaissance.

17. The P.R.U. cover shows many scattered fire incidents, chiefly in the centre and east of the town. Most of the damage was caused to public and residential buildings, including some 60 blocks of flats or houses, a theatre, an art gallery and two churches. Further damage was, however, caused to the Ansaldo fitting yards in the eastern dock area and to harbour installations. Despite the greater weight of bombs dropped, the damage in this raid appears to be somewhat less than that caused on the 13/14th November.

Defences.

18. The heavy guns were thought by some to be concentrated round the docks and the area of the Ansaldo works, but others described the defences as more dispersed than in previous attacks. There was no improvement in the accuracy of either light or heavy fire, although the volume may have increased slightly. 20 to 30 searchlights were variously described as concentrated to the west and north-west, and forming a ring round the town. It seems likely that they had been levelled out of the danger area, as on this occasion they continued to appear to, albeit with little success, throughout the raid.

19. Four-fifths...

19. Four-fifths of the aircraft plotted at Genoa recorded heavy flak, nearly one half recorded light flak and one quarter recorded searchlights. There were 203 single gun discharges recorded, 3 appearing to be 2-gun discharges and three which may be 4-gun salvos or rapid fire from a smaller number of guns. The ground positions of 6 different batteries have been recognised from night photographs. That at Fort San Guiliamo was in action from 2206 hours to 2221 hours and that at Forte Duca di Galliera from 2204 hours to 2230 hours.

Navigation and Missiles.

20. The average Gee range for this operation was 367 miles - rather below that for the 13/14th. Considerable jarring was reported around Paris, but this can hardly have accounted for the difference. There were very few failures.

Other Targets Attacked.

21. No claims were made of attacks on alternative targets, and there is no evidence of any diversion of effort.

Casualties.

22. No aircraft was missing, and only two aircraft sustained damage from flak, in each instance minor. 3 Halifaxes crashed on return and became total wrecks, but only one casualty was reported among the crews.

Summary.

23. This was another successful operation at relatively negligible cost. Great concentration of bombing was achieved over the target, causing damage to built-up areas.

24. For a detailed report on the night photographs from this operation see Report N.67 and for a full summary of damage caused to Genoa during October and November, 1942 see Report K.S. 65

MINELAYING.

21. 22 Wellingtons of 1 Group were detailed to lay mines in the Bay of Biscay. 12 report accomplishing the task and laying 24 mines; most of the others were unable to pinpoint, owing to 10/10ths. cloud. One aircraft failed to return from St. Nazaire, and observations indicate that it was shot down by light flak near Grandville.

BC/S 26342/1/CRS
6th January 1943
 MLG/B'S

Report of Operations, 1st to 15th December, 1941

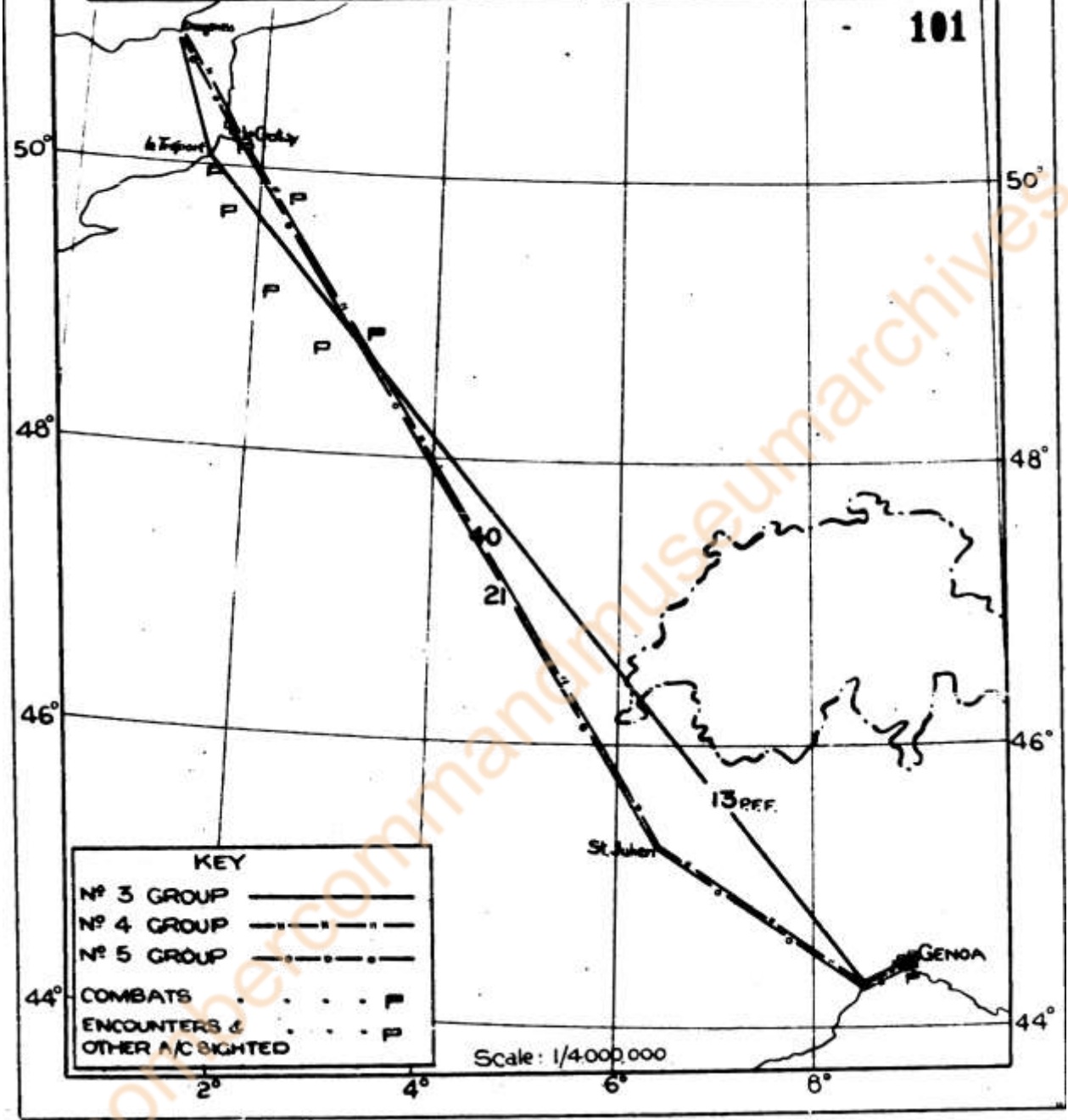
| Target | Group | Type | Sectice | Aircraft reporting | | Objective markings | | Missing | Aircraft in primary area | Composition - Bombers | | | Interactions | |
|---------------------------|--------|------------|---------|--------------------|------------------|----------------------|----------------------|---------|--------------------------|-----------------------|---------|------------------|--------------|--------------|
| | | | | primary area | alternative area | over enemy territory | over enemy territory | | | flak | fighter | not enemy action | Attacked | Not attacked |
| GONNA | L.P.F. | Lenovator | 6 | 5 | - | 1 | - | - | 1 | - | 1B | - | - | |
| | | Stirling | 11 | 8 | - | 1 | 2 | - | 1 | - | - | - | - | |
| | | Halifax | 42 | 34 | - | 3 | 3 | - | - | - | NE | 1 | 3 | |
| | | Lenovator | 21 | 21 | - | - | - | - | - | - | - | - | - | |
| BOMBING TOTAL | | | 76 | 68 | - | 4 | 6 | - | - | 2 | - | 1B, NE | 1 | 3 |
| MIRA YDS.
ST. MARGARET | 1 | Well. III. | 4 | 2 | - | 1 | - | 1 | 4 | - | - | - | - | 1 |
| | 1 | Well. IV. | 2* | - | - | - | 2 | - | - | - | - | - | - | - |
| L. POLICE | 1 | Well. II. | 1* | 1 | - | - | - | - | 2 | - | - | - | - | - |
| | 1 | Well. III. | 5 | 6 | - | 2 | 1 | - | 12 | 1 | - | - | - | - |
| LOBBENT | 1 | Well. IV. | 6* | 3 | - | 1 | 2 | - | 6 | - | - | - | - | 2 |
| MIRA YDS TOTAL | | | 22 | 12 | - | 4 | 5 | 1 | 24 | 1 | - | - | - | 2 |
| TOTAL | | | 100 | 80 | - | 8 | 11 | 1 | 24 | 3 | - | 1B, NE | 1 | 5 |

*These 9 aircraft were not fitted with Geo.

www.bombercommandmuseumarchives.ca

RAID TRACKS 15/16 NOV. 1942.

101

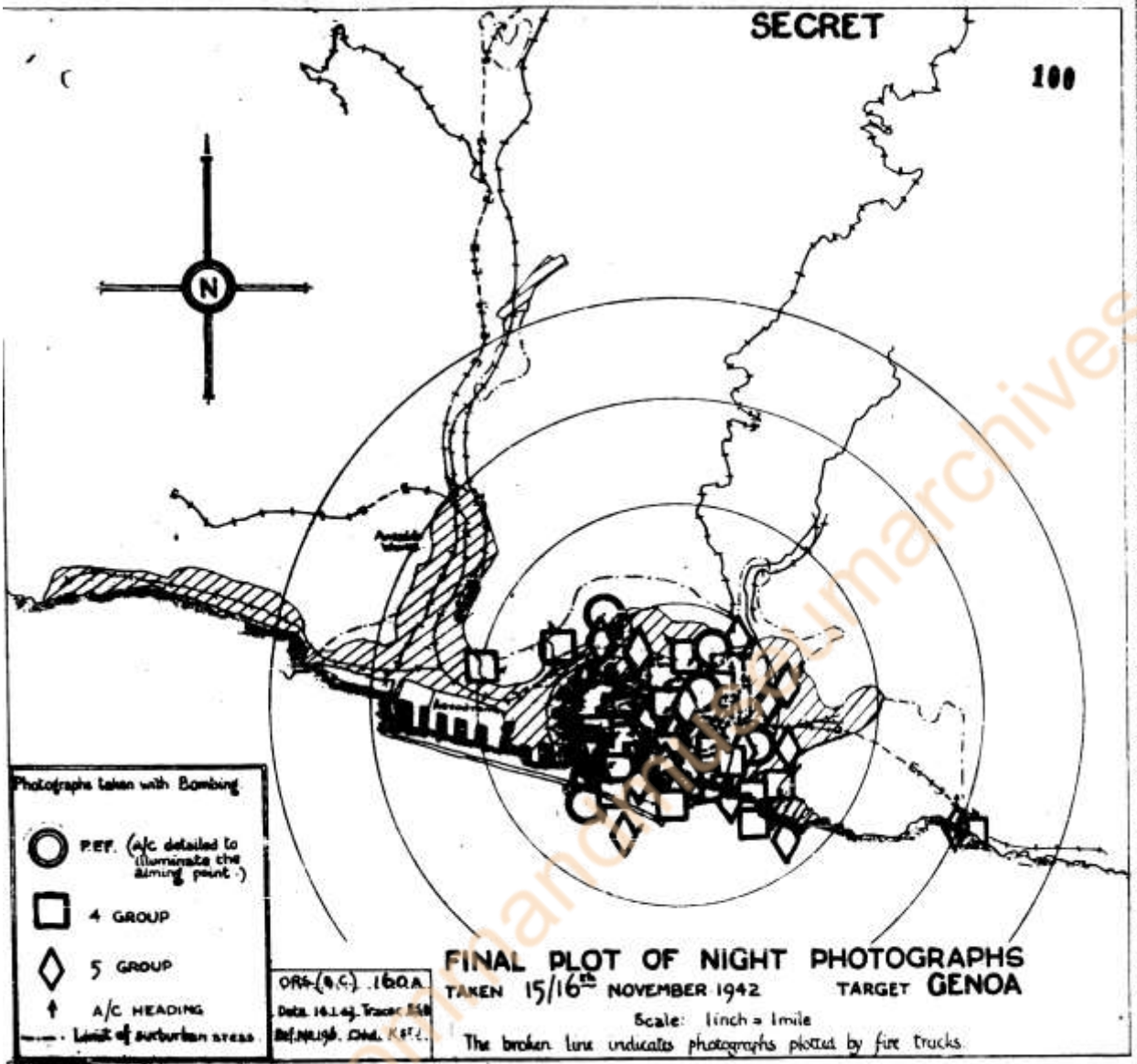
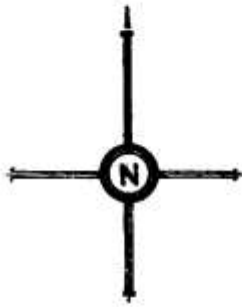


BOMBER COMMAND HEADQUARTERS.

www.bombingcommandmuseumarchives.ca

SECRET

100



Photographs taken with Bombing

- REF. (a/c detailed to illuminate the aiming point)
- 4 GROUP
- ◇ 5 GROUP
- ↑ A/C HEADING
- Limit of suburban area

ORR (A.C.) 160A
 Data 16.1.42. Tracer 558
 Ref. N. 1. 1. 42. D. 1. 1. 42.

**FINAL PLOT OF NIGHT PHOTOGRAPHS
 TAKEN 15/16th NOVEMBER 1942 TARGET GENOA**

Scale: 1 inch = 1 mile

The broken line indicates photographs plotted by fire trucks.

www.bombercommand.com archives.ca

SECRET

102

--- Outline of suburban areas
xxxxx Position of generators
plotted from night
photographs.
● Positions of batteries
photographed in action
during raids between
22/23rd October & 17/16th
November 1942.
(see C.I.U. Report H226)



GENOA

Scale: 1 inch = 1 mile

Plan showing positions of
flak batteries and smoke screens.

... O.R.S. (AC) 1628 ...
Date: 15.1.43. Tracer: B68 ...
Ref: 102 194. Contd. K-5c-J.

www.bombercommand.com archives.ca

BOMBER COMMAND REPORT ON NIGHT OPERATIONS - 16/17th NOVEMBER 1942.Minelaying - Leaflets.Meteorological Advice Submitted to the Command.

1. 0930 hours. At home bases little cloud is likely, but fog will develop in patches towards midnight, becoming more general towards dawn. Convection cloud will prevail over the North Sea with tops probably extending to 15,000 feet, at which height there will be a gale of 70 m.p.h. over the eastern half of the North Sea, and of 60 m.p.h. towards the west. Over the north-west coastal strip of Germany, convection cloud will be broken. East of 10°E., along the Baltic coast and inland to an occluded front running from 55°N. 17°E. to Berlin, there will be little cloud and good visibility. Inland, west of 10°E., there will be much layer and convection cloud with a few breaks. A cold front will lie from 55°N. 25°E. to Munich to Nantes; this will be feeble over western Germany and France, but wind velocity near the front at 15,000 feet will be of the order of 60 m.p.h. The Alps are likely to be cloud-covered. Fog is expected at Turin and Milan, but there should be little cloud in the Gulf of Genoa, where visibility will be moderate to good. Over France, visibility will generally be moderate.

1300 hours. All Groups expect some bases to keep fit throughout the night, with visibility above 2,000 yards. North Norfolk is the most reliable area. Mining targets - west Norway: 7-10/10ths cloud with frequent showers and 50 m.p.h. wind at 2,000 feet - Frisians and Helligeland: 7-9/10ths cloud, base 1,500 feet, lower in showers - Kattegat and west Baltic: little cloud above 1,500 feet, winds east of 6-7°E. 40-50 m.p.h. at 2,000 feet, 60-80 m.p.h. at 15,000 feet - Lorient to Nantes: probably 5-7/10ths., base 1,000 feet or above, risk of some frontal conditions - La Pallice: 6-8/10ths., base 1,500 feet or above. Inland over France there is a risk of frontal conditions between 45°N. and 47°N; otherwise little cloud is expected.

1550 hours. Wintry showers over the eastern North Sea will be frequent and heavy. No bases outside Operational Groups will remain fit all night.

MINELAYING.Sorties.

| | | | |
|----|-----|--|---------|
| 2. | (a) | No. of aircraft despatched..... | 65 |
| | (b) | " " " reporting mines laid in primary area... | 55 |
| | (c) | " " abortive sorties (technical defect.... 1)
(weather..... 5)
(sickness of crew.... 1)..... | 7 |
| | (d) | " " aircraft missing..... | 3(4.6%) |

Weather Experienced.

3. At home bases, a few showers were experienced in the east, where cloud was based above 1,000 feet; inland, there was little cloud, although mist and local fog developed in the west midlands and south. Hail and sleet were encountered over the Bight area with some static, but, except in showers, visibility was very good. Convection cloud was based at 1,000 feet, with icing above 1,500 feet. Fine weather prevailed over the Baltic, with no low cloud and only thin medium cloud. Over western France there was 10/10ths. layer cloud, base 1,500 feet, with good breaks in the Bordeaux - Cognac area; visibility was moderate to good. The moon was above the horizon and 68% of full.

Results.

Results.....

Results.

4. 65 aircraft of 1,3,4 and 5 Groups were despatched to lay mines in areas from Swinemunde to St. Jean de Luz. 55 report reaching their targets, and 150 mines were laid, including 70 off the Frisians and 31 off the Gironde estuary. Flak was encountered from coastal areas, but was generally slight except over Heligoland, Cherbourg and Nord Arnoy. 3 aircraft failed to return; observations indicate that a Stirling was shot down by flak at Cherbourg, but there is no evidence of how the others were lost.

Remarks.

5. Five Halifaxes of 4 Group were detailed to drop over 2,000,000 leaflets relating to the Prime Minister's recent speech, over France. Four report reaching their target, the fifth having to abandon its task because of a technical defect. One aircraft sustained minor damage from flak over Limoges; otherwise the operation was completed without incident.

BC/S 26342/1/CRS.

7th January 1943

MLN/ELS.

| Target | Group | Type | Services | Aircraft reporting attack on | | Abortive sorties | | Losses | Mines laid in primary areas | Observations | | | Interruptions |
|-------------------------|-------|------------|-----------|------------------------------|------------------|------------------|------------|----------|-----------------------------|--------------|----------|------------------|---------------|
| | | | | primary target | alternative area | over land | over coast | | | Flak | Fighter | not enemy action | |
| MINELAYING | | | | | | | | | | | | | |
| SWINEMUNDE | 5 | Heinkel | 3 | 1 | - | - | 2 | - | 2 | - | - | - | - |
| LATTRETT | 5 | Heinkel | 3 | 2 | - | - | 1 | - | 8 | - | - | - | - |
| HELIGOLAND BIGHT | 1 | Hall. All. | 6 | 4 | - | 1 | - | 1 | 6 | - | - | - | - |
| LAKE ESTUARY | 1 | Hall. All. | 3 | 3 | - | - | - | - | 6 | - | - | 1 | - |
| FRISIANS ISLANDS | 1 | Hall. All. | 5 | 5 | - | - | - | - | 10 | - | - | - | - |
| | 3 | Stirling | 10* | 10 | - | - | - | - | 20 | - | - | - | - |
| | 4 | Hall. All. | 4 | 4 | - | - | - | - | 24 | - | - | - | - |
| | 4 | Hall. All. | 10 | 8 | - | - | 2 | - | 16 | - | - | - | - |
| LORIENT | 3 | Hall. All. | 4 | 3 | - | - | - | 1 | 6 | 1 | - | LAC | - |
| ST. N. ARNOY | 3 | Hall. All. | 3 | 2 | - | 1 | - | - | 4 | - | - | - | - |
| GIRONDE ESTUARY | 3 | Stirling | 8 | 8 | - | - | - | - | 31 | - | - | - | - |
| CHERBOURG | 3 | Stirling | 3 | 3 | - | - | - | - | 9 | - | - | - | - |
| ST. JEAN DE LUZ | 3 | Stirling | 3 | 2 | - | - | - | 1 | 6 | 1 | - | - | - |
| TOTAL | | | 66 | 59 | - | 2 | 5 | 3 | 150 | 2 | - | 1 LAC | - |
| LEAFLET DROPPING | | | | | | | | | | | | | |
| HELIGOLAND BIGHT | 4 | Halifax | 2 | 2 | - | - | - | - | - | - | - | - | - |
| LIMOGES & BORDAUX | 4 | Halifax | 1 | 1 | - | - | - | - | - | - | - | - | - |
| TOULON | 4 | Halifax | 1 | 1 | - | - | - | - | - | - | - | - | - |
| TOULON & MARSEILLE | 4 | Halifax | 1 | - | - | - | 1 | - | - | - | - | - | - |
| TOTAL | | | 5 | 4 | - | - | 1 | - | - | 1 | - | - | - |
| TOTAL | | | 70 | 63 | - | 2 | 6 | 3 | 150 | 3 | - | 1 LAC | - |

* These aircraft were not fitted with G.O.

NIGHT REPORT NO. 148
 16
 15
 2/24

BOMBER COMMAND REPORT - ON NIGHT OPERATIONS - 17/18 FEB. 1942.

Minelaying - leaflets.

eteorological Advice Submitted to the Command.

1. 0925 hours. Little cloud is expected at operational bases tonight, but visibility will be moderate and fog will be experienced locally in the midlands. Over the North Sea there will be much convection cloud, with tops probably to 10,000 feet; this will extend inland west of 10°E. over the plain of north Germany, but should be well broken in the middle Rhine. East of 10°E., there will be small amounts of convection cloud over the Baltic coast, and broken layer cloud inland. Broken convection cloud will prevail over the Alps and broken medium over the Plain of Lombardy. Low cloud is expected over Gauxa and Agghern. Over France there will be little cloud, but visibility will generally be moderate.

1300 hours. All Groups expect some bases to remain fit throughout the night. Visibility will be good in the Baltic, with little cloud, but much convection is likely in the Bight, based at 1,000 feet, together with rain, sleet and perhaps hail: freezing level, 2,000 feet. Cloud is becoming stratified over the Frisians where, apart from a few showers, visibility will be good. Over France and the Saar basin, there will be much strato-cumulus and decaying cumulus, based at 1,500 feet, with tops at about 7,000 feet. Over the west coast of France, visibility will be moderate, with variable amounts of strato-cumulus. Winds at 15000 feet: west of 5°E., 60 m.p.h. from 360°; east of 5°E., 70 m.p.h. from 360°. East of 12½°E., winds are likely to decrease. Over west Norway there will be 8-10/10ths. strato-cumulus, base and freezing level 2,500 feet, tops 5,000 feet, with occasional patches below 2,500 feet covering the hill-tops. Ice accretion in the cloud is likely to be rapid. There now seems a chance of good breaks in the cloud over France. Wind velocity east of 10°E. at 15,000 feet will be 50-60 m.p.h. from 340°.

MINELAYING.

Salties.

| | | | |
|----|-----|---|----|
| 3. | (a) | No. of aircraft despatched..... | 43 |
| | (b) | " " " reporting mines laid in primary area..... | 38 |
| | (c) | Abortive sorties:- (technical defect.....4)
(sighted distress signal...1)..... | 5 |
| | (d) | No. of aircraft missing.... | 0 |

Weather Experienced.

3. Over the North Sea and the Helligeland area 7-10/10ths. convection cloud prevailed, based at 2-3,000 feet and accompanied by local showers. Over the Baltic there was 5 - 8/10ths. layer cloud, based at 2-3,000 feet, with a wind of 25-35 m.p.h. from 310° - 340°. One report was received of nil cloud over Danzig Bay, and another of 10/10ths over the Copenhagen area. In the Bay of Biscay, there was 5/10ths. layer cloud based at 3,000 feet. The moon was 78% of full, but visibility was generally moderate.

Results.

4. 43 aircraft were detailed to lay mines in the areas of Pillau, Danzig, Gdynia, Bornholm, Helligeland Bight, the Frisians, Lorient and St. Nazaire. 38 reports reaching their targets, and 94 mines were laid, including 40 off the Frisians. No aircraft was missing and, although flikt was encountered in many coastal areas, there was only one instance of damage, and that minor. One aircraft sighted a distress signal in the North Sea, and the pilot abandoned his mission in order to circle round and wireless the news of base.

LEAFLETS

5. 15 aircraft were despatched over France to drop over 2,000,000 leaflets relating to the Prime Minister's recent speech. 14 crews report accomplishing their task without incident, but the remaining aircraft, a Halifax of 4 Group, failed to return from Strasbourg. The evidence suggests that it was shot down by a fighter west of Nancy.

BC/S. 26342/2/CRS.
12th January 1943.

MLM/VP.

| Target | Group | Type | Serials | No. dropping times | | Weather | | Missing | Aircraft
lost
in
primary
area | Conditions | | Interceptions | |
|------------------------|-------|------------|-----------|--------------------|---------------------|-----------------------|---------------------------|----------|---|------------------|------------------------|---------------|-----------------|
| | | | | primary
area | alternative
area | over
enemy
area | not over
enemy
area | | | flick
fighter | not
enemy
action | attacked | not
attacked |
| MINI-JING | | | | | | | | | | | | | |
| Palma | 5 | Wapster | 3 | 2 | - | - | 1 | - | 6 | - | - | - | - |
| Amisig | 5 | Wapster | 3 | 3 | - | - | - | - | 9 | - | - | - | - |
| Gymis | 5 | Wapster | 3 | 1 | - | - | 2 | - | 3 | - | - | - | - |
| Servis | 5 | Wapster | 2 | 2 | - | - | - | - | 5 | - | - | - | - |
| Holigoland | (1) | Hall. III. | 1 | 1 | - | - | - | - | 2 | - | - | - | - |
| Eight | (1) | Hall. III. | 5 | 4 | - | - | 1 | - | 6 | - | - | - | - |
| Western Is. | PFV | Starling | 3 | 3 | - | - | - | - | 18 | - | - | - | - |
| | 1 | Hall. III. | 4 | 2 | - | - | - | - | 4 | - | - | - | - |
| | 4 | Hall. III. | 10 | 9 | - | - | 1 | - | 18 | - | - | - | - |
| Western | 1 | Hall. III. | 6 | 6 | - | - | - | - | 12 | - | - | 14 | - |
| St. Nazaire | 1 | Hall. IV. | 5 | 3 | - | - | - | - | 10 | - | - | - | - |
| MINI-JING TOTAL | | | 43 | 38 | | | 5 | | 94 | 1 | | 14 | |
| LEAFLETS | | | | | | | | | | | | | |
| Vichy | 4 | Halifax | 1 | 1 | - | - | - | - | - | - | - | - | - |
| Lyons &
St. Etienne | 4 | Halifax | 2 | 2 | - | - | - | - | - | - | - | - | - |
| Toulouse &
Orleans | 4 | Halifax | 1 | 1 | - | - | - | - | - | 1 | - | - | - |
| Strasbourg | 4 | Halifax | 1 | - | - | - | - | 1 | - | - | - | - | - |
| Sillo | 91 | Hall. III. | 2 | 2 | - | - | - | - | - | - | - | - | - |
| Nantes | 91 | Hall. III. | 1 | 1 | - | - | - | - | - | - | - | - | - |
| Rouen | 91 | Hall. III. | 1 | 1 | - | - | - | - | - | - | - | - | - |
| Rheims | 91 | Hall. III. | 1 | 1 | - | - | - | - | - | - | - | - | - |
| Paris | 91 | Whitley | 5 | 5 | - | - | - | - | - | - | - | - | 1 |
| LEAFLETS TOTAL | | | 15 | 14 | | | | 1 | | 1 | | | 1 |
| TOTAL | | | 58 | 52 | | | 5 | 1 | 94 | 2 | | 14 | 1 |

These 15 aircraft were not fitted with GEC.

106

BOMBER COMMAND REPORT ON NIGHT OPERATIONS - 18/19th NOVEMBER, 1942.Turin - leaflets.Meteorological Advice Submitted to the Command.

1. 0920 hours. The midnight frontal positions are estimated as follows: (1) occluded from 55°N. 22°E. to 53°N.15°E. becoming warm to Antwerp and cold to Hamburg (2) warm from Hamburg to 57°N.21°E. At home bases, fog will develop locally in East Anglia and Lincolnshire before midnight, becoming general later; but Yorkshire and some areas in the midlands and the south-west will remain free all night. Cloud will be well broken over Germany, except in the north near the fronts, and over France. Layer cloud will be below 10,000 feet over the Alps, and over the Plain of Lombardy a clear sky is expected, but visibility will be moderate during the first half of the night, and there is a chance of late fog at Milan and Turin. Wind velocity at 15,000 feet on route to north Italy cannot as yet be accurately estimated, but will probably be 40-50 m.p.h. from north-east or north-north-east.

1255 hours. All Groups expect to be fit for take-off around dusk, but visibility for return after midnight is doubtful; however, bases in the north of 4 Group, the east of 1 Group and possibly the north-east of East Anglia should be safe. Cornwall and the west midlands will be able to provide diversion areas. There now seems a good chance of a clear sky over Turin. Patchy strato-cumulus will be encountered over most of the route, but the Alps will be covered with 10/10ths. to 10,000 feet, with strato-cumulus, possibly containing slight icing, over some of the higher peaks. At 18,000 feet the wind will be mainly northerly, at 40-50 m.p.h. 8-10/10ths. based at 1,500 feet will prevail over the Frisians, with patches between 600 and 1,000 feet.

1615 hours. 5 Group is doubtful for take-off at dusk, and no bases in Operational Groups can be guaranteed for a return at 0200. Isolated stations in the east of 1 Group may just be fit. Localities on the south coast, and in the west and south-west are recommended for diversions. Over the west coast there will be 10/10ths. at 1,800-2,000 feet.

Plan of Attack.

2. The target for tonight is TURIN. Zero hour will be at 2115 hours.
 Period of attack:-
 Pathfinder Force (21 a/c).....zero - 1 to zero + 30 minutes.
 Main Force: (1) aircraft detailed to attack
 aiming-point between main
 Railway Station and Royal
 Arsenal.....zero + 3 to zero + 60 minutes.
 (2) aircraft detailed to attack
 Royal Arsenal.....zero + 10 to zero + 45 minutes.
 (3) aircraft detailed to attack
 Fiat factory.....zero + 10 to zero + 60 minutes.

The Pathfinders will function both as "finders" and "illuminators" of the target. The composition and timing of each of these subdivisions will be as follows:-

Finders: 6 aircraft.....zero - 1 minute.
 Illuminators:
 3 aircraft.....zero hour.
 2 "zero + 5 mins.
 2 "zero + 10 "
 2 "zero + 15 "
 2 "zero + 20 "
 2 "zero + 25 "
 2 "zero + 30 "

The "finders" will release long sticks of flares at 8 - second intervals

...../across

across the target area in three directions, namely:

- from (i) 45°08'N. 07°42'E. to 45°03'N. 07°36'E.
- " (ii) 45°06'N. 07°43'E. to 45°03'N. 07°37'E.
- " (iii) 45°05'N. 07°45'E. to 45°01'N. 07°39'E.

If necessary these may be released on accurate D.R.; but if the target can definitely be identified, the "finders" may revert to the role of "illuminators". The latter will release short flare-sticks at 4 - second intervals from a point 500 yards east of the Royal Arsenal to a point 1000 yards south-west of the main railway station at the times stated above. Both "illuminators" and "finders" will release 1 green flare over the town centre if and when this point has been positively identified.

3. The main force will be subdivided into three sections, each to attack a separate aiming-point. The first section, consisting of Lancasters of 1 Group, Wellingtons of 3 Group, Halifaxes of 4 Group and 5 Pathfinder aircraft, will attack an area in the north of the town, approximately midway between the Royal Arsenal and the main Railway Station. The second section, consisting of Stirlings of 3 Group, will bomb the Royal Arsenal itself, while aircraft of Section 3 will concentrate their attack on the Fiat factory. All aircraft of the Main Force will carry mixed loads of H.E. and 30-lb. incendiary bombs.

Navigational Instructions.

4. The southern chain will operate from 1200 hours. When outside Gee range, navigators will make full use of astro-fixes. Wireless operators will take loop bearings on the commercial stations at Lyons and Borne, and will use these for obtaining fixes when possible. The high peaks of the Alps should be free of cloud and the characteristic bond of the Po at Turin should be easily identifiable. On the outward journey, aircraft should gain height steadily and cross the French coast at 10,000 feet, in order to avoid high winds. Similarly, on return they should lose height after crossing the Alps. Care should be taken to keep south of the Somme estuary.

Route:

- 5. All Groups: base - Le Grottoy - St. Julien - TURIN - same for return.
(For details of routes taken, see route map).

Sorties.

| | | |
|----|--|------------|
| 6. | (a) No. of aircraft despatched..... | 77. |
| | (b) " " " reporting attack on primary area..... | 71 (92.2%) |
| | (c) " " abortive sorties (technical defect.....) | 6 |
| | (icing.....) | 1 |
| | (late.....) | 1 |
| | (d) " " aircraft missing..... | 0 |

Weather Experienced.

7. At home bases, such fog, accompanied by low cloud and rain, spread over the east midlands, the east and the south-east by dawn. 4 Group and bases in the south remained fit. 10/10ths. cloud prevailed en route to Turin, based at 1,500 - 2,000 feet with tops at 4-8,000 feet. The tops of the Alps were clear, and Turin was free of cloud. Visibility was good, despite haze. The moon was 86% of full and above the horizon.

Weight of Bombs Dropped.

(by aircraft reporting attack on primary).

| | | |
|----|---------------------------|-------------------------|
| 8. | H.E. : 92.9 tons | Incendiaries: 32.4 tons |
| | including (15 x 4,000-lb) | (including 1x4000-lb) |
| | (4x2,000-lb) | |
| | (128x1,000-lb) | |

.../Pathfinders.

Pathfinders.

| | |
|--|-----------|
| No. of aircraft carrying H. E. + flares..... | 13 |
| " " " " 250-lb. incendiaries + flares..... | 4 |
| " " " " 4,000-lb. incendiary + flares..... | 1 |
| " " " " 250-lb. incendiary + H.E..... | 1 |
| | <u>19</u> |

Main Force.

| | |
|--|-----------|
| No. of aircraft carrying H.E. + 30-lb. incendiaries..... | 46 |
| " " " " H.E. only..... | 6 |
| | <u>52</u> |

Timing of Attack.

3. Pathfinders.

| | |
|--|-----------|
| No. of aircraft attacking within planned period..... | 11 |
| " " " " 0-25" late..... | 8 |
| | <u>19</u> |

Main Force.

| | |
|--|-----------|
| No. of aircraft attacking within planned period..... | 47 |
| " " " " 0-30" late..... | 5 |
| | <u>52</u> |

Night Photographic Evidence.

10. Photographs taken with bombing that have been plotted (by ground detail):

| | |
|----------------------------|-----------|
| within 3 miles..... | 35 |
| between 3 and 5 miles..... | 5 |
| outside 5 miles..... | 4 |
| | <u>44</u> |

(In calculating the above figures, the photographs taken by each Group have been considered with reference to that Group's aiming-point. On the diagrams the mile-circles are drawn about the Group 4 aiming-point.)

Unplotted photographs (with bombing) that show ground detail:

| | |
|---------------------|----------|
| probably Turin..... | 1 |
| open country..... | 1 |
| | <u>2</u> |

Conditions for photography were exceptionally clear and evidence from night photographs show that flares were burning over the target area throughout practically the whole period of the attack, effectively illuminating ground detail. Several H.E. incidents and smoke from fires, but relatively few sticks of incendiaries were recorded within the built-up area of Turin. Apart from the Fiat works, the main weight of attack appears to have fallen on the central and south-western districts of the city.

Narrative of Attack.

11. 77 aircraft of the Pathfinders, 3, 4 and 5 Groups were despatched to Turin, and all but 6 of these report having successfully attacked the primary. 10/10ths cloud was encountered en route, but the target was clear and visibility was good. The Pathfinders illuminated the town successfully, and the bombing seemed concentrated and accurate. The centre of the town was left well alight, although the greater part of the effort seemed directed rather to the south. All the 26 Lancasters detailed to attack the Fiat works claim to have bombed the primary. This was somewhat obscured by smoke from the town, but fortunately a flare was dropped exactly over the main buildings. Numerous hits were reported, including one by a 4,000 lb. bomb which was confirmed by several observers. A direct hit was also claimed on the marshalling-yards, which could easily be identified by the adjacent oval amphitheatre.

The Italian communique admitted "appreciable" damage, asserting that this was mainly caused to civilian property. 36,000 leaflets were dropped on the target.

Day Reconnaissance.

12. Damage in the town, except for 2 H.E. incidents in the centre, was shown to be confined to the suburbs in the south, west and south-west. Most of the destruction caused was to industrial buildings, and a considerable number, including the railway workshops, the Fiat lorry works and a wire factory were damaged. Contrary to the Italian communique, residential and public buildings suffered relatively little. In the Fiat works, a large block of workshops, the factory railway station and 3 small buildings connected with the transformer and switching station were seriously hit, while several bays of the main buildings suffered no damage. 4 direct hits on the factory are estimated; there are about 20 craters in open ground around the works. Nearly two thirds of the total damage appears to have been caused by H.E.

Defences.

13. The defences appear to have been rather less numerous than those encountered in recent raids on Genoa, and no more accurate. Roughly one-third of the 44 photographs plotted over the target record heavy flak, and one-third light flak. By far the greater number of salvos recorded were single-gun discharges. Two heavy and two light batteries were recorded in action.

Navigation Aids.

14. The average Gee range was only 380 miles, but some remarkable fixes were recorded by individual navigators, including one of 527 miles. The absence of a lattice chart covering the greater ranges prevented a further increase.

Casualties.

15. No aircraft was missing, and only three minor instances of damage by flak were reported. One Halifax had to be abandoned over England owing to a short of petrol, and, although none of the crew was hurt, the aircraft crashed and became a total wreck. The pilot of another Halifax had a remarkable adventure. His aircraft caught fire near the Italo-Swiss border, and he gave the order to bale out. All the crew except himself had jumped when the fire went out and the pilot was left alone in a damaged aircraft, which he succeeded in bringing safely back to base single-handed.

Summary

16. A satisfactory first raid on Turin, in which considerable industrial damage was caused. The attack on the Fiat works was, however, unfortunate in securing a major proportion of very near misses.

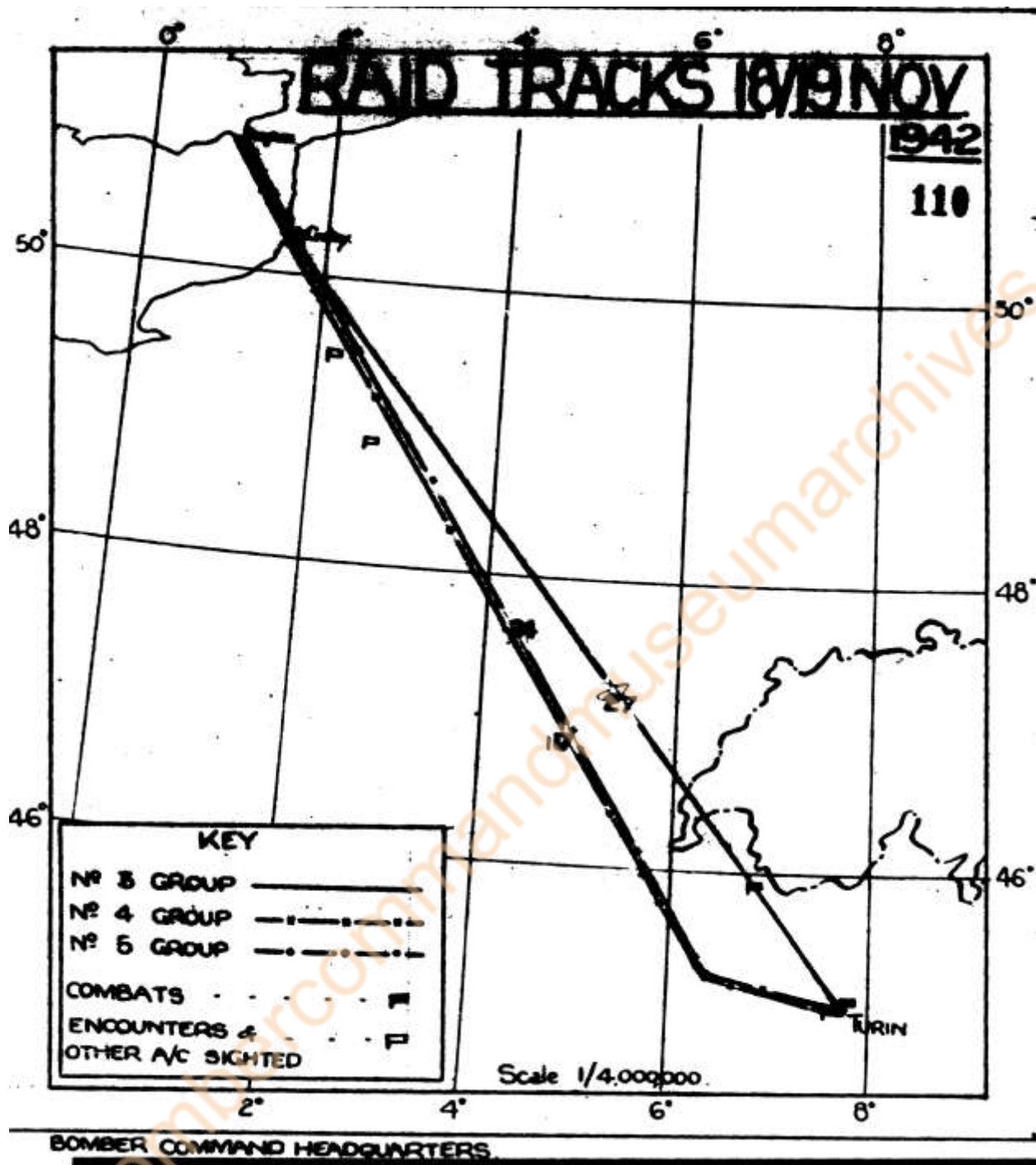
LEAFLETS.

17. 5 Wellington IC's of 91 Group, manned by pupil crews, were detailed to drop leaflets on Mantua. 4 accomplished their task without incident, but the fifth crashed at Liss on the way out and 2 of the crew were killed. The cause of the crash is unknown.

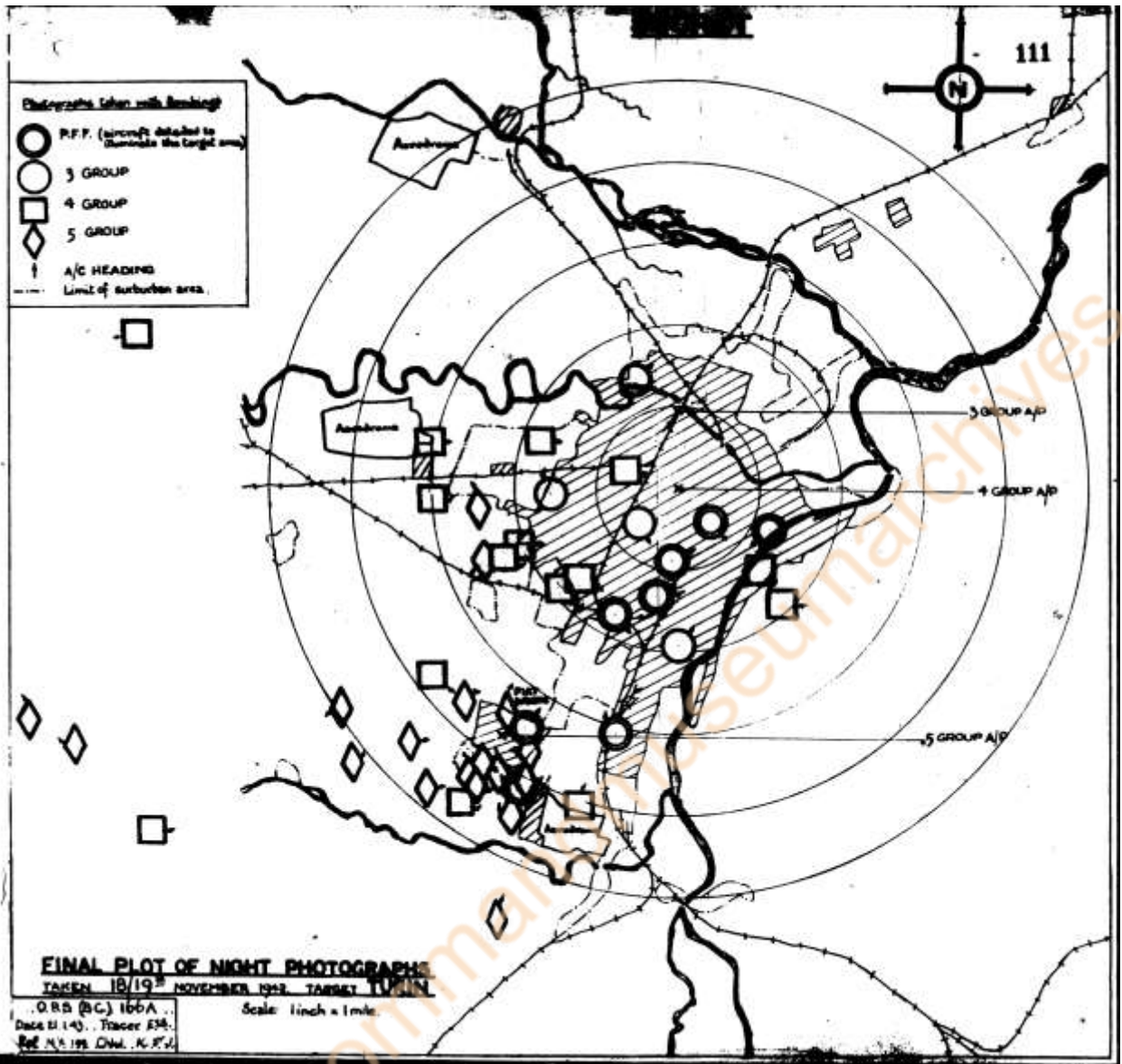
| Type | No. | Model | Serial | Number reported: | | Location: | | Status | Date | Remarks | Total reported | |
|---------------|-----------|-----------|--------|-------------------------|-------------|---------------------|--------------------|--------|------|---------|----------------|---|
| | | | | Primary (non-territory) | Alternative | Over land territory | Over sea territory | | | | | |
| TUM | P.P.P. | Leicester | 7 | 7 | - | - | - | - | - | - | - | |
| | P.P.P. | Hull III | 6 | 4 | - | 1 | 1 | - | - | - | - | |
| | P.P.P. | Halifax | 8 | 0 | - | - | - | - | - | L | - | |
| | 3 | Hull III | 5 | 4 | - | 1 | - | - | - | - | 1 | |
| | 3 | Stirling | 1 | 2 | - | - | - | - | - | - | - | |
| | 4 | Halifax | 24 | 21 | - | 2 | 1 | - | 2 | - | 12 | |
| 5 | Leicester | 25 | 25 | - | - | - | - | 1 | - | 11 | - | |
| BOEING TOTAL | | | 77 | 71 | - | 4 | 2 | - | 3 | - | 21 + 11 | 1 |
| <u>INMETS</u> | | | | | | | | | | | | |
| BOEING | 91 | Hull 10 | 69 | 4 | - | - | 1 | - | - | - | 11 | - |
| TOTAL | | | 82 | 75 | - | 4 | 3 | - | 3 | - | 21 + 22 | 1 |

* These 5 aircraft were not fitted with Gov.

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Bomber Command Report on Night Operations - 19/20th November, 1942.

Mine-laying.

3 FEB

Metecological Advice Submitted to the Command.

1. 0920 hours. The midnight frontal positions are estimated as follows: (1) occluded from 63°N. 11°E. to 62°N. 8°E. becoming cold to the Shetlands and warm to 55°N. 5°E. (2) occluded from 57°N. 27°E. to 54°N. 10°E., becoming cold to 55°N. 5°E. and warm to north Holland to west of Brussels, then cold to the western Alps. At home bases, visibility will be poor in Yorkshire and in east England, south of the Humber, with fog in places. Over France, layer cloud is expected, with a few breaks. Much medium and low cloud will prevail over north Germany, but this will be broken inland. The Alps will be cloudy, although their peaks may be clear. Over the Plain of Lombardy there will be broken medium cloud, but conditions will be hazy.

1250 hours. Bases will be difficult for take-off but should generally just be fit. An increase of wind later in the day may clear 4 Group and the north of 1 Group, but at present it seems certain that diversions will be required for all Operational Groups; south-west and west England and north of Newcastle are suggested, but conditions in north-east Scotland require further examination. The route to Turin will be very cloudy. The west coast of France will be suitable for mining, especially the Gironde area, and cloud may be above 1,000 feet over the Kattegat and the Frisians.

1600 hours. Local difficulties will be experienced for take-off. There is little likelihood of a safe return to 4 Group, and all Operational Groups are doubtful. Forshore and Hoyford are suggested for an early return and in Scotland, Drom may be in the cold front region by 0200 hours. Over the Kattegat and the Frisians cloud should certainly be above 1,000 feet.

Sorties.

| | | | |
|----|-----|--|----|
| 2. | (a) | No. of aircraft despatched (Wellingtons of 1 Group)..... | 11 |
| | (b) | " " " reporting mines laid in primary area..... | 9 |
| | (c) | " " abortive sorties (technical defect)..... | 1 |
| | (d) | " " aircraft missing..... | 1 |

Weather Experienced.

3. Much cloud at 2,500 feet prevailed at bases, where visibility was generally moderate to poor. En route to the Bay of Biscay 10/10ths, cloud was encountered, base 2,000 feet and tops 4,500 feet. Visibility was moderate, although the moon was 92% of full.

Results.

5 Wellington III's of 1 Group were detailed to lay mines off Lorient, and Wellingtons II's and 2 Wellington IV's of 1 Group off St. Nazaire. 4 aircraft spent reaching the former area and 5 the latter, laying 8 and 10 mines respectively. Flak was encountered from several points on the French coast, but no damage was caused, and the only interception by a fighter was evaded without action. One Wellington IV failed to return from St. Nazaire, but there is no information to indicate the cause of loss.

S. 26342/5/ORS.

14 January, 1943

VP.



A. M. W. 16
 COPY NO. 343
 21ST NOVEMBER, 1942

BOMBER COMMAND REPORT ON NIGHT OPERATIONS - 20/21ST NOVEMBER, 1942

Turin: Mineslaying: Leaflets

SUMMARY

Turin

A highly successful and concentrated attack on Turin was made by a large force consisting mainly of heavy aircraft. The city was easily identified in daylight moonlight and 85% of the force of 232 which set out report having bombed it.

The damage revealed by a daylight reconnaissance was extensive, affecting a great deal of industrial property including the Fiat airframe factory. Most of the destruction was caused by fire.

The opposition encountered was slight and losses were consequently small (1.3%).

Mineslaying

Despite 10/10ths cloud, 16 mines were laid in the mouth of the Gironde river by 4 Stirlings, all of which completed their task without suffering damage or loss.

Leaflets

Leaflets were dropped on Paris and on the Lille-Bethune coalfield area.

Metereological Forecast

At midnight a cold front will lie from the Isle of Wight to 50°N 05°E to Iceland.

Sea:- Very hazy at dusk in the lee of industrial areas with local fog at night. About half the bases in England will be available till 0200 hours, though some very smoky, with 4 Group fit all night. Diversion areas will be available in the south-west from Tangmere to Pembroke, also in 1 and 2 Groups.

Winds:- 8-10/10ths strato-cumulus cloud to the Alps, but the peaks will probably be clear. Winds at 15000 feet (a) to 51°N. 50-55 m.p.h. but less on downward journey; (b) 51°-47°N, 25-30 m.p.h. from 360° (w) south of 47°N, m.p.h. from 20°.

Cloud:- Little cloud, but some haze resulting from local smoke.

Target Area:- Well broken strato-cumulus cloud with moderate visibility.

TURIN

Timing of Attack

Turin to be attacked by all available aircraft.

Zero hour 2145 hours.

Period of Attack:-

| | |
|-----------------------------------|------------------------------|
| Pathfinder Force (about 21 a/c): | zero to zero + 26 mins. |
| Main Force (a) 1, 3, and 4 Groups | zero + 3 to zero + 45 mins. |
| + 9 P.F.F. (u/t) | zero + 10 to zero + 30 mins. |
| (b) 5 Group | |

(Appendix I shows the timing actually achieved)

...../Routes briefed:-

Routes briefed:-

- 1 and 3 Groups: base - Le Crotoy - St. Julien - TURIN - same return
4 and 5 Groups: base - Cabourg - St. Julien - TURIN - same return
(For routes taken see route map)

6. Having arrived 5 to 10 minutes early to ensure positive identification at zero hour, 9 Pathfinders were to illuminate the target, the remaining 12 following at 2 minute intervals from zero + 4 to zero + 26. A straightforward flare technique, using no colours, was ordered. The Wellingtons were each to release a single stick of flares (6 - second intervals) Stirlings two sticks (5 - second intervals) and Halifaxes two sticks (8 - second intervals) across the centre of the target. Each Wellington was also to drop three 250 lb. incendiaries, observing and reporting their effect. All other Pathfinders to complete their loads with 1,000 lb. G.P. bombs.

7. Section (a) of the Main Force was detailed to attack the centre of the town and section (b) the Fiat airframe factory. Since these aiming points were not widely separated crews were briefed to take care to avoid being drawn away from their particular target.

8. The bombs loads specified comprised mixed loads of H.E. and 4 lb. incendiaries for the aircraft of 1 and 4 Groups and those of the P.F.F. attached with the Main Force: 4 lb incendiaries for two-thirds of the aircraft of 1 Group, the remaining third to carry heavy H.C. or G.P. bombs: four-fifths of the Lancasters detailed to attack the Fiat factory were to carry one 4,000 G.P. bomb plus 30 lb. incendiaries and the remaining fifth 30 lb incendiaries

Navigation Instructions

9. The Southern Chain to operate from 1600 hours.

Sorties

| | | | |
|-----|-----|--|-------------|
| 10. | (a) | Number of aircraft despatched | 232 |
| | (b) | Number of aircraft reporting attack on primary area | 198 (85.3%) |
| | (c) | Number of abortive sorties (technical defect.....29)
(attacked by fighter... 2) | 31 (13.4%) |
| | (d) | Number of aircraft missing | 3 (1.3%) |

Weather Experienced

11. Home Bases:- The feeble cold front moved slowly south over Southern England, resulting in local rain and poor visibility. By 0200 hours almost all bases experienced variable amounts of layer cloud, generally more than 6/10ths, but everywhere based above 1,500 feet. Extensive mist, with local fog, prevailed on the lee of industrial areas: 4 and 91 Groups, however, together with aerodromes of the South coast, remained fit.

Route to Turin:- 9-10/10ths layer cloud prevailed over France, with tops to increasing to 10,000 feet over the Alps. Over the Plain of Lombardy the cloud broke suddenly and the rest of the route was clear.

Turin:- Clear, but with ground haze.

The moon was above the horizon and 97% of full.

Narrative of Attack

12. 232 aircraft, including 179 heavies, were despatched to attack Turin. 10/10ths cloud was encountered to the Alps, but this dispersed over the Plain of Lombardy, and the target was easily identified in bright moonlight, although slightly obscured by haze. 17 of the 23 Pathfinders reached the primary, encountering inaccurate opposition, were able to drop their flares with the maximum of accuracy. A high percentage of the Main Force then delivered a concentrated and well-timed attack on the town, dropping 183.8 tons of H.E. and 162.4 tons of incendiary bombs. Many fires were started, especially in the area between the Fiat steelworks and the centre of the city; two seemed to involve burning oil, with black smoke rising several thousand feet into the air. Several crews observed a large explosion in the vicinity of the Royal Arsenal

...../and 2

a red fire of notable size was reported near the cathedral. 59 Lancasters been detailed to attack the Fiat airframe works, but the identification of the target was considerably hampered by smoke drifting from the fires burning in the town. Nevertheless, many hits were recorded on the factory buildings in both incendiaries and H.E. bombs. Only 3 aircraft failed to return.

No claims were made of attacks on alternative targets and there is no evidence of any stray bombing. Two aircraft were forced to jettison their bombs over France, one on account of engine trouble, the other to evade a fighter.

Photographic Evidence

Night Photographs:-

Photographs taken with bombing have been plotted as shown in the accompanying diagram:-

| | |
|-------------------------|------------------------------|
| By ground detail.....55 | Within 3 miles.....51 |
| | Between 3 and 5 miles..... 1 |
| | Outside 5 miles..... 3 |

In these measurements, allowance has been made for the fact that 5 groups given the Fiat Works as their aiming point, though in the diagram the mile circles have been drawn from the aiming point of 1, 3 & 4 Groups. Plotted photographs that show ground detail:-

| |
|---------------------------------|
| Probably suburbs of Turin.....6 |
| Open Country.....1 |

Plotted photographs that show no ground detail, but with fire tracks that might be plotted.....57

Conditions for photography do not appear to have been as clear as on the previous raid on Turin (18-19th Nov.), ground detail being somewhat obscured by haze; there is however, considerable photographic cover. Evidence from night photographs shows that flares were burning over the target area in the early stages of the attack. The photographs have also recorded some H.E. incidents, smoke from fires and a great number of sticks of incendiaries. These last were especially concentrated over the built-up area of the city in the last half hour of the attack, as many as 10 or 12 sticks being visible sometimes on a single photograph. Bursts of heavy H.E. and a number of incendiary sticks were recorded in the proximity of the Fiat Works. Three aircraft returned photographs taken with bombing towards the end of the attack which have been plotted at Avoli, 6 miles N.W. of the Fiat Works, suggestive that there may have been a small diversion of effort in that neighbourhood.

Day Reconnaissance:-

The P.R.U. cover revealed extensive damage, concentrated chiefly on the south and west of the city. The Fiat works suffered more heavily than in the previous raid, and generally the damage caused was mainly industrial. 25 factories were partially or wholly destroyed, including the State Railway Works and a large textile factory. Public buildings sustaining major damage include the Municipal Buildings, College of Music and the History Museum. Most of the destruction was caused by fire; the percentage of incendiaries carried was greater than on the 18/19th. November.

Navigation Aids

An average Gee-range of 403 miles was recorded, the best individual range 555 miles being obtained by a navigator of 44 Squadron. Jamming was again experienced at Paris, but this proved ineffectual. There were reports of multiple pulses over S.E. England.

Defences

Flak and Searchlights:-

Slight and inaccurate heavy flak was encountered at 9-15,000 feet from/about

about four positions said to be sited respectively to the east, south-east, south-west and north-west of the town. The defences consisted mainly of moderate and inaccurate light flak. As the raid progressed, the light guns near the centre of the town ceased fire. Other light guns were observed to the east, west and south-west. There was no searchlight activity. Photographic evidence showed even less flak on this night than on the raid of 18/19th November. Of the 58 a/c plotted at Turin, only 21% recorded heavy flak and 29% light flak. The measured intensity was 1.0 single gun discharges per plotted aircraft.

Fighters:-

18. Number of interceptions reported:-

| | |
|--------------------------|-----------------|
| attacks..... | 2(0.9%) |
| other interceptions..... | 33(14.2%) |
| | Total 35(15.1%) |

although no activity by ground-controlled fighters was overheard the prevailing conditions of bright moonlight above layer cloud were eminently suitable for the operation of free-lance fighters, many of which succeeded in intercepting the bombers, mainly on the homeward journey. The excellent visibility, which enabled approaching fighters to be seen, probably accounts for the small number of attacks which developed.

Casualties

| | |
|--------------------------------------|-------------|
| 19. (a) No. of aircraft missing..... | 3(1.3%) |
| (b) No. of aircraft damaged:- | |
| flak..... | 9(3.9%) |
| fighter..... | 1(0.4%) |
| not enemy action..... | 6(2.6%) |
| | ...16(6.9%) |

Our own observations show that 1 aircraft fell in flames to the east of Annecy, and possibly a second fell in flames at Turin, where a parachute was seen by one of our aircraft. The causes of loss cannot be determined for any of the missing aircraft.

MINELAYING

20. 4 Stirlings of 3 Group were detailed to lay mines off the mouth of the Gironde. Despite 10/10ths cloud, all accomplished their task successfully, 16 mines being laid. No damage was sustained, and all our aircraft returned safely.

LEAFLETS

21. 4 Wellingtons III's of 92 Group were detailed to drop leaflets on Paris and 4 more on the Lens-Bethune coalfield. All completed their task and returned without incident.

BC/S. 26342/6 /ORS.
7th February, 1943.

MLM/VF.

APPENDIX ITiming of Attack13. Pathfinder Force

| | |
|--|-----------|
| No. of aircraft attacking within planned period..... | 16 |
| " " " 3" late..... | 1 |
| | <u>17</u> |

Main Force
(Section a)

| | |
|---|------------|
| No. of aircraft attacking within planned period..... | 107 |
| " " " 0-20" late..... | 2 |
| Result not known(a/c crashed-only rear-gunner alive)..... | 1 |
| | <u>110</u> |

Section b

| | |
|--|-----------|
| No. of aircraft attacking within planned period..... | 18 |
| " " " 0-20" late..... | 43 |
| " " " more than 20" late..... | 10 |
| | <u>71</u> |

APPENDIX IIWeight of Bombs Dropped

14. By aircraft reporting attack on primary area:-

H.E. 183.8 tonsIncendiaries 162.4 tons

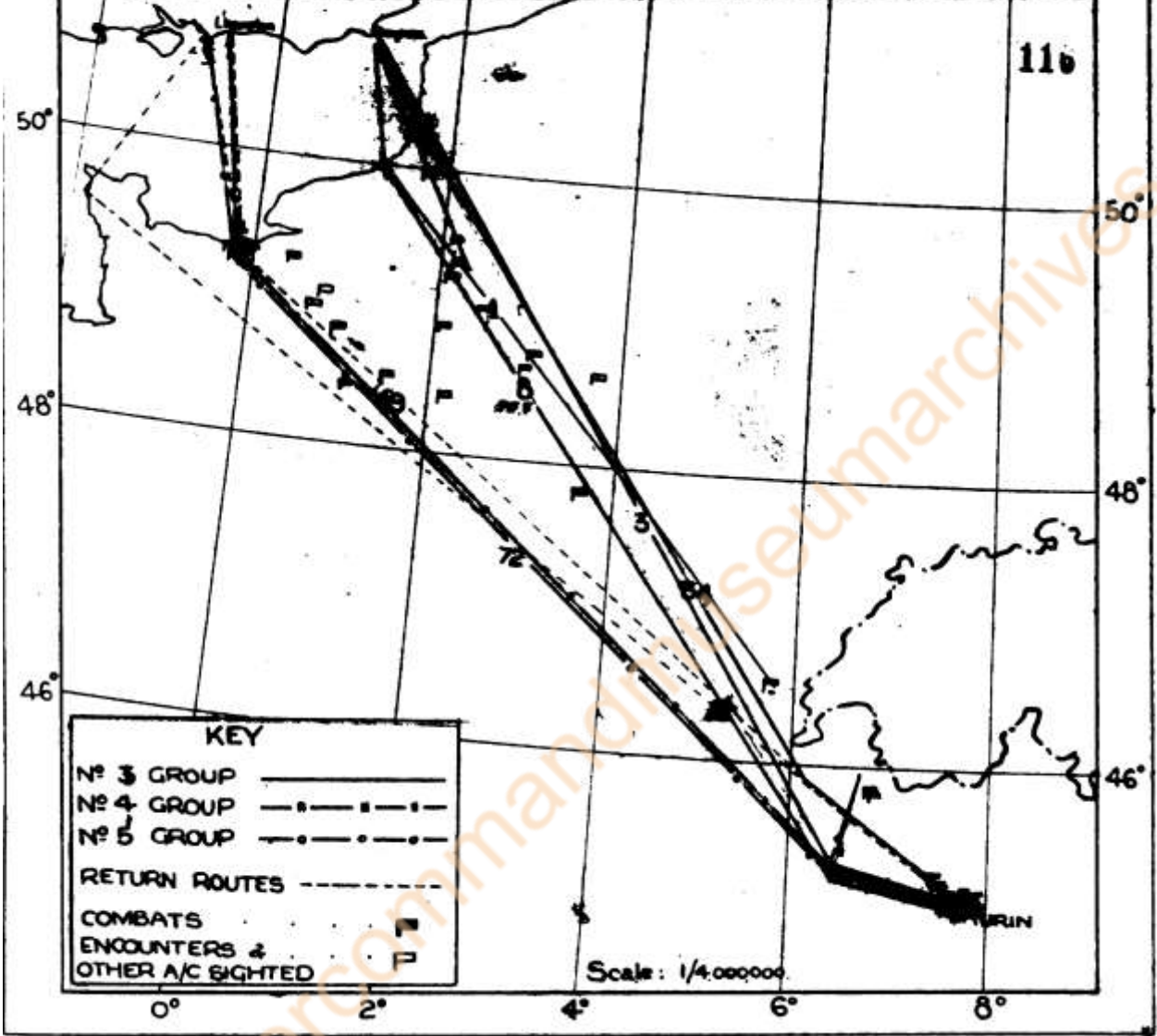
including { 53 x 4,000 lb. }
 { 17 x 2,000 lb. }
 { 3 x 1,900 lb. }
 { 137 x 1,000 lb. }

| | |
|--|------------|
| No. of aircraft carrying flares + H.E..... | 14 |
| " " " flares + 250 lb. incendiaries..... | 3 |
| " " " H.E. only..... | 19 |
| " " " 4 lb. incendiaries only..... | 24 |
| " " " 30 lb. incendiaries only..... | 18 |
| " " " H.E. + 4 lb. incendiaries..... | 67 |
| " " " H.E. + 30 lb. incendiaries..... | 53 |
| | <u>198</u> |

| Target | Op. | Type | Sorties | Aircraft reporting attacks on | | Abortive sorties | | Missing | Damage | | | Interceptions | |
|---------------------------|-------------------------|-----------|---------|-------------------------------|------------------|------------------|----------------------|---------|----------|----------|----------------|---------------|--------------|
| | | | | primary area | alternative area | over en. territ. | Not over en. territ. | | Flak | fighter | not en. action | attacked | not attacked |
| | | | | | | | | | | | | | |
| WARR | P.O.P. (u/v) | Stirling | 9 | 7 | - | 2 | - | - | 1B | - | - | - | 2 |
| | P.O.P. | Halifax | 8 | 7 | - | - | - | - | - | - | - | - | 1 |
| | P.O.P. | Well.III | 4 | 3 | - | 1 | - | - | 1 | 2A | 1 | - | 2 |
| | P.O.P. (u/v) | Stirling | 3 | 3 | - | - | - | - | 1 | - | - | - | - |
| | P.O.P. (u/v) | Halifax | 1 | 1 | - | - | - | - | - | - | - | - | - |
| | P.O.P. (u/v) | Well.III | 3 | 3 | - | - | - | - | - | - | - | - | - |
| | 1 | Well.III | 12 | 8 | - | 1 | 2 | 1 | 1 | - | 1AO+1B | - | - |
| | 1 | Well.IV | 15 | 13 | - | - | 2 | - | - | - | - | - | - |
| | 1 | Lancaster | 8 | 8 | - | - | - | - | - | - | - | 1 | 6 |
| | 3 | Well.III | 9 | 7 | - | - | 2 | - | - | - | - | - | - |
| | 3 | Stirling | 33 | 27 | - | 3 | 2 | 1 | 2AO | - | 2B | - | 7 |
| | 4 | Well.III | 10 | 8 | - | 1 | 1 | - | - | - | - | - | 2 |
| | 4 | Halifax | 39 | 32 | - | - | 6 | 1 | 1 | - | - | - | - |
| | 5 | Lancaster | 78 | 71 | - | - | 7 | - | 3 | - | - | - | 13 |
| | B O M B I N G T O T A L | | | 232 | 198 | - | 8 | 23 | 3 | 6+2AO+1B | 1 | 2A+1AO+3B | 2 |
| WARR
Aircraft Delivery | 3 | Stirling | 4 | 4 | - | - | - | - | - | - | - | - | 1 |
| WARR
Paris | 92 | Well.III | 4 | 4 | - | - | - | - | - | - | - | - | - |
| WARR
Lone Bethune | 92 | Well.III | 4 | 4 | - | - | - | - | - | - | - | - | - |
| T O T A L | | | 244 | 210 | - | 8 | 23 | 3 | 6+2AO+1B | 1 | 2A+1AO+3B | 2 | 34 |

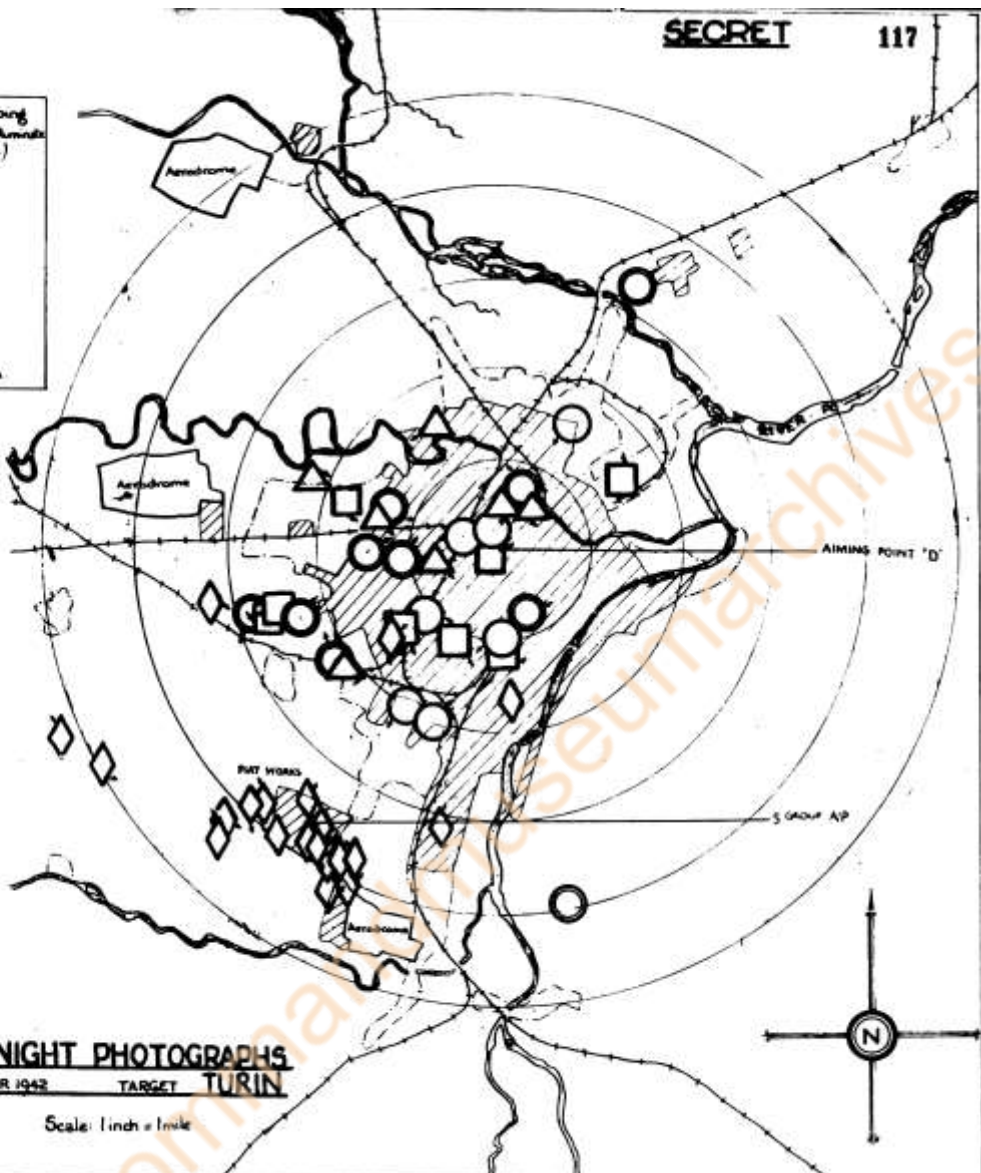
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RAID TRACKS 20/21 NOV. 1942



BOMBER COMMAND HEADQUARTERS

- Photographs taken with Bombing
P.F.F. (A/C detailed to illuminate
the target area.)
- 1 GROUP
 - △ 3 GROUP
 - 4 GROUP
 - ◇ 5 GROUP
 - ↓ A/C HEADINGS
 - Limit of suburban area.



FINAL PLOT OF NIGHT PHOTOGRAPHS
 TAKEN 20/21st NOVEMBER 1942 TARGET TURIN

ORS. (B.C.) 167A
 Date 3.1.43 Tracer ESB
 Ref. 1.1.201 Chud. K 57J

Scale: 1 inch = 1 mile

www.bombercommand.com/airphotoarchive.ca

NIGHT BOMBING REPORT

COPY NO. 16

TIME 1942

3 FEB 1943

BOMBER COMMAND REPORT ON NIGHT OPERATIONS - 21/22 NOVEMBER 1942

Military.

Meteorological Advice Submitted to the Command.

1. 0925 hours. The midnight frontal positions are estimated as follows: (1) cold from Vienna to 47°N, 05°E. to La Pallice (2) cold, approximately east to west, at 49°N. At home bases cloud will be variable, and visibility will be moderate to poor inland. Much convection cloud will prevail over the North Sea, with isolated banks probably extending to 15,000 feet. The wind at 15,000 feet over the western North Sea will be 50-60 m.p.h. from north-north-west, and 70-80 m.p.h. over the eastern North Sea. The convection cloud will extend inland over Germany, west of 11°E., to 49°N., where there will be a frontal belt of bad weather. East of 11°E. there will be little cloud, and visibility will be good. Between the two cold fronts, there will be broken layer cloud, with a wind of 60 m.p.h. from west-north-west at 15,000 feet. Cloud is expected to extend to considerable heights over the Alps, and broken medium, possibly with broken strato-cumulus, will prevail over the Lombardy Plain. Over France there will be broken layer cloud, generally based above 1,000 feet, except locally near the fronts.

1240 hours. Bases will be fit almost everywhere at dusk, and probably all night, although cloud will drop to 1,000 feet at times and visibility will be reduced to 1,500 yards in smoky inland areas. 8-10/10ths. cloud is expected over the west coast of France, but not below 1,500 feet, except very locally. En route to the Bay of Biscay much cloud will be encountered in layers between 2,000 and 8,000 feet. Freezing level will be at 1,000 feet over bases, but will lift to 3,000 feet over north-west France and to 5,000 feet further south.

1546 hours. No change.

Sorties.

| | | |
|----|---|----|
| 2. | (a) No. of aircraft despatched | 30 |
| | (b) " " " reporting mines laid in primary area..... | 27 |
| | (c) " " " " alternative area.... | 1 |
| | (d) " " abortive sorties (technical defect)..... | 2 |
| | (e) " " aircraft missing..... | 0 |

Weather Experienced.

3. Bases generally remained fit, apart from industrial areas. Cloud was variable, mostly in small amounts over south England, but increasing towards the French coast to 10/10ths. layer cloud, which persisted southwards, based at 2-3,000 feet, but in places at 1,500 feet. Visibility as moderate, although the moon was 99% of full and above the horizon.

Results.

4. 30 aircraft were despatched to lay mines in the Bay of Biscay. Despite 10/10ths. cloud, 27 of these report reaching their appointed targets, and 82 mines were laid, including 31 off the Gironde estuary and 23 off Bayonne. One aircraft detailed for the former area pinpointed incorrectly and planted 4 mines off l'Île de Re. No aircraft was missing and, although flak was reported from a number of coastal areas, no damage was sustained.

How Many Bombs Dropped December, 1943

| Aircraft | Group | Type | Bombs | How Many Bombs Dropped | | How Many Bombs Dropped | | Missing | How Many Bombs Dropped | How Many Bombs Dropped |
|-----------------|-------|------------|-------|------------------------|------------------|---------------------------|----------|---------|------------------------|------------------------|
| | | | | primary area | alternative area | over enemy for each count | on coast | | | |
| Lorient | 1 | Wellington | 10 | 1 | - | - | - | - | 8 | - |
| | 1 | Wellington | 5 | 5 | - | - | - | - | 10 | - |
| St. Nazaire | 3 | Wellington | 6 | 3 | - | - | 1 | - | 10 | - |
| Girondo Estuary | 3 | Stirling | 3 | 3 | - | - | - | - | 12 | - |
| | 3 | Stirling | 6 | 5 | 1 | - | - | - | 19 | - |
| Bayonne | 1 | Waco | 6 | 3 | - | - | - | - | 13 | 2 |
| St. John de Luz | 3 | Stirling | 3 | 2 | - | 1 | - | - | 5 | - |
| | | Waco | 30 | 27 | 1 | 1 | 1 | - | 62 | - |

- This aircraft was not fitted with bombs

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BOMBER COMMAND REPORT ON NIGHT OPERATIONS - 22/23RD NOVEMBER, 1942.Stuttgart: LeafletsMeteorological Advice Submitted to the Command.

1. 0920 hours. Visibility will be moderate at home bases in 1 and 4 Groups and in the north of 5 Group, where layer cloud will prevail. Further south, local fog is expected, and visibility will be poor. Over the southern North Sea and north-west Germany there will be much layer and convection cloud, with isolated tops to 8-10,000 feet and wintry showers: freezing level, 1,000 feet. Southwards, cloud will increase, becoming broken over the Ruhr and dispersed over the upper Rhine. Less than 4/10ths. is expected at Stuttgart and possibly nil; visibility should be good to moderate. East of 10°E., visibility will be good. The Alps will be covered with much cloud, and over the Plain of Lombardy there will be variable amounts of medium and strato-cumulus cloud. Over France, there will be very well broken layer cloud. Over the southern North Sea, there will be a north-north-westerly wind of 40 m.p.h. increasing to 60-70 m.p.h. over Denmark. The mean wind en route to the upper Rhine will be north-north-westerly - 45 m.p.h.

1305 hours. Visibility will be adequate in 4 Group throughout the night, although there is a threat of slight rain from the north. Other Groups, including Training Groups, will experience widespread visibility troubles for return due to smoke. 3 Group will be best with visibility 1,000-3,000 yards. The south-west, and Marston, will be available for diversions, and possibly the south coast. Conditions at Stuttgart are uncertain but hopeful and there is no alternative with better prospects. Much strato-cumulus will be encountered en route, but this should decrease towards the target. Severe icing is likely in all cloud above 1,500 feet.

1605 hours. 4 Group will be fit all night, and most stations in East Anglia, especially near the coast, should be available till 0400, together with isolated aerodromes in 1 and 5 Groups. Over the target, very well broken strato-cumulus is expected, based above 3,000 feet. Visibility should be good. In the Bight area, there will be 9-10/10ths. strato-cumulus at 1,500-2,000 feet, with snow showers but good visibility.

STUTTGARTPlan of Attack

2. The target for to-night is STUTTGART. Zero hour will be at 2145.
Period of attack:

Pathfinder Force (23 A/C).....2144-2202
Main Force.....2148-2210

3. The Pathfinders will function both as "finders" and "illuminators" of the target. The "finders" (5 Halifaxes and 5 Wellingtons) will release long sticks of flares (8-second intervals) at zero - 1 minute in three directions, as follows:-

from 48°43'N. 09°09' E. to 48°49'N 09°10' E.
48°43'N. 09°11' E. to 48°49'N 09°12' E.
48°43'N. 09°13' E. to 48°49'N 09°14' E.

Any "finders" able definitely to identify the target may act as "illuminators". The latter will each release two short flare-sticks (4-second intervals) over the aiming point on positive identification. This illumination will begin at zero hour and will be continued at zero + 3 minutes, and thereafter at intervals of 3 minutes until zero + 17 minutes. Both "finders" and "illuminators" will each drop one single steady green flare over the last turning-point (north tip of Lake Constance) if positively identified, so that

...../an accurate

an accurate timed run may be made from that point to the target. In addition, all Pathfinder aircraft will release one bundle of green flares emitting red stars over the aiming point, if definitely identified, a few 4000 lb. incendiary bombs will also be dropped experimentally by some of these marker aircraft. Five untrained Pathfinders will attack with the Main Force.

4. All aircraft comprising the Main Force will carry mixed loads of H.C. or G.P. bombs and 4 lb. incendiaries, except about one-third of the Lancasters of 5 Group and one squadron of Wellingtons of 1 Group, which will carry 4 lb. incendiaries only.

Navigation Instructions

5. In view of the strong headwind expected at operational height, all aircraft are instructed to fly as low as possible between base and Chatillon-sur-Seine, on both journeys. The Southern Chain will operate from 1600 hours.

Route Briefed

6. All Groups: base - Cayeux - Chatillon-sur-Seine - STUTTGART - turn left Chatillon - Cayeux - base.

(for routes taken, see route map)

* * * * *

Sorties

| | | | |
|----|-----|--|-----------|
| 7. | (a) | No. of aircraft despatched..... | 222 |
| | (b) | " reporting attack on primary area..... | 182(81.5) |
| | (c) | " " alternative area..... | 3 |
| | (d) | " abortive sorties (technical defect.....23) | 27 |
| | | (flak damage.....2) | |
| | | (late.....2) | |
| | (e) | " aircraft missing..... | 10(4.5) |

Narrative of Attack

8. 222 aircraft of the Pathfinders, 1,3,4 and 5 Groups were despatched to attack Stuttgart. 5/10ths. cloud was encountered over the target, and, although at times this cleared considerably, haze rendered visibility only moderate. A considerable proportion of the attacking force claim to have bombed the primary, and many fires were reported in the built-up area of the town, including several started by 4000 lb. incendiaries. Some crews reported a big explosion to the east-north-east of the town, which may refer to the gasworks, and numerous large buildings, including the Town Hall, were seen to be ablaze. One pilot detailed to reconnoitre the target at the close of the attack reported six to eight major fires in the vicinity of the Robert Bosch works, and two others which suggested burning oil. 800,000 leaflets were dropped in the area of the target. Many aircraft shot up trains in Germany and France on the return journey. 10 aircraft (4.5%) failed to return.

Weather Encountered

9. 10/10ths. layer cloud, base 2-3,000 feet and tops 6-7,000 feet, was encountered en route, but this dispersed over the Rhineland. Over the target, cloud varied from 8/10ths. to nil. Snow patches were observed on the ground. Visibility was moderate. At home bases inland, visibility was reduced to 1-2,000 yards by 0100 hours, with local fog near industrial areas. In the south-west, 4 Group, the north of 1 Group and on the south coast, visibility was moderate. The moon was 100% of full and above the horizon.

Night Photographic Evidence

10. Photographs taken with bombing that have been plotted (see accompanying diagram).

| | | | |
|-----------------------|----|----------------------------|---|
| By ground detail..... | 20 | within 3 miles..... | 3 |
| | | between 3 and 5 miles..... | 9 |
| | | outside 5 miles..... | 8 |
| | |/Unplotted | |

3.

Unplotted photographs with bombing that show ground detail:

Open country.....32

Unplotted photographs with bombing with no ground detail, but
with fire-tracks which might be plotted.....54

Only 20 photographs have been plotted from this operation and their distribution suggests that the attack became scattered over the open country and villages to the S.S.W. of Stuttgart. There seem to have been local concentrations of bombing at Vaihingen and Mchringen. The scatter is in the general direction of approach from the last turning-point and a tendency to bomb short is apparent. No doubt the scatter is due to the cloudy conditions which prevailed in the Stuttgart area, but nevertheless at intervals throughout the period of attack a few aircraft located and bombed the target, through gaps in the cloud.

Weight of Bombs Dropped.

(by aircraft reporting attack on primary target).

| | |
|---|---------------------------------|
| 11. <u>H.E. 124.5 tons</u> | <u>Incendiaries: 225.4 tons</u> |
| Including { 23 x 4,000 lb.) | (including 7 x 4,000 lb.) |
| { 5 x 2,000 lb.) | |
| { 2 x 1,900 lb.) | |
| { 137 x 1,000 lb.) | |
| No. of aircraft carrying flares only.....12 | |
| " flares + 4,000 lb. incendiary..... 7 | |
| " H.E. only..... 9 | |
| " 4 lb. incendiaries only.....58 | |
| " H.E. + 4 lb. incendiaries.....96 | |
| | 182 |

Day Reconnaissance.

12. The P.R.U. cover is very incomplete, including only half of the Bosch works and excluding most of the area to the north, where many fires were reported by crews, as well as much of the eastern industrial district towards Uhlbach and nearly all the city south of the main railway station. In the area covered, damage is visible at the main railway station, the roof of which was partially destroyed by fire, and the gasometer, which is battered but not destroyed.

Timing of Attack.

13. Pathfinder Force.

| | |
|---|----|
| No. of aircraft attacking early (15 mins.)..... 1 | |
| " " within planned period..... 13 | |
| " " 0-15 mins. late..... 5 | |
| | 19 |

Main Force.

| | |
|--|-----|
| No. of aircraft attacking early (8 mins.)..... 1 | |
| " " within planned period.....113 | |
| " " 0-20 min. late..... 47 | |
| " " more than 20 min. late..... 2 | |
| | 163 |

Navigational Aids.

14. This was the first operation against a German target on which the Southern Chain was used. Results were better than the average for the Eastern Chain, although the enemy was consistently endeavouring to jam. The average range for the night was 3.7 miles, and several crews achieved over 400 miles.

...../15.

Other Targets Attacked.

15. 3 aircraft reported attacks on alternative targets, viz: (1) Offenbourg (2) a small unidentified town on the railway south-west of Stuttgart (3) an unidentified built-up area. One aircraft released a 1,000 lb. bomb which had hung up over the target over Raslat. Many aircraft machine-gunned trains in Germany and France on the return journey.

Defences.

16. Slight to moderate heavy flak was encountered, thought to be predictor control "unseen", although barrage fire was also reported. The total number heavy guns in action was estimated as 8 to 12. The light flak was slight to moderate and was not reported as accurate. It emanated from positions round the target area, some crews reporting a greater volume to the west; in this light guns were seen sited round a decoy fire. A few guns, probably 20 m.m., were reported in the town and marshalling yards. Many crews saw no searchlights but from 3 to 6 were reported as having exposed, probably in the early stages of the attack. 2 to 4 balloons were seen at 8-10,000 feet; one crew reports a total of 20 in four groups or five at unspecified heights. There were many observations of a cone of 10-20 searchlights, with considerable heavy and light flak fire, over Lauffen during the early stages of the attack on Stuttgart. Some reports suggest that this was nearer Stuttgart in the Ludwigsburg area. This activity was apparently associated with a decoy. Intense flak was also encountered at Karlsruhe and Strasbourg.

Casualties.

17. (a) No. of aircraft missing.....10(4.5%)
 (b) No. of aircraft damaged:-
 flak.....17(7.7%)
 fighter..... 3(1.4%)
 not enemy action..... 5(2.3%).....2,*(10.8%)
 (c) No. of interceptions:-
 attacks..... 6(2.7%)
 other interceptions.....17(7.7%)..... 23(10.4%)

* including 1 aircraft damaged both by flak and on landing.

The missing rate is above the average for the three previous raids on Stuttgart in May 1942, but this increase during the six months is not unusual for a German target. Wireless Intelligence indicates that 23 sorties were flown by controlled night fighters. There was one claim to have shot down our aircraft but this cannot be confirmed. 2 aircraft were shot down by fighters at Abbeville and 25 miles south-south-east of Nancy, and 3 further aircraft were shot down, possibly by fighters, 1 at Strasbourg and 2 in the Beauvais area. There was an unconfirmed observation of an aircraft destroyed by heavy flak at Amiens. All of these aircraft were seen falling in flames. Causes of loss may therefore be assessed as 2, possibly 5, to fighter, 1 unconfirmed to flak and 4 to causes unknown.

Summary

18. The evidence of night photographs taken with bombing suggests that some of the weight of the attack was drawn away to the south-west. Only 20 photos could be plotted but a further 32 showed open country. The day reconnaissance which does not cover the whole town, suggests that little damage was caused to the centre. Until a fuller reconnaissance is undertaken, no reliable estimate of the success of the attack can be given.

LEAFLETS

19. One Wellington IV of 93 Group, manned by a pupil crew, was detailed to drop leaflets over Paris. The operation was completed without incident.

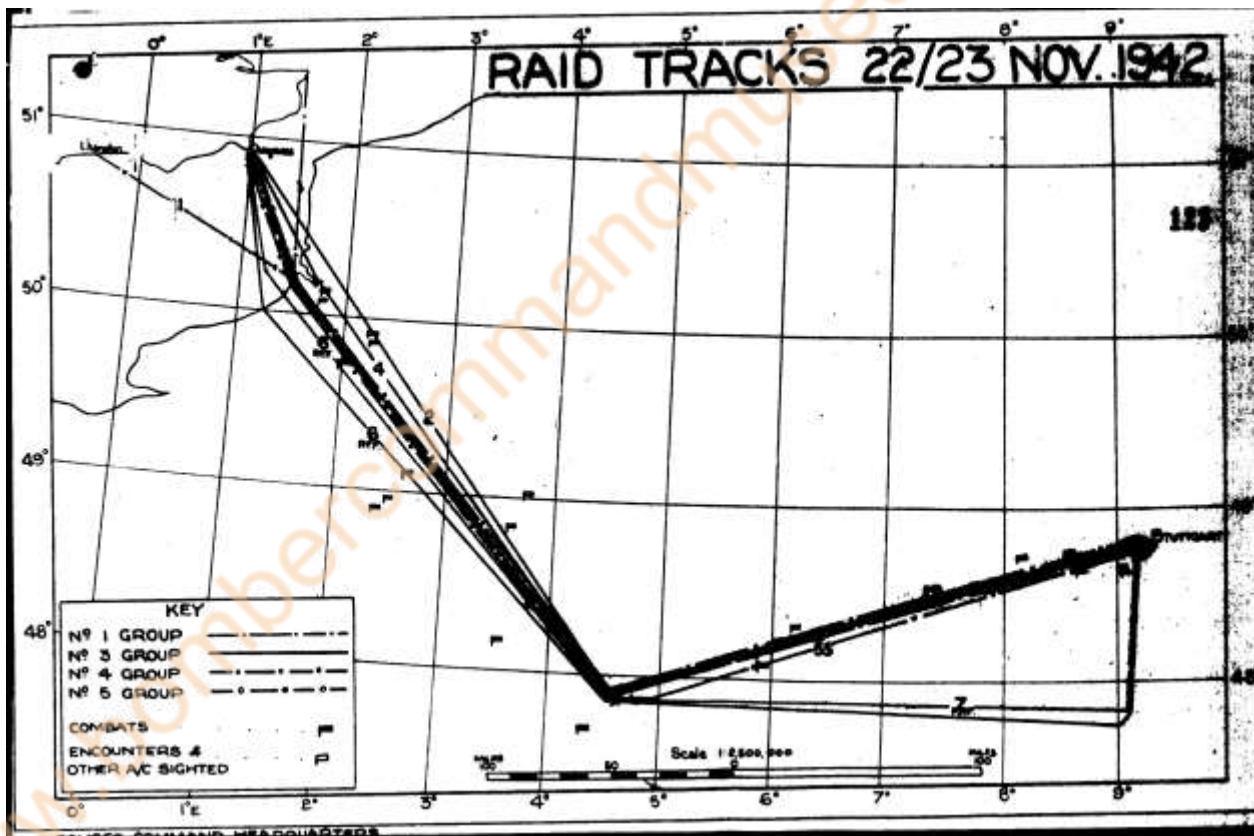
BC/S. 26342/5/ORS.
 29th January, 1943.

NLM/VP.

| Target | Op. | Type | Sorties | Aircraft reporting attack on | | abortive sorties | | Missing | Damage | | | Interceptions | |
|-----------|---------------|-----------|---------|------------------------------|------------------|----------------------|--------------------|---------|---------------|----------------|---------------|---------------|--------------|
| | | | | primary area | alternative area | over enemy coastline | not over coastline | | flak | fighter | not on action | attacked | not attacked |
| | | | | | | | | | | | | | |
| STUTTGART | P.P.P. | Well. III | 6 | 5 | - | - | - | 1 | - | - | - | - | - |
| | P.P.P. | Halifax | 8 | 7 | - | - | - | 1 | 2 | - | - | - | - |
| | P.P.P. | Lancaster | 8 | 7 | - | - | - | 1 | 1 | - | - | - | 1 |
| | P.P.P. | Well. III | 2 | 2 | - | - | - | - | - | 1B | - | 1 | - |
| | P.P.P. (a/c) | Halifax | 1 | 1 | - | - | - | - | - | - | - | - | - |
| | 1 | Well. III | 13 | 9 | 1 | - | 3 | - | - | - | 1AC | - | 6 |
| | | Well. IV | 11 | 11 | 1 | 1 | 1 | - | 1B | - | - | 1 | 1 |
| | | Lancaster | 25 | 22 | - | - | 2 | 1 | 1 | - | - | - | 1 |
| | 3 | Well. III | 12 | 9 | - | 1 | 5 | 2 | - | - | 1 | 1AC | - |
| | | Stirling | 27 | 20 | - | - | 5 | - | - | - | 1 | 1AC | 1 |
| | 4 | Well. III | 12 | 10 | - | - | 1 | 1 | - | 2+1AC | - | - | - |
| | | Halifax | 30 | 24 | - | 2 | 2 | 2 | 3+2AC | 1AC* | 1* | 1AC | 2 |
| | 5 | Lancaster | 64 | 55 | 1 | 2 | 3 | 3 | 2+1AC | - | 1AC | - | 1 |
| | | | | | | | | | | | | | |
| | BOMBING TOTAL | | | 222 | 182 | 3 | 8 | 19 | 10 | 11 + 4 AC + 2B | 1+1AC + 1B | 1+ 1AC | 6 |
| 15. FLTS | 93 | Well. IV | 1 | 1 | - | - | - | - | - | - | - | - | - |
| T O T A L | | | 223 | 183 | 3 | 8 | 19 | 10 | 11+ 4 AC + 2B | 1+1AC + 1B | 1+ 1AC | 6 | 17 |

* These 15 a/c were not fitted with Gee

* This a/c sustained damage both from fighter and on landing



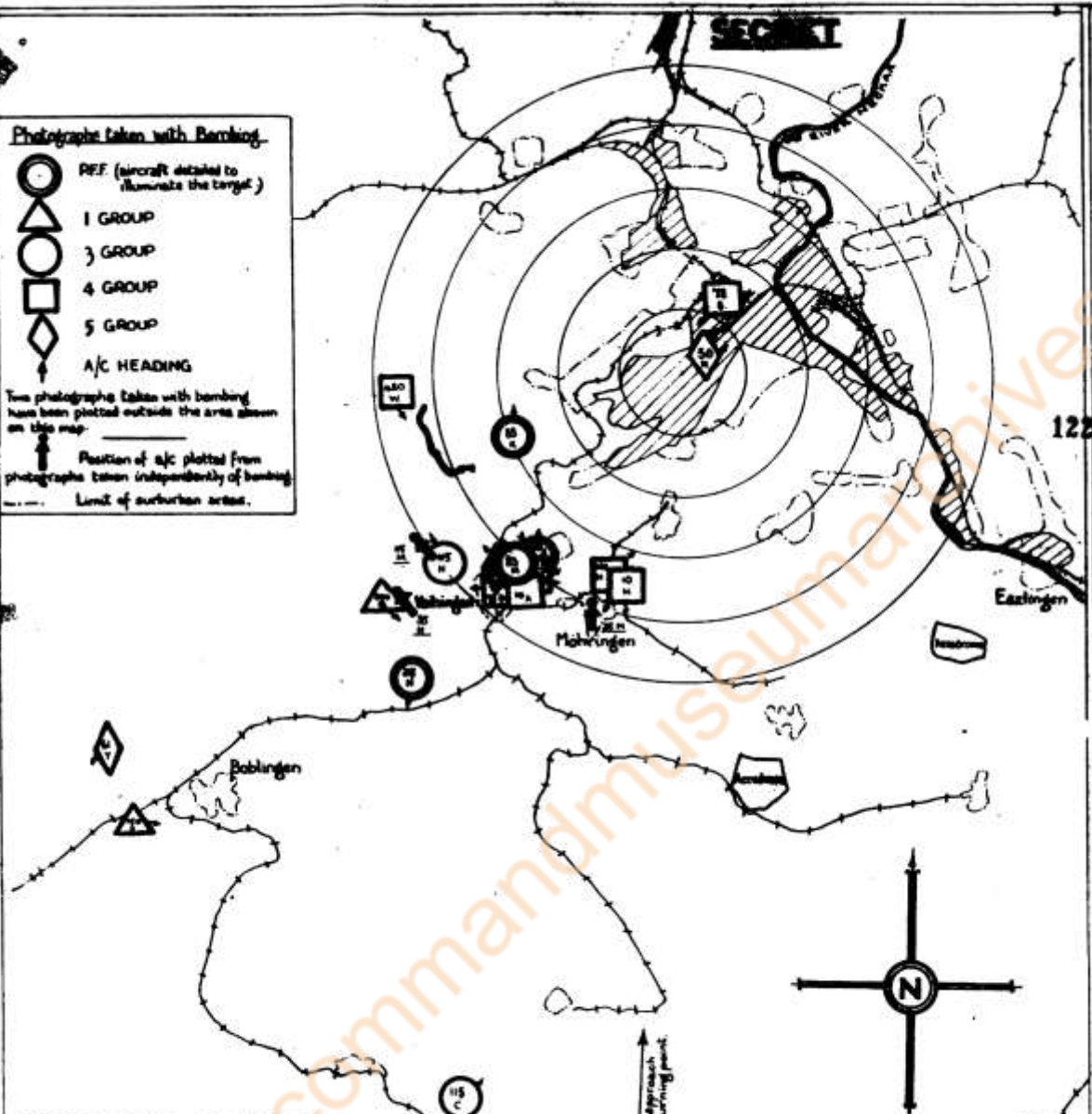
SECRET

Photographs taken with Bombing

- REF. (aircraft detailed to illuminate the target)
- △ 1 GROUP
- 3 GROUP
- 4 GROUP
- ◇ 5 GROUP
- ↖ A/C HEADING

Two photographs taken with bombing have been plotted outside the area shown on this map.

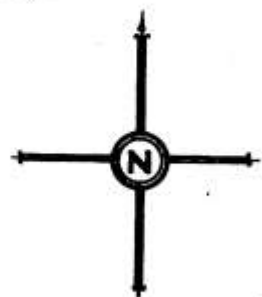
↑ Position of a/c plotted from photographs taken independently of bombing.
--- Limit of suburban areas.



FINAL PLOT OF NIGHT PHOTOGRAPHS
TAKEN 22/23rd NOVEMBER 1942. TARGET **STUTTGART**

Scale: 1/100,000 MILES

↑ Direction of approach from last turning point.



ORS (B.C.) 168 A ...
Date 24.1.43 Tracer ESS.
Ref N.A. 203. Subd. N. 256.

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BOMBER COMMAND REPORT ON NIGHT OPERATIONS - 23/24th NOVEMBER, 1942.
MINELAYING (FRISIANS, etc.)Metorological Advice Submitted to the Command.

0920 hours. It is estimated that at midnight an occluded front will lie on 48°N. 18°E. to Mannheim to 50°N. 06°E., becoming feeble warm to south Wales and north Ireland and cold to 54°N. 02°E., then warm northwards to 61°N. 05°E. At these bases there will be variable strato-cumulus cloud, with fog forming before midnight in many places; in the west and south-west visibility will be moderate, with layer cloud based at 1,500 ft. Broken convection cloud will prevail over the North Sea east of the front, with medium cloud and a wind of 70 m.p.h. at 15,000 feet in the area of Denmark. Along the Baltic coast visibility will be good, with cloud well broken. Inland over Germany there will be much layer cloud, well broken east of 10°E; south of the front, there will be much medium cloud and broken strato-cumulus. Some good breaks will be found in the layer cloud over France, especially along the west coast, but some industrial haze is likely. Little cloud is expected over the north plain of Italy.

0145 hours. 5 and 93 Groups anticipate visibility troubles soon after dusk, and have little hope of any bases being available after 2300-2400 hours. In the north and east of East Anglia visibility will be 2,000 yards or more until 0200 hours, but the remainder of 3 Group will be more smoky. 91 and 92 Groups should stay fit until 0200 hours, and bases in the north and east of 1 Group and anywhere in 4 Group are likely to be available for most of the night. Over the Frisians, broken strato-cumulus should stay above 2,000 feet. In the Bay of Biscay visibility will be moderate, with little cloud except at Brest, where some haze is probable towards dawn.

0200 hours. Bases in 4 Group and the north of 1 Group will be fit until quite late in the night. All other Operational Groups will experience visibility troubles, with rain or drizzle in localities near the east coast. 3 and 5 Groups will require diversions, for which the south-west, the south coast and possibly Combe Down are suggested.

Statistics.

| | | |
|-----|--|----|
| (a) | Aircraft despatched | 35 |
| (b) | " reporting mines laid in primary area | 30 |
| (c) | Abortive sorties (technical defect | 4) |
| | (flak | 1) |
| (d) | Aircraft missing | 0 |

Weather Experienced.

Fog and mist developed in patches at dusk in areas between Yarmouth - Rochester - Abingdon - Dover, and spread during the night with deteriorating visibility to Lancs, Lincs and south-east Yorkshire. East of a line from Bourne to the Wash, however, visibility gradually improved. Over the North Sea 7-10/10ths. cloud, base 1,500 feet, was encountered to 3°E., but towards the east this broke to 3-4/10ths, based at 2-4,000 feet; visibility 10-20 miles. Over the Bay of Biscay was almost free of cloud, except for occasional large patches of layer, based at 3,000 feet, and here too visibility was good. Wind velocity at 10,000 feet in the north was 25 m.p.h. from 10° and 15-20 m.p.h. from 70°-100° in the south. The moon was 99% of full and above the horizon.

Results.

35 aircraft were despatched to lay mines in the Bay of Biscay and off the Frisians. 30 report reaching their targets, and 76 mines were laid. Considerable flak opposition was encountered. All our aircraft returned safely, though one was damaged by flak.

26342/4/ORS.
January, 1943.

| Target | Op. | Type | Sorties | Aircraft reporting mines laid in | | Dertive sorties over enemy coasts | | Missing | Times laid in primary area | Drops (flak) | Interceptions |
|-----------------|-----|-----------|---------|----------------------------------|------------------|-----------------------------------|-----------------------|---------|----------------------------|--------------|---------------|
| | | | | primary area | alternative area | over enemy coasts | not over enemy coasts | | | | |
| PRINCE ISLANDS | 4 | Well. III | 6 | 3 | - | 1 | 2 | - | 6 | - | - |
| | 4 | Halifax | 14 | 12 | - | 1 | 1 | - | 24 | - | - |
| LORIENT | 1 | Well. III | 3 | 3 | - | - | - | - | 6 | - | - |
| ST. NAZAIRE | 1 | Well. III | 3 | 3 | - | - | - | - | 6 | - | - |
| GIRONDE ESTUARY | 5 | Londoner | 4 | 4 | - | - | - | - | 15 | - | - |
| BAYONNE | 5 | Londoner | 3 | 3 | - | - | - | - | 11 | 1 | - |
| ST. JEAN DE LUZ | 5 | Londoner | 2 | 2 | - | - | - | - | 8 | - | - |
| T O T A L | | | 35 | 30 | - | 2 | 3 | - | 76 | 1 | - |

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HUMBER COMMAND REPORT ON NIGHT OPERATIONS - 25/26th JANUARY, 1943.

Mine-laying.

Metereological Advice Submitted to the Command.

1. 0930 hours. At midnight a warm front will lie from 51°N. 23°E. to Prague to Mannheim to Dioppe. Home bases will generally be cloudy, with moderate to poor visibility; south of the Humber, drizzle and fog will become widespread and in many cases cloud base will be well below 1,000. Over north Germany, north of the warm front, there will be much layer cloud, based at 1,000-1,500 feet, but lower over the North Sea coast. Southwards, cloud will decrease, becoming well broken in the extreme south of Germany. Little cloud is expected over France except in the north, where much layer cloud will prevail, but visibility will generally be moderate. Over the Lombardy Plain, there will be small patches of layer cloud.

1230 hours. At inland bases in 1 and 4 Groups, cloud will be broken, and based at 2,000 feet, with visibility 2 to 4 miles; but by 0100 - 0200 hours this will decrease to 1,000 yards. Drizzle and low stratus are expected in the coastal areas of 1 and 4 Groups and in all other Operational Groups, but 5 Group hope to be safe for return until 0100 hours. Visibility will be very poor in the south-west midlands, where fog may develop, and smoke will spread to the south-west, where, however, a number of stations should be available for diversion. Over the Frisians, there will be much low stratus with stratocumulus above, and patches of coastal fog. Over north-west France, broken stratocumulus will be based at 2,000 feet, and visibility will be moderate.

Sorties.

| | | | |
|----|-----|--|----|
| 2. | (a) | "% of aircraft despatched..... | 22 |
| | (b) | " " " reporting mines laid in primary area.... | 11 |
| | (c) | " " abortive sorties (technical defect ...4)
(weather.....7)..... | 11 |
| | (d) | " " aircraft missing..... | 0 |

Weather Experienced.

3. Home bases south of the Humber experienced much cloud below 1,000 feet, with local fog and occasional drizzle. North of the Humber and in south-west England, conditions were moderate to good. Target areas were mainly overcast with 10/10ths thin layer cloud, base 1-2,000 feet, with another higher layer over the North Sea, and patches of cloud below 1,000 feet in the Brest area. Visibility ranged from 1 to 5 miles. The moon was above the horizon and 91% of full.

Results.

4. 22 aircraft of 1 and 4 Groups were despatched to lay mines in the Bay of Biscay and off the Frisians. Dense cloud prevented a number of pilots from pinpointing, and only 11 report reaching their targets. 22 mines were laid. No aircraft was missing, and only one flak hit was recorded, a single shot which caused no material damage beyond a small hole, but mortally wounded the rear gunner.

BC/S.26342/5/CRS.

15th January, 1943.

L/VF

| Target | Gp. | Type | Sevices | A/C Reporting
minus laid in
primary zone | Substive
Portions | | Missing | Minus
laid in
primary
zone | Damage | | Interceptions |
|------------|-----|-----------|---------|--|----------------------|-----------------------------|---------|-------------------------------------|--------|-----------------------|---------------|
| | | | | | over eny
coasts | net over
enony
coasts | | | Flak | net
enony
ation | |
| Frisone | 4 | Malifx | 6 | 5 | 1 | - | - | 10 | - | - | - |
| Brest | 4 | Woll.III. | 6 | 3 | 2 | 1 | - | 6 | - | - | - |
| Lorient | 1 | Woll.III. | 4 | 2 | - | 2 | - | 4 | - | - | - |
| St.Nazaire | 1 | Woll.III. | 2 | 1 | 1 | - | - | 2 | 1 | 1B | - |
| | | Woll.IV. | 4 | - | 2 | 2 | - | - | - | - | - |
| | | TOTAL | 22 | 11 | 6 | 5 | - | 22 | 1 | 1B | - |

* This 4 cases it were not fitted with Goc.

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BOMBER COMMAND REPORT ON NIGHT OPERATIONS - 26/27th NOVEMBER, 1942.Mine-laying (Frisians etc.)Metereological Advice Submitted to the Command.

0950 hours. The midnight frontal positions are estimated as follows: (1) cold from 61°N. 05°E to 54°N. 12°E to 53°N 20°E and eastwards (2) warm from 48°N 0° to Munich and eastwards. At home bases there will be variable layer cloud, based in some areas below 1,000 feet, with occasional fog or drizzle. In the south-west, visibility will be moderate with broken strato-cumulus cloud. Over Germany between the two fronts there will be much layer cloud based at 1-2,000 feet. South of the warm front, broken medium cloud will prevail to the Alps, but little or no cloud is expected over the Plain of Lombardy. Over West France there will be patches of layer cloud. Near the cold front over Denmark there will be a strong upper wind, probably 60 m.p.h. at 15,000 feet. To the east of this cold front there may be small amounts of cloud, but owing to lack of data, a large margin of error must be allowed in the estimation of the exact frontal position.

1300 hours. Most home bases should be fit at dusk, although aerodromes in the east may have patches of very low stratus. During the night visibility will become poor, with local fog inland and local stratus and drizzle in the east. North Lincoln and Yorkshire should, however, remain available. The south-west should be safe for diversions, and also east Scotland, south of Aberdeen, although the latter area may be troubled towards dawn by the cold front, which is expected to lie from north Scotland to Denmark at midnight, accompanied by rain and thick cloud. For this reason, an early operation in the West Baltic is suggested: here, cloud will be based at 1,500 feet with patches at 600 feet, but broken in places. North-west France will be fit for mining, apart from poor visibility and patches of low stratus over Brittany. The route to North Italy will be cloudy to 48°N., with tops about 5,000 feet, but thence almost entirely cloudless, with winds of not more than 30 m.p.h.

1620 hours. There is an even chance that cloud will be broken over Denmark and the west Baltic particularly towards the north. Otherwise, no change.

Sorties.

| | | |
|-----|--|----|
| (a) | Aircraft despatched..... | 30 |
| (b) | " reporting mines laid in primary area | 23 |
| (c) | Abortive sorties { aircraft recalled.....3 } | |
| | { weather.....2 } | |
| | { technical defect 1 } | |
| | { sickness of crew 1 }..... | 7 |
| (d) | Aircraft missing..... | 0 |

Weather Experienced.

At home bases, low cloud below 600 feet and poor visibility rendered conditions unfit for take-off in 3 Group during the evening. Much low cloud was experienced, with fog and drizzle, but Yorkshire, north Lincolnshire, Norfolk, the south-west and the south coast remained fit, with cloud based at 1-2,000 feet and moderate visibility. North-west France was overcast with layer cloud at about 1,000 feet, and the Frisians with broken layer cloud at 2,500 feet. Moderate fog was encountered around 40°E. at 4,000 feet. A wind of 20-30 m.p.h. blew from the north. Visibility over all targets was moderate. The moon was 85% of full and rose at 2008, B.S.T., i.e. during the operation.

Results.

30 aircraft were despatched to lay mines off the west coast of France and the Frisians, and in the Yattegat. All the three aircraft despatched to the last-mentioned area were recalled, owing to weather conditions at base, but all except 4 of the remainder succeeded in reaching their allotted targets. 44 mines were laid, including 36 off the Frisians. Apart from one hit from flak causing minor damage, the operation was completed without incident. All our aircraft returned safely.

11/11/41 (1941-12/31) (1941-12/31)

| Target | Op. | Type | Sorties | Aircraft reporting mines laid in | | Subsive sorties | | Missing | Mines laid in primary area | Damage | | Interceptions |
|-----------------|-----|-----------|---------|----------------------------------|------------------|-------------------|-----------------------|---------|----------------------------|--------|----------------|---------------|
| | | | | primary area | alternative area | Over enemy coasts | Not over enemy coasts | | | Flak. | Not un. action | |
| KITBELT | 5 | Lancaster | 3 | - | - | - | 3 | - | - | - | - | - |
| FRISLAN ISLANDS | 4 | Halifax | 20 | 19 | - | - | 1 | - | 36 | - | - | - |
| LORIENT | 4 | Well.III | 4 | 2 | - | - | 2 | - | 4 | 1 | 1 u.C. | - |
| ST. N. SAIRE | 4 | Well.III | 3 | 2 | - | - | 1 | - | 4 | - | - | - |
| T O T A L | | | 30 | 23 | - | - | 7 | - | 44 | 1 | 1 u.C. | - |

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BOMBER COMMAND REPORT ON NIGHT OPERATIONS - 27/28th NOVEMBER, 1942.Stettin (abortive) : Minelaying.Metereological Advice Submitted to the Command.

0930 hours. At midnight a warm front will lie from 59°N.14°E. to 57°N.05°E. 55°N.01°W to Cardiff, becoming cold to Havre to Paris to Nurnberg. Home bases between the warm and cold sectors of the front will experience cloud based at 1,000 ft with showers and moderate to poor visibility. Medium and low cloud will increase over the southern North Sea and Denmark, but over the Baltic coast of Germany inland to 50°N and east of 9°E., there will be little cloud and visibility will be good, although late in the night medium cloud will increase from the North, West of 9°E over Germany and north of 50°N there will be layer cloud with good breaks. South of the cold front medium front will prevail, accompanied by strato-cumulus. A low cloud is expected over the plain of Lombardy, probably with rain. Over France much layer cloud will prevail in the north-west, but this will disperse southwards.

1315 hours. 1, 5 and 93 Groups should be just fit for take-off, but will require diversions for return. 4 Group will have very few bases available after the passage of the warm front, at about 2400 or 0100. 2, 3, 91 and 92 Groups expect better conditions than of late during the first half of the night, but are very doubtful afterwards, with low cloud and slight precipitation. Some aerodromes will be available on the south coast and in the southwest. Stettin should be free of low cloud until late in the night; winds on route are expected to be northerly or north-westerly, but could nowhere be stronger than 50 m.p.h. Danzig will be very suitable for mining, as north-west France and the Frisians during the first half of the night.

1610 hours. Conditions over the eastern North Sea will deteriorate for return to Stettin, with strong winds of 70-80 m.p.h. at 15,000 feet and 50 m.p.h. at 2,000 feet. Bases north of London should be available for most of the night, except during the passage of the cold front, which will reach Yorkshire at about 0300 hours. 1 and 3 Groups are more hopeful than this morning, but in the Midlands (Pathfinders, 91 and 92 Groups) conditions will deteriorate soon after dusk, with no chance of improvement. Good diversions are still expected in the south-west and on the south coast.

STETTIN.8 Stirlings

32 aircraft (3 Pathfinder Stirlings of 3 Group and 21 Lancasters of 5 Group) were despatched to attack Stettin, but were all recalled shortly after take-off owing to rapidly deteriorating weather at bases. None of the aircraft reached enemy territory; all jettisoned their bombs into the sea and returned without mishap.

MINELAYING.Results.

| | | |
|-----|---|----|
| (a) | No. of aircraft despatched | 10 |
| (b) | " reporting mines laid in primary area..... | 6 |
| (c) | " abortive sorties (mistaken recall)..... | 4 |
| (d) | " aircraft missing..... | 0 |

War Experienced.

All Operational Groups were serviceable at 2200 hours, but soon afterwards developed in 1 and 5 Groups and locally in 4 Group, with mist in 3 Group. Visibility in Yorkshire and Lincolnshire improved after 0300 except for slight showers. En route to the Gironde, 10/10ths strato-cumulus was encountered between 3,000 and 5,000 feet but this broke 15-20 miles from the target. Texel was covered with 10/10ths cloud at 2,000 feet. Visibility at both targets was moderate. The moon was below horizon.

Notes.

Five aircraft were despatched to lay mines south of Texel, two off the Ems estuary, one off Gdynia and one off Danzig. All three detailed for the Baltic were detailed for the Gironde picked up the recall signal issued to aircraft of their own Group operating against Stettin, and mistakenly obeyed it, jettisoning their

mines into the sea. The remaining six aircraft completed their task successfully. 10 mines were laid south of Texel and 4 off the Gironde. No incidents were reported and no aircraft is missing.

BC/S.26342/6/ORS.
19th January, 1943.

MLM/PVD.

STETTIN: minelaying (night 27/28th November, 1942)

| Target | Op. | Type | Sorties | W/O reporting mines laid in primary area | abortive (not over enemy territory) | Missing | Mines laid in primary area | Damage | Interceptions |
|-------------------|--------|-----------|---------|--|-------------------------------------|---------|----------------------------|--------|---------------|
| STETTIN | P.P.F. | Stirling | 3 | - | 3 | - | - | - | - |
| | | Stirling | 8 | - | 8 | - | - | - | - |
| | | Lancaster | 21 | - | 21 | - | - | - | - |
| SCHEMIG TOTAL | | | 32 | - | 32 | - | - | - | - |
| <u>MINELAYING</u> | | | | | | | | | |
| Lanzig | 5 | Lancaster | 1 | - | 1 | - | - | - | - |
| Odysia | 5 | Lancaster | 2 | - | 2 | - | - | - | - |
| S. of Texel | 1 | Well. IV | 5* | 5 | - | - | 10 | - | - |
| Gironde Estuary | 3 | Stirling | 2 | 1 | 1 | - | 2 | - | - |
| MINELAYING TOTAL | | | 10 | 6 | 4 | - | 12 | - | - |
| T O T A L | | | 42 | 6 | 36 | - | 12 | - | - |

128

* These 5 W/O were not fitted with Geo

BOMBER COMMAND REPORT ON NIGHT OPERATIONS, 28/29TH NOVEMBER, 1942.Turin: Minelaying: LeafletsSUMMARYTurin

1. This was the most successful attack yet made on an Italian target, causing damage described by the Italian authorities as "enormous". Of the 228 aircraft, nearly all heavies, which were despatched, 85% delivered a concentrated and accurate attack in moonlight from comparatively low level. The havoc caused included 33 industrial plants destroyed or damaged, again mainly by fire, and extensive devastation of residential parts of the city. Opposition in the target area was again very slight and only 1 bomber failed to return.

Minelaying

2. Sea-mining at various points in the Bay of Biscay and at Brest was undertaken by 19 aircraft. 15 aircraft reached their allotted areas, laying 30 mines, and a Stirling laid 4 mines in an alternative area. One Wellington failed to return.

Leaflets

3. Five aircraft dropped leaflets, describing the use of night photographs in the interpretation of air raids, over Paris and Roubaix. All returned safely without incident.

Meteorological Forecast

4. The midnight frontal positions are estimated as follows:-

1. occluded from $51^{\circ}\text{N } 21^{\circ}\text{E}$ to $49^{\circ}\text{N } 12\frac{1}{2}^{\circ}\text{E}$, becoming cold to $47\frac{1}{2}^{\circ}\text{N } 05^{\circ}\text{E}$ to N.W. France, then turning northwards as a warm front over Ireland;
2. Warm from $49^{\circ}\text{N } 12\frac{1}{2}^{\circ}\text{E}$ to the Alps.

Bases:- Well broken layer cloud with local fog inland soon after midnight, but most stations in Operational Groups should be fit until 0200 hours.

Route to the Alps:- No difficulties should be encountered. Wind at 10-15,000 ft., 40 m.p.h. from 340° .

Turin:- 7/10-10/10ths. strato-cumulus and possibly medium cloud are expected, but there is a good chance of the target being almost clear.

North Sea and German targets:- Doubtful conditions over the North Sea with very strong wind and wintry showers. Mannheim expected to be covered by 7-9/10ths. cloud early in the night, with a chance of clearances later. No better targets available except in north Germany between 10°E and 15°E .

TURINPlan of Attack

5. Zero hour 2145 hours
 Period of attack:-
 Pathfinder Force (24 a/c).....zero to zero + 51 mins.
 Main Force - 3 Group (Fiat Mirafiori works) zero + 3 to zero + 25 mins.
 1,4 & 5 Groups (city centre)....zero + 28 to zero + 60 mins.

Routes Briefed:-

- 1,4 & 5 Groups: Base - Cabourg - Annecy - TURIN - same return.
 3 Group: Base - between Le Treport and Dieppe - 10 miles S. of Troyes - St. Michel - TURIN - same return.
 (for routes taken, see attached map)/6.

6. The Pathfinders were divided into "finders" of the target and "illuminators" or "markers" of the two aiming points shown above.

At zero hour the "finders", consisting of 6 Stirlings, were each to release two long sticks of flares (8 - second intervals) from East to West across the city as follows:-

3 Stirlings from $45^{\circ}05'N$ $10^{\circ}35'E$. to $45^{\circ}05'N$ $10^{\circ}44'E$.
 3 Stirlings from $45^{\circ}03'N$ $10^{\circ}35'E$. to $45^{\circ}03'N$ $10^{\circ}44'E$.

Two of these six aircraft, after releasing their flares, would then mark 3 Group's aiming-point (the Fiat Mirafiori factory), when it had been positively identified, by each dropping 4 x 250 lb. incendiaries on it. The additional loads of the four remaining Stirlings, all consisting of 3 x 1000 lb. G.P. bombs, were to be dropped on the second aiming point, namely the centre of the old city, about 1200 yards S. of the Royal Arsenal.

7. The illumination, initiated by one aircraft at zero hour, was to be continued by single aircraft operating at 3-minute intervals until zero + 51 minutes. The 18 Pathfinders acting in this capacity were each to release 2 short flare-sticks (5-second intervals) from E. to W. across a line running N-S from a point near the Royal Arsenal to the main railway station, so that the nearest sticks would be almost $1\frac{1}{2}$ miles from the Fiat-Mirafiori works. The additional loads of all illuminators, made up of 1000 lb. G.P. bombs, were to be dropped on the centre of the old city.

8. The Main Force, including 7 untrained Pathfinders, was given two specific aiming points as already indicated. 3 Group was given the Fiat-Mirafiori works, approximately $3\frac{1}{2}$ miles S.W. of the old city centre, which was to be attacked from low level with 1000 lb. R.D.X. - filled bombs, individual loads being made up as necessary with 500 lb. or 250 lb. G.P. bombs.

9. The bomb loads specified for the remainder of the Main Force (1, 4 & 5 Groups together with 7 Pathfinders u/t) for their attack on the city centre were:-

1 and 4 Groups:- one third of aircraft to carry H.E. and two thirds to carry 4 lb. incendiaries (6% of explosive type).

3 Group:-
 (a) 4 Lancasters, each 1 x 8000 lb. H.C.
 (b) 4 armoured Lancasters, each 1 x 4000 lb. H.C.
 (c) One third of the remainder (approx. 95 a/c) to carry mixed loads of 1 x 4000 lb. H.C. made up with the maximum weight of incendiaries, the other two thirds to carry incendiaries only.

10. Aircraft of 4 Group were instructed to concentrate over Littlehampton at 15,000 feet, 2 hours 50 minutes before their planned time of arrival at the target (2213 hours), then to maintain height but to cut down engine revolutions as much as possible in order to reduce exhaust glow. These aircraft were also advised to lose height on the return journey until reaching a level just above the clouds and to avoid flying in cloud owing to the risk of icing.

Sorties

| | | | |
|-----|-----|--|-------------|
| 11. | (a) | No. of aircraft despatched..... | 228 |
| | (b) | " reporting attack on primary area..... | 194 (85.1%) |
| | (c) | " abortive sorties { technical defect..... | 32 |
| | | { cause unknown (a/c crashed | |
| | | after take-off... 1). | 33 |
| | (d) | " aircraft missing..... | 1 (0.4%) |

Weather Experienced

12. Home Bases:- Moderate visibility, with well broken layer cloud. Thick haze developed in Lincolnshire and the Midlands between 2200 and 0300 hours.
 Route to Turin:- 8-10/10ths strato-cumulus cloud over France, with tops at 6,000 feet, but rising to 8,000 feet towards the Alps, where some icing was reported in the tops of the clouds. The peaks of the Alps were clear.

...../Turin

Turin:- Over Italy the cloud completely cleared. The sky was clear over target and visibility was good, despite haze.

The moon rose during the attack and was 69% of full.

Narrative of Attack

13. 228 aircraft of the Pathfinders, 1,3,4 and 5 Groups were despatched to Turin. 8/10ths cloud was encountered over France, but this cleared south of the Alps and visibility over Turin was good, apart from some haze. All 23 Pathfinders reached the target, which they are reported to have illuminated promptly and accurately, and 171 aircraft of the Main Force followed with an extremely concentrated attack. 190 tons of incendiaries and 189 tons of H.E. bombs, including 2 x 8,000 lb. and 37 x 4,000 lb., were dropped. Many fires were started in the city, especially in the west and near the Royal Arsenal. The smoke was so thick that a number of aircraft detailed to bomb the Fiat works were unable to identify them, and attacked the city instead. Nevertheless, a number of hits on the works were recorded; one big fire was observed in the northern end, and the main building was reported to be ablaze. The Italian communique admitted "enormous damage, especially to the centre of the town." One aircraft was missing from this operation. Two others crashed on return and were totally wrecked, but otherwise no major damage was sustained.

14. No claims were made of attacks on alternative targets. One aircraft was forced to jettison its load 10 miles west of Chalons on account of engine trouble but otherwise there is no evidence of any stray bombing.

Photographic Evidence

15. Night Photographs:- There is considerable photographic evidence for this attack and a fire plot (Rept. N.68), based on the examination of more than 160 films, is available. The diagram shows that a great concentration of bombing was achieved in the west half of the city. The photographic evidence falls into three periods of time, from zero hour (21.45) to 22.30; from 22.30 to 22.35, when photography reached a peak, and 22.35 - 22.57.

The effective zero hour for the attack on the town was 22.15 hrs. The earliest photographs show almost the whole of Turin before fires were burning, and by 22.18 the first incendiary sticks could be plotted. Flares were burning early in the operation over all parts of the city (aircraft attacking in the first half hour carried flares and H.E.) and at least 12 incendiary sticks together with isolated fires, were recorded before 22.30. The centre of the concentration was $2\frac{1}{2}$ miles W.S.W. of the city centre. In the second period the incendiary attack was intensified, many new sticks being recorded. The area affected was considered extended eastwards and westwards, but especially to the west. Much smoke and haze is seen in the photographs from now on, obscuring ground detail. This suggests that fires were beginning to develop. Three 4,000 lb. H.E. and 1 x 8,000 lb. H.E. bombs were plotted in this period. Districts to the east, south and west of the concentration were still largely clear of fires at 22.30. In the third period incendiaries continued to fall mainly to the east of the area already affected. New sticks were photographed with more fires and much smoke. Photographic coverage at 22.54-57 showed numerous fires burning and much smoke rising at many points in the western half of the city.

The raid on the Fiat Works comprised a separate operation, occupying 20 minutes before the attack on the city. The only photographic evidence for this is that a number of successful exposures made with bombing show the works and their immediate surroundings. Some sticks of incendiaries were photographed near the works.

Daylight Reconnaissance:-

16. The P.L.U. cover includes damage caused on the night of the 29-30th November, but, as only 18 aircraft attacked TURIN on the latter raid, virtually all the destruction may be attributed to the night under consideration. Very heavy damage is shown to have been caused, almost entirely to industrial works; public and residential buildings have suffered relatively little. These include 5 of the Fiat plants producing rolling stock, lorries and heavy armaments, 2 Lancia plants manufacturing military vehicles, A.F.V.'s and tanks, and factories devoted to aircraft components and typewriters. The State Railway works again

suffered heavily. Public buildings that were hit include the Municipal Water Works, the Gas Works, the Tramway Offices and the railway station. About 25 acres of the residential districts of the city were devastated.

Navigational Aids:-

17. Propagation conditions must have been phenomenal on this night. The average Gee range was 467 miles, and no squadron except one, which was represented by only one aircraft, achieved an average of less than 425 miles. Only four squadrons failed to obtain a range of over 500 miles, and a navigator of 97 Squadron, by extrapolation, reached 617 miles which constituted an all-time record for Gee. The absence of a lattice chart beyond 7°E was again apparent.

Defences

18. Flak:- The majority of aircraft delivered their attacks from heights between 5,000 and 7,000 feet. Since the Italians are thought to possess very few predictors and are forced to rely on plotting methods for data for their heavy guns, it is not surprising that inaccurate fire was reported by almost all crews. The heavy guns were active to the north-west, north-east and south-east of the town, but the number of sites engaging was very much smaller than photographic interpretation and secret sources indicate. Possible explanations may be that there are a number of dummy guns in the area or that well-constructed shelters are provided for gun detachments. Light A.A. guns were observed on the roofs of the Fiat factory, to the south-west of it, near the Lancia works and in the Marshalling Yards. Three searchlights only were reported.

Fighters:-

19. Number of interceptions reported:-

| | | |
|-----|--------------------------|-----------|
| (a) | attacks..... | 9(3.9%) |
| (b) | other interceptions..... | 16(7.0%) |
| | Total | 25(10.9%) |

The routes followed mainly avoided controlled night-fighter areas and none of these was heard operating. As on the previous visit to this target, the conditions of moonlight and clear visibility above medium cloud, and the long distance travelled over enemy territory, were most favourable for German freelance fighters. These made many interceptions, including nine attacks, but achieved practically no success. The opposition encountered from Italian fighters was practically non-existent, and none attempted to attack.

Casualties

| | | | |
|-----|-----|------------------------------|-----------|
| 20. | (a) | No. of aircraft missing..... | 1(0.4%) |
| | (b) | " | damaged:- |
| | | flak..... | 9(3.9%) |
| | | fighter..... | 2(0.8%) |
| | | not enemy action..... | 6(1.2%) |
| | | total damaged | 17(5.9%) |

One Stirling of 3 Group was missing. An observation of an aircraft seen to crash into a hill while crossing the Alps on the outward journey probably refers to this. No major damage was sustained from flak except in the instance of another Stirling of 3 Group, both pilots of which received severe face injuries over the target. The first pilot, F/Sgt. Middleton, succeeded in bringing his aircraft back to the English coasts, and, although the aircraft crashed and he himself was killed, four of the crew escaped with their lives. F/Sgt. Middleton was posthumously awarded the V.C. Another aircraft, also a Stirling, overshot on landing and became a total wreck, but none of the crew was hurt. Two aircraft were hit by fighters, but in neither instance was the damage serious.

MINELAYING

21. 19 aircraft were despatched to lay mines in the Bay of Biscay. Despite 10/10ths cloud, 15 report reaching their allotted targets, and 30 mines were laid.

...../One

One aircraft detailed for the Gironde estuary had to turn back, owing to engine trouble, and laid 4 mines off l'Ile de Re. One Wellington failed to return from Lorient and observations indicate that it was shot down in flames off l'Ile de Croix.

LEAPLETS

22. 5 aircraft were detailed to drop leaflets over France, relating to the use of night photographs in the interpretation of air raids. All completed their task and returned without incident. A number of these leaflets were also carried by aircraft attacking Turin.

BC/S. 26342/6 /ORS.
22nd January, 1943.

MLM/VP.

APPENDIX ITiming of AttackPathfinders (23 a/c).

No. of aircraft attacking within planned period.....23

Main Force.3 Group (Fist Works).

No. of aircraft attacking within planned period.....12
 " " 0-20" late.....13
 " " more than 20" late.....6
 31

1,4 & 5 Groups, & Pathfinders w/t.

No. of aircraft attacking 15-0" early.....4
 " " within planned period.....123
 " " 0-20" late.....13
 140

APPENDIX IIWeight of Bombs Dropped

By aircraft reporting attack on primary area.

H.E. 189.1 tons

Incendiaries 190.5 tons.

including { 2 x 8,000 lb.)
 { 37 x 4,000 lb.)
 { 2 x 1,900 lb.)
 { 186 x 1,000 lb.)

No. of aircraft carrying flares only.....6
 " " flares + 250 lb. incendiaries.....2
 " " flares + H.E.....15
 " " H.E. only.....61
 " " 4 lb. incendiaries only.....87
 " " H.E. + 4 lb. incendiaries.....23
 194

ADDENDUMNight Photographic Evidence

Photographs taken with bombing that have been plotted
 (see accompanying diagram):-

By ground detail.....61 Within 3 miles.....66
 By fire tracks.....24 Between 3 and 5 miles.....10
 Outside 5 miles.....1

Unplotted photographs taken with bombing that show ground detail:-

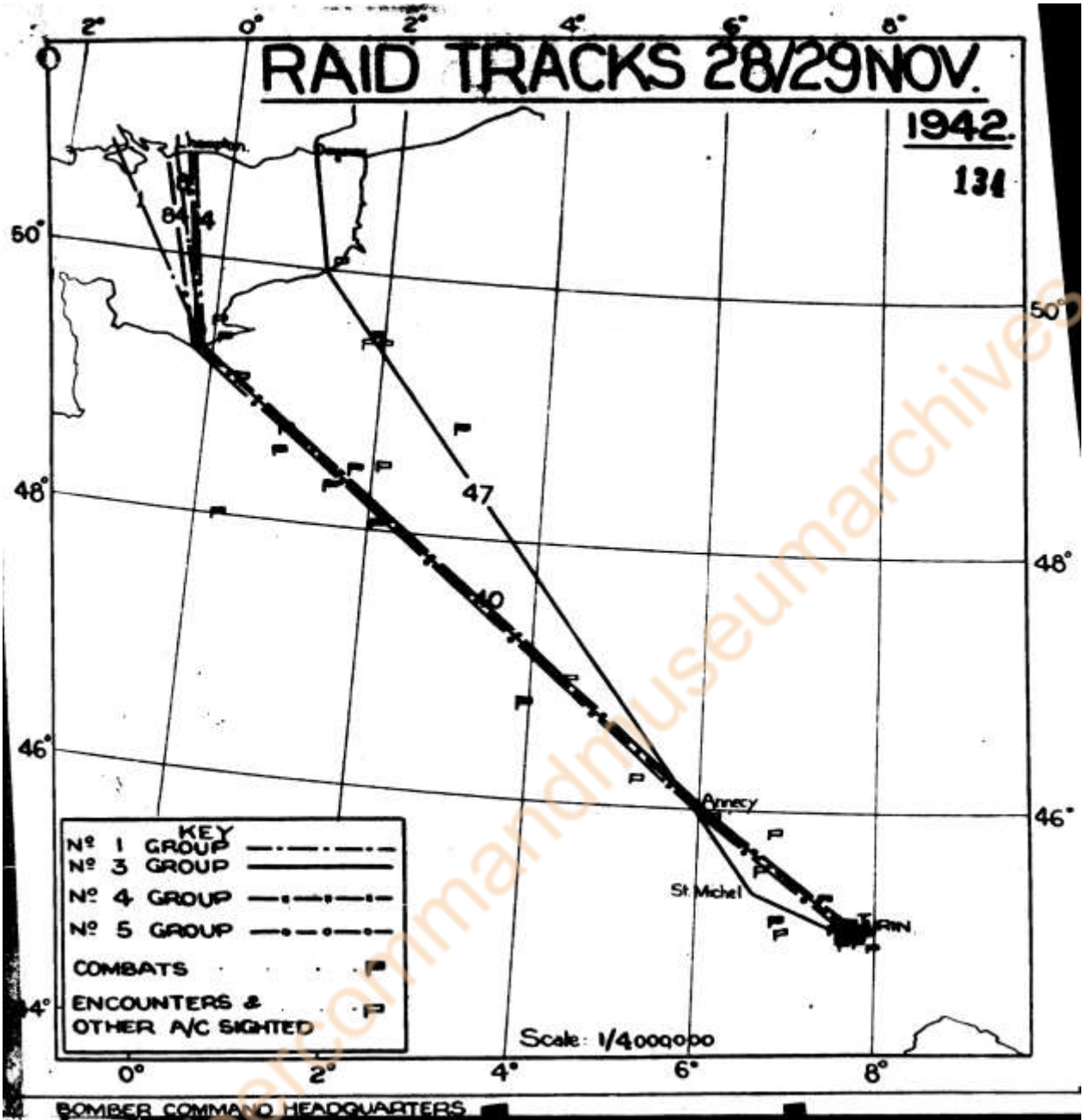
Probably suburbs of Turin.....1
 Open country.....8
 that show no ground detail but with
 fire tracks that might be plotted....44

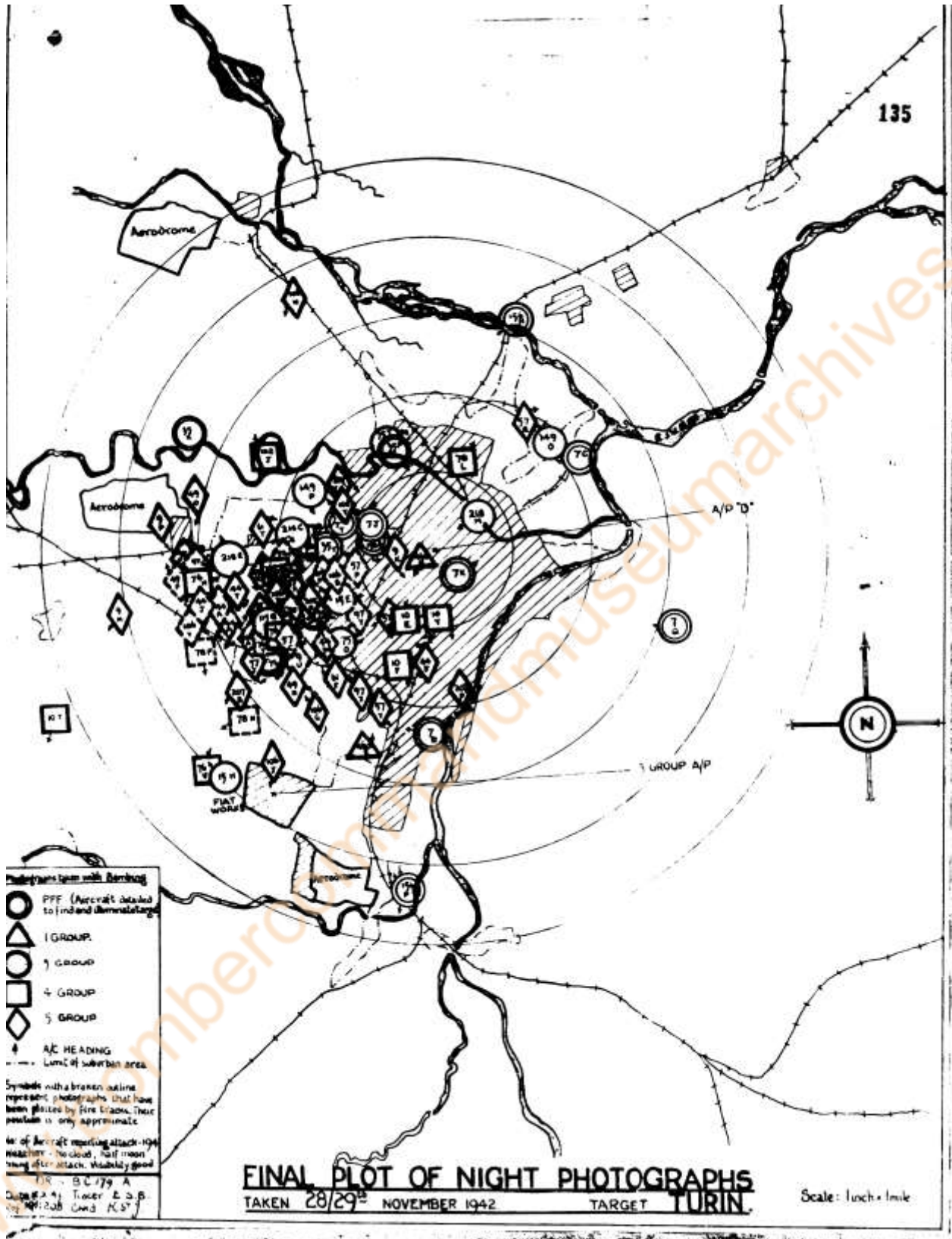
TURIN - minelaying - leaflets (26/27th November 1942)

| Target | Group | Type | Sorties | Aircraft reporting attack on primary area | | Abortive sorties | | Missing | Damage | | | Interceptions | |
|-------------------|------------|-----------|----------------|---|------------------|------------------|----------------------|----------------------------|----------------|---------|----------------|---------------|--------------|
| | | | | primary area | alternative area | over en. territ. | not over en. territ. | | Flak | Fighter | not en. action | attacked | not attacked |
| TURIN | P.F.P. | Halifax | 8 | 8 | | - | | - | - | - | - | - | - |
| | P.F.P. | Stirling | 9 | 9 | | - | | - | - | - | - | - | 4 |
| | P.F.P. | Well.III | 6 | 6 | | - | | - | - | - | - | - | - |
| | 1 | Lenoxster | 26 | 23 | | 3 | | - | 1 | 1AC | - | 1 | 6 |
| | 3 | Well.III | 11 | 11 | | - | | - | 1 | 2AC | - | - | 1 |
| | 3 | Stirling | 34 | 20 | | 6 | 7 | 1 | 2+1E | - | 1B+1E | - | 1 |
| | 4 | Halifax | 36 | 29 | | 2 | 5 | - | 1+1A | 1 | - | 5 | 4 |
| | 5 | Lenoxster | 91 | 82 | | 4 | 5 | - | 2+1AC | - | 1AC | 3 | 3 |
| | P.F.P(u/t) | Halifax | 1 | 1 | | - | - | - | - | - | - | - | - |
| P.F.P(u/t) | Stirling | 4 | 3 | | 1 | - | - | - | - | - | - | - | |
| P.F.P(u/t) | Well.III | 2 | 2 | | - | - | - | - | - | - | - | - | |
| BOMBING | TOTAL | | 228 | 194 | | 13 | 20 | 1 | 6+1A
1AC+1E | 2 | 1AC+1B
+1E | 9 | 16 |
| <u>MINELAYING</u> | | | | primary area | alternative area | | Missing | Mines laid in primary area | | | | | |
| Brest | 1 | Well.IV | 6 [#] | 4 | - | - | 2 | 8 | - | - | - | - | - |
| Lorient | 1 | Well.III | 4 | 3 | - | - | 1 | 6 | - | - | - | - | - |
| St. Nazaire | 1 | Well.IV | 2 [#] | 2 | - | - | - | 4 | - | - | - | - | - |
| Gironde Estuary | 3 | Well.III | 6 | 6 | - | - | - | 12 | - | - | 1AC | - | - |
| | | Stirling | 1 | - | 1 | - | - | - | - | - | - | - | - |
| MINELAYING | TOTAL | | 19 | 15 | 1 | - | 2 | 30 | - | - | 1AC | - | - |
| <u>LEAFLETS</u> | | | | | | | | | | | | | |
| Rotbaix | 92 | Well.III | 4 | 4 | - | - | - | - | - | - | - | - | - |
| Paris | 93 | Well.III | 1 | 1 | - | - | - | - | - | - | - | - | - |
| LEAFLETS | TOTAL | | 5 | 5 | - | - | - | - | - | - | - | - | - |
| TOTAL | | | 252 | 214 | 1 | 13 | 22 | 30 | 6+1A
1AC+1E | 2 | 5AC+1B
+1E | 9 | 16 |

These 6 aircraft were not fitted with Gee.

www.bombercommandmuseum.ca





Symbols used with Bearings

- PFF (Aircraft detailed to find and illuminate target)
- △ 1 GROUP
- ◐ 2 GROUP
- ◑ 3 GROUP
- ◒ 4 GROUP
- ◓ 5 GROUP
- ↑ A/C HEADING
- Limit of suburban area

Symbols with broken outline represent photographs that have been placed by fire tracks. Their position is only approximate.

No. of Aircraft reported attack 194
 Weather - No cloud, half moon
 Time of attack, visibility good

TR - BC 179 A
 Date: 28/29 Nov 42
 By: 100/208 CWS KST

BOMBER COMMAND REPORT ON NIGHT OPERATIONS - 29/30th NOVEMBER, 1942.
18 FEB 1943

Turin: French Railways.

Meteorological Advice Submitted to the Command.

1. 0920 hours. Home bases will generally be fit all night, except for wintry showers in the north and east of East Anglia and local smoke in the Midlands. All targets are extremely uncertain. Masses of layer cloud will drift over the Italian plain, and there should be some good clearances, but it is impossible to state where and when these will be found. The same applies to the Upper Rhine. At midnight a front will lie from Exeter to Paris/just south of Mannheim, but this should not present difficulties above 12,000 ft. Over the North Sea there will be wintry showers and a low freezing level. West of Denmark, much convection and layer cloud is expected, but east of Denmark, over northern Germany, cloud will be well broken.

Later Conferences. For take-off, 10/10ths will be experienced at 2-4,000 feet and locally below 2,000 feet, extending in layers to 8,000 feet and in places, particularly in the south, to 12,000 feet. Freezing level, 2,000 feet icing slight to moderate. Visibility 4-3 miles. Similar cloud will be encountered on return, though some breaks are probable in northern Groups. Visibility will deteriorate to 1,000-3,000 yards. Local diversions will be available on the south coast, particularly west of Thorney. Turin is likely to be half-covered with medium cloud; visibility will be bad, with a risk of fog. En route, 10/10ths will be encountered to the Alps, with tops to 8,000 feet and further layers to 10-15,000 feet, especially near the front; freezing level, 1,000-1,500 feet. The peaks of the Alps should be clear. A north-north-westerly wind of 40-50 m.p.h. is expected over France.

Plan of Attack.

2. The target for tonight is TURIN. Zero hour will be at 0325 hours. Period of attack: zero to zero + 30 minutes. The attacking force will consist of 16 pathfinders and 20 Stirlings of 3 Group. 12 pathfinders will mark and attack an aiming-point 1,000 yards south-east of the old city centre. The remaining 4 pathfinders, together with all the Stirlings, will attack the Fiat Mirafiori works with 1,000 lb. R.D.X.-filled bombs from low level and from any direction. No flares will be released over this special target, which should be plainly visible in the moonlight, but any aircraft unable to find it will attack the other aiming-point.

Route Briefed.

3. P.F.P. : base - Dungeness - 500N.010E. St. Julien - TURIN - same return.
3 Group: base - Dungeness - between Le Treport and Dieppe - 10 miles north of Troyes - St. Michel - TURIN - same return.

(For routes taken see route map).

Sorties.

4. (a) No. of aircraft despatched 36
(b) " " reporting attack on primary area ... 18 (50.0%)
(c) " abortive sorties (technical defect.....4)
(icing.....12).....16
(d) " aircraft missing 2 (5.6%)

Narrative of attack.

5. The attacking force was originally planned to comprise all available long-range aircraft, but, in view of deteriorating weather conditions only a small force was sent, with the Fiat Works as the main objective. Severe icing was experienced on the outward journey and several aircraft had consequently to jettison their loads into the sea. 18 aircraft succeeded in reaching the target area, but experienced great difficulty in locating the Fiat Works owing to dense haze. Most pilots dropped their bombs on the town, adding to considerable fires still burning from the night before. 400,000 leaflets were dropped on Turin and Paris. Two aircraft failed to return; another crash-landed and was totally wrecked, but the crew escaped serious injury.

Weather Experienced.

6. Home bases generally remained fit throughout the night. En route to Turin, 10/10ths strato-cumulus with icing was encountered to the Alps. Italy was free of cloud but the target was obscured by thick haze or fog. Visibility was moderate. The moon was above the horizon and 60% of full.

Night Photographic Evidence.

7. Photographs taken with bombing that have been plotted (within 3 5).....5
Unplotted photographs that show ground detail (probably Turin
(open country.....)

The evidence from night photographs shows that flares were dropped over the town, where smoke and at least one stick of incendiaries are seen. The number of photographs returned by aircraft is, however, too small to afford evidence of the progress of the attack.

Weight of Bombs dropped.

8. (by aircraft reporting attack on primary area).

H.E.: 29.0 tons. Incendiaries: 1.8 tons.

including (3 x 4,000 lb.) (1 x 4,000 lb.)
(45 x 1,000 lb.)

| | |
|--|-------|
| No. of aircraft carrying flares + H.E..... | 13 |
| " " H.E. only | 4 |
| " " H.E. + 4,000 lb. Incendiary..... | 1 |
| | <hr/> |
| | 18 |

Day Reconnaissance.

9. The P.R.U. cover reveals severe damage, but by far the greater part of this was no doubt caused by the attack of the previous night, carried out by over 150 bombers. The inadequacy of the night photographic evidence makes it impossible to attribute any particular incidents to the raid under consideration.

Timing of Attack.

| | |
|---|--|
| 10. No. of aircraft attacking 15-0" early | |
| " " within planned period | |
| " " 0.5" late..... | |

Other targets attacked.

11. No claims were made of attacks on other targets. One aircraft jettisoned its bombs 65 miles west of Turin, and another 35 miles north-

of Dijon, but in both instances they are thought to have fallen in open country.

Defences.

12. Flak was reported as considerably heavier than on previous Turin raids, and was possibly predicted. There were few searchlights but two or three balloons were seen. Of the 6 aircraft plotted in the target area, one recorded heavy flak, four light flak, and none searchlights.

13. Casualties.

Two aircraft failed to return. The Italian communique stated that one was shot down by flak near Micholina, and an intercepted R/T message claimed one as destroyed south-east of Paris, presumably by a fighter. There is no corroboration of either of these claims.

Summary.

14. A minor raid in bad conditions added to damage caused the previous night.

FRENCH TARGETS.

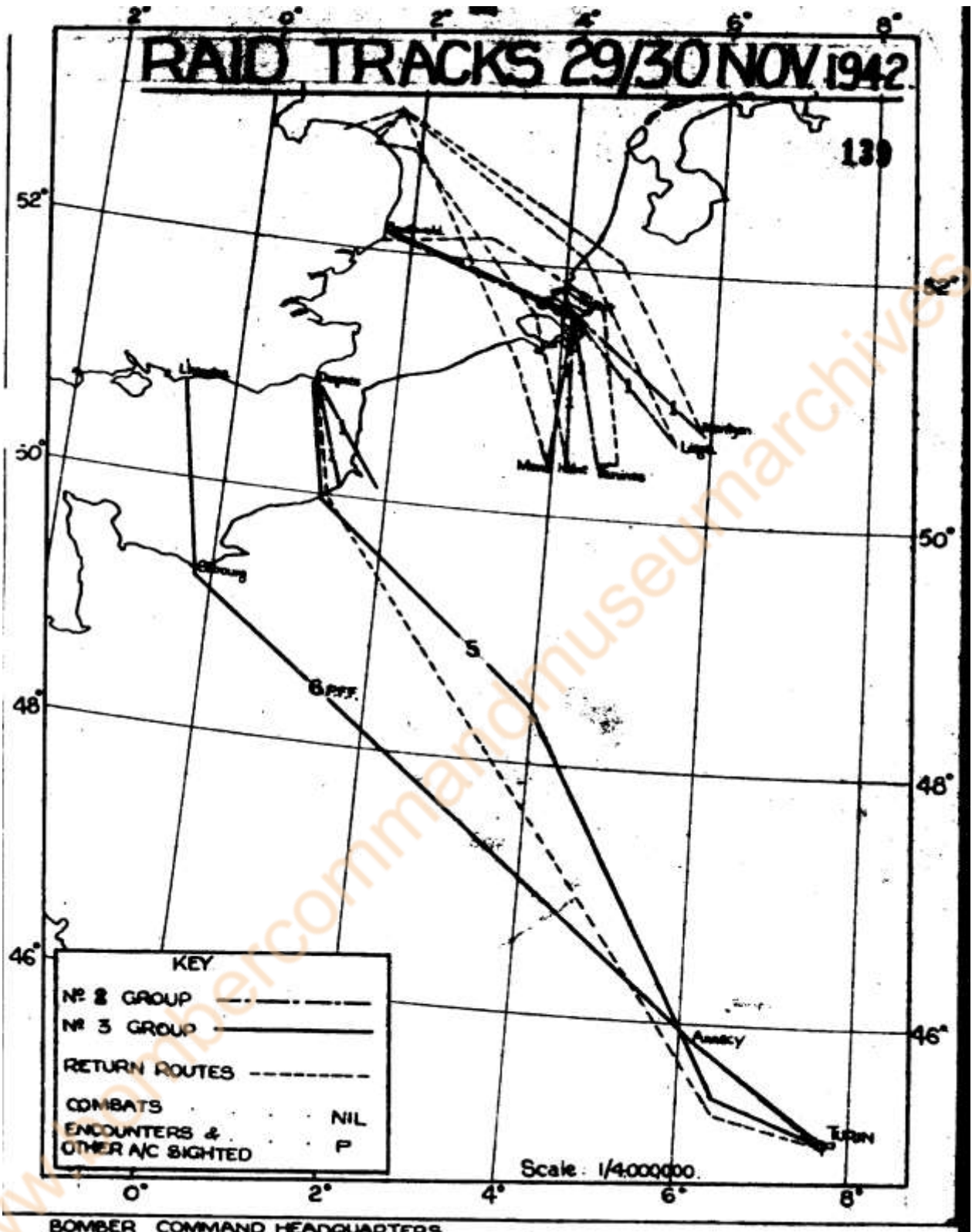
15. 6 Mosquitoes of 2 Group were detailed to attack railways and marshalling yards in the area of Haine St Pierre, Namur, Mons, Liege and Montzen. All completed their tasks and returned safely. No definite results could be observed, owing to cloud.

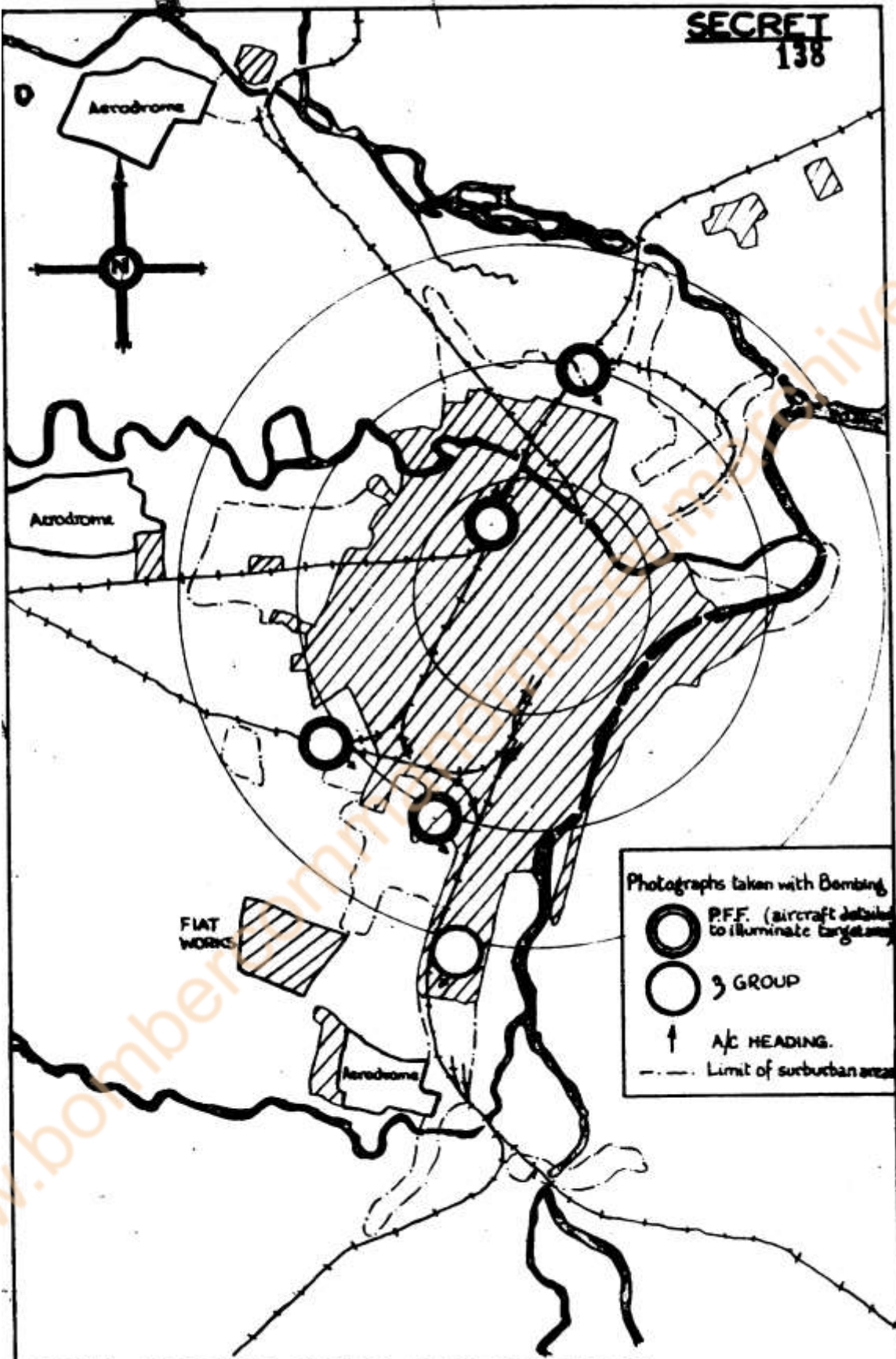
BC/S. 26342/6/ORS.
24th January, 1943.

MLM/VP.

| Target | Op. | Type | Sorties | A/C reported
attack on
primary area | over enemy
territory | not over
enemy
territory | Flak | not enemy
action | (Losses) |
|--------------------|--------|-----------|---------|---|-------------------------|--------------------------------|------|---------------------|----------|
| TURIN | P.F.P. | Lancaster | 7 | 7 | - | - | - | - | 1 |
| | P.P.P. | Stirling | 9 | 7 | - | 1 | 1 AD | - | - |
| | 3 | Stirling | 20 | 4 | 2 | 13 | - | 1 E | - |
| T O T A L | | | 36 | 18 | 2 | 14 | 1 AD | 1 E | 1 |
| French
Railways | 2 | Mosquito | 6 | 6 | - | - | - | 1 | - |
| T O T A L | | | 42 | 24 | 2 | 14 | 1 AD | 1 E | 1 |

RAID TRACKS 29/30 NOV 1942





FINAL PLOT OF NIGHT PHOTOGRAPHS
TAKEN 29/30th NOVEMBER 1942 TARGET TURIN

Scale: 1 inch = 1 mile.

...ORS (BC) 1.73A.
Date RS 143 Tracer. E.S.R.
Ref. MA 209/Chkd. K.S.T.J.

MEMBER COMBINED REPORT ON NIGHT OPERATIONS - 30th NOVEMBER/1st DECEMBER, 1942.

Mine-laying (La Pallice).

Local Advice Submitted to the Command.

0930 hours. The midnight frontal positions are estimated as follows: (1) north-east Scotland to north-east Ireland to south-east Ireland (2) south-east Ireland to south-west England to the Channel Islands to the Alps and then south-westwards and occluded eastwards. Heavy bases south of the coast will experience fog in patches by midnight, probably becoming widespread over the eastern North Sea there will be much convection cloud, tops 15,000 feet. This will extend some distance along the western Baltic and to the south, but deep inland good breaks should be found. Much medium cloud is expected over the Lowlands and the Paris Plain, probably accompanied by low cloud. Along the west coast of France there will be much layer cloud, based at about 1,000 feet.

1250 hours. Bases of 4 Group should be fit for take-off, but will be later. Other Operational Groups will experience local fog or very poor visibility at dusk, becoming worse towards midnight, except in East Anglia. Snow may be reported in the north. A good diversion is likely in south-west England. From the coast to Danzig there will be frequent wintry showers and heavy cloud, very low in places. Over the Bay of Biscay, 8-10ths cloud will be based at 2,000 feet, probably thicker in the north.

1545 hours. 4 Group will be fit till 0200 hours, but probably ^{not} later; visibility is expected in cloud at 1,000 feet. 1, 3 and 5 Groups will be smoky, developing in patches. 91 and 92 Groups are more promising, with visibility 100 yards.

a) No. of aircraft despatched (Well.III's of 3 Group).....6
 b) reporting mines laid in primary area6

Encountered.

Thin, low cloud prevailed over the target area. The moon was below the horizon but visibility was fairly clear.

6 Wellington III's of 3 Group were detailed to lay mines off La Pallice. They completed their task successfully and returned without incident. 12 mines were

2/6/ORS.
 1st Dec, 1942.