

GAF SEA RECONNAISSANCE

A Prisoner from a French-Based Group Describes Its Operations with Ju-290s

CONSIDERABLE detail about the activities, strength, tactics, and equipment of GAF long-range reconnaissance units has been furnished by crew members of a Ju-290 of 1/FAG 5, based at Mont de Marsan, south of Bordeaux. The aircraft was shot down in the Atlantic by RAF Hurricanes on 26 May, while it was searching for an Allied convoy. The information is supplied in an ADI(K), Air Ministry, report, and is subject to the usual reservations on prisoner of war interrogation.

The Ju-290 in question was one of two hurriedly dispatched about 1100 hours on 26 May, on receipt of a flash report from other aircraft of the same unit which had been searching most of the night before. Both planes were equipped with *Hohentwiel* (FuG 200), and the prisoners' plane at least also carried one *Schwan* automatic DF buoy.

The two aircraft flew together for about six-and-a-half hours on a direct course, and were intercepted by the Hurricanes before sighting the convoy they were after. Being damaged almost at once, one 290 was ditched by the pilot, and five survivors of the crew of ten managed to get clear in one-man dinghies, being picked up later by a naval craft and brought to England.

FAG 5: This unit, consisting of two staffeln only, was formed about June, 1943, at Osnabrück, and has been at Mont de Marsan since November. On 25 May, each staffel had eight to ten aircraft, all Ju-290s, and from 12 to 14 crews each, plus a Gruppenstab with two or three aircraft and crews.

Very few operations had taken place in recent weeks, and (probably for reasons of economy) only a few aircraft of each staffel have been used at a time on operations. In this way, flying hours were built up for certain aircraft, which were then sent to Germany for overhaul, leaving available the fresh ones that had been idle.

Since beginning operations in December, 1943, FAG 5 has lost a total of seven ships and crews. Of these, two were shot down by a Beaufighter and a naval aircraft off Northern Ireland on 16 February. Crews of the Gruppe consisted largely of experienced personnel drawn from other units, and a nucleus of such men remained from the time the Gruppe was organized, a year ago. When losses occurred, crews were reshuffled and new arrivals added who were trained on the Ju-290 at Mont de Marsan.

Ju-290: The Ju-290 flown by this crew was stated to be one of the oldest aircraft in the unit, dating

from the original training period at Osnabrück.

The aircraft of FAG 5 carry two pilots, an observer, two radio operators, a flight engineer, and four gunners. On the long flights made by this group, it was customary for the gunners to change positions every so often.

The armament mounted consisted of the following guns:

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|-----------------|-------------------|
| Forward dorsal | 1 × 20 mm. MG 151 |
| Rear dorsal | 1 × 20 mm. MG 151 |
| Waist | 2 × 13 mm. MG 131 |
| Tail turret | 1 × 20 mm. MG 151 |
| Rear ventral | 1 × 13 mm. MG 131 |
| Forward ventral | 1 × 20 mm. MG 151 |

According to the prisoners, none of the aircraft of FAG 5 had forward fuselage armament, but it was expected that future deliveries of the Ju-290 would have 20-mm. guns in the forward position. The two dorsal turrets are electro-hydraulically operated, and each is manned by a gunner, while the waist guns are manually operated and can be drawn into the fuselage when not in use. The tail turret is accessible from inside, and its 20-mm. gun has a traverse of 60°, with elevation of 45° and a depression angle of 60°.

According to the prisoners, there is no provision for bomb stowage, either internal or external, on the Ju-290s of FAG 5.

Radar and Radio Equipment: The FuG 200 as described by this crew is much the same as that used by aircraft of KG 26, the unit which has operated against shipping in the Mediterranean for so long. It was stated that as carried by FAG 5 this set has a presentation screen calibrated from zero to 100 kilometers, with provision for fine readings to 10 kilometers.

FuG 216 (Neptun) is carried in all aircraft; this is the special tail-warning radar device which bomber crews operating against England have found so unreliable. Presumably it is of greater use to aircraft operating alone over the open sea.

Radio equipment is fairly elaborate in these Ju-290s. The basic set is the FuG 10, which is adapted to voice transmission by means of the TZG 10 unit. (This is done in many cases because of supply difficulties with the FuG 17, standard radiophone set.) An additional attachment to the FuG 10 is normally carried: SK 2, a short wave adapter adding a band of six to 12 megacycles. Standard DF homing set, *Peil Gerät 6*, is also installed.

Range and Performance: The Ju-290 has an endurance of 20 hours, according to these prisoners,

though none of them had ever been out longer than 17 hours. Total fuel capacity was given as about 4,750 gallons, of which about 800 gallons is carried in a large tank in the fuselage. Economical cruising speed (IAS) was stated to be 175 to 180 m.p.h. at about 3,200 feet, with maximum speed in about 250 m.p.h. at the same height.

Atlantic Reconnaissance : The duties of FAG 5 have consisted of unarmed reconnaissance to make sufficient contact with Allied convoys which were suspected of heading into the area so as to report their course, speed and composition ; the aircraft do not act as *Fühlungshalter* (shadowing aircraft), owing to the danger from carrier-borne fighters. Approaches are generally made from the west at low altitudes, according to one crew member.

The normal patrol consists of two Ju-290s, which, in clear weather, fly at a height of 60 to 100 feet and in close formation for protection. In poor visibility they fly at some distance apart. In good visibility, the normal search pattern is a "creeping line" ahead, with about 30 miles between legs, and often not using the *Hohentwiel*. With low visibility, direct courses outwards and back are flown, with some 60 miles between the two. In this case, *Hohentwiel* is used at intervals of about 30 miles, the aircraft climbing to make a searching turn, and returning to the deck immediately.

Navigation : In FAG 5, there has been no standard navigation procedure, and observers have been free to take drifts, fixes, and other observations pretty much as they pleased. Their log books were generally analyzed after a mission, but there was no assessment or grading. The observer of the present crew is a man of considerable experience, and described the methods used in this unit in some detail. A civilian navigation instructor has been stationed with the Gruppe at Mont de Marsan, and gave periodic lectures as well as being responsible for all instruments.

Navigation in FAG 5 is normally by track-plot, air plot being used only when a DR position is doubtful or when the aircraft is being chased by enemy fighters.

This observer usually found his wind data by taking a quick drift on one-minute alterations of course 30° to port and starboard, and then to work out a three-drift wind on a three-point

calculator. He admitted that he often relied on wind estimation from wind lanes and the Beaufort scale, which in practice was accurate enough when helped from time to time by *Sonne* radio beacons and astro fixes.

A simple drift recorder is used in these Ju-290s, built into the port side of the aircraft behind the observer's seat. Drifts were not taken at night, and no flares were carried for this purpose ; astro and *Sonne* fixes were considered sufficient means for keeping on track and for finding ground speed.

ARG 1 : From this prisoner a more detailed description of the ARG 1 astro-calculator and its use was obtained than has been available heretofore (SUMMARY No. 30, page 10). This device is now known to be about 14 inches in diameter. The ground-glass plate extends under the ring frame so that its edge passes under one of the eyepieces, which is fixed and contains a magnifying lens. On the plate, which is lighted from beneath for night use, is a zenithal projection of latitude and longitude lines on a plane surface. An hour-angle scale is marked along the longitude lines, hours being marked off at 15-degree intervals.

Declination is shown on the latitude scale, the lines curving outward toward the pole. Latitude is also marked on the circumference of the plate underneath the ring, but not on the same scale as that on the zenithal projection. Any part of the plate can be viewed through the movable eyepiece, which contains cross-hairs, a magnifying lens, and a screw for vernier adjustment.

In operation, the plate is rotated by means of the geared screw until latitude is set at 90 degrees under the fixed lens. This is neutral position, and the north of the zenithal projection is then at 12 o'clock. The declination and hour-angle are obtained from tables, and the movable eyepiece is set over their intersecting point on the plate. Next the plate is rotated to set the latitude of the observer against the pointer under the fixed eyepiece at the circumference. The new point then appearing under the movable eyepiece will now show the calculated altitude of the star on the hour-angle scale. The error is noted between this calculated altitude and azimuth, and the shot altitude of the star. The result is a position line, which can then be plotted on a chart. The ARG 1 thus takes the place of astronomical tables, and an almanac is the only book needed.



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