

The Watching Wolves of Portugal

by Marco P.J. Borst

The Portuguese Air Force has been flying the P-3P Orion for almost twelve years now. Despite the fact that Esquadra 601 "Lobos" (Wolves) had to face the lack of Maritime Patrol experience in the early years of their P-3 operations, the squadron developed into one of NATO's most experienced squadrons.



Between 1954 and 1960 the Air Force had two squadrons (Esquadra 61 and Esquadra 62) with Lockheed PV2 Harpoons. These were used mainly as bombers for operations in Portugal's African colonies. In 1960 the Harpoons were replaced by Lockheed P2V-5 Neptunes which remained in service until 1977. Both the Harpoons and the Neptunes were former Royal Netherlands Navy aircraft. Prior to the arrival of the Orions in 1988, the Portuguese Air Force did not have any Maritime Patrol aircraft in its inventory. Search and Rescue or coastal patrol missions were conducted with C-130 Hercules or CASA 212 Aviocars.

The Portuguese government recognized the lack of a Maritime Patrol platform, and ordered six former Royal Australian Air Force P-3B Orions from Lockheed in 1985. These aircraft were traded in by the RAAF when the latter purchased ten new P-3C Orions. In mid October 1985 the first two Orions were ferried from RAAF Edinburgh to Montijo AB in Portugal. Almost immediately these aircraft were used for flight-crew training. Lockheed instruc-

tors were responsible for the early training courses. In the meantime Lockheed at Burbank was modifying one of the P-3B Orions to a new standard to meet the Portuguese requirements. It was not before March 1986 that the current Orion squadron was established, and the first so-called P-3P Orion arrived at the squadron in

August 1988. Only one of the six aircraft was modified by Lockheed. The other five were reworked at the Oficinas Gerais de Material Aeronautico (OGMA) facilities at Alverca AB in Portugal. Operational training of mission crews was supervised by Lockheed instructors, and took one and a half years. In mid 1989, Esquadra 601 reached operational status with the P-3P; Portugal was back in the Maritime Patrol business. Since the introduction of the Orion, the aircraft have flown more than 3,600 missions with over 15,400 flight hours in Portuguese service.

Many operational systems on board the P-3P are similar to those on the P-3C-II^{1/2} Orion variant as used by the US and Netherlands navies, but the cabin layout of the aircraft is still based on the P-3B airframe, which means that all mission stations are situated on the left side of the cabin. From the front to the back these are Communications (station 7), Radar and Forward Looking Infra Red (FLIR) sensor (station 8), Electronic Surveillance Measurements (ESM) and Magnetic Anomaly Detector (MAD) sensors (station 8a), Navigation (station 9), Tactical Coordinator (TACCO, station 10) and Acoustics (stations 11 and 12). Crew workload has been better divided, since operating the non-acoustic sensors is the responsibility of two crew members instead of one. Also navigation and communications have been split into two different tasks.

Esquadra 601 is a rather small squadron. In November 1997, reorganizations in the Portuguese Air Force command structure led to the integration of a maintenance group into the squadron. Maintenance personnel now report to the squadron commander. Before the reorganization they reported to the base commander. Esquadra 601 "Lobos" (Wolves) has 104 personnel including 46 maintenance technicians. The goal is to have six operational crews available but at the moment 601 has only 3½ crew. One of the six Orions is in permanent storage (but



P-3P over the Atlantic

(PAF)



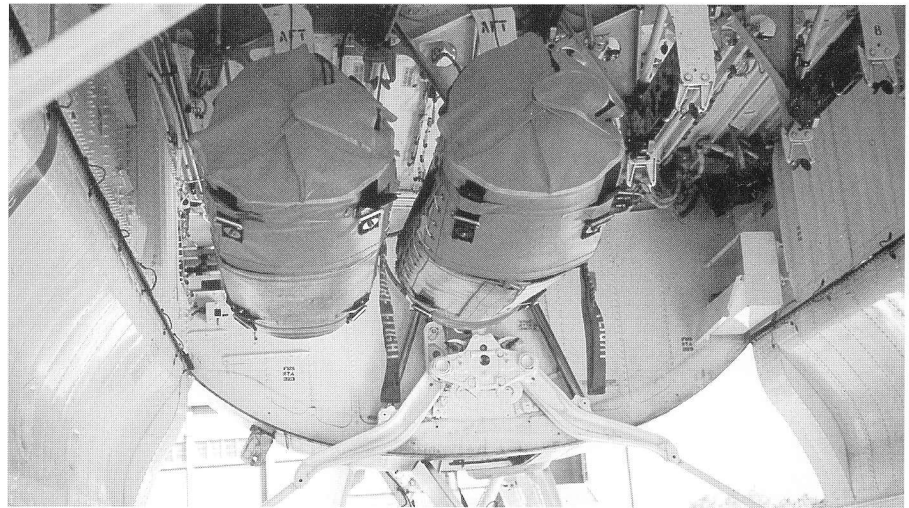
P-3P Tactical Cell (PAF)

will return into service this year) and usually there is one aircraft in Scheduled Depot Level maintenance (SDLM) with OGMA, while one or two aircraft are in phase inspection at the squadron's own facilities at Montijo AB. This leaves two or three aircraft available for operational duties. The squadron is flying about 1200 flight hours every year.

As with any other Orion operator Anti Submarine Warfare (ASW) is still the main mission of Esquadra 601. Secondary missions are Anti Surface Warfare (ASuW), Search and Rescue (SAR), mining, coastal patrol, environmental control and (although only once or twice a year) counter-drug operations. The most important peace time mission is SAR. The area of responsibility for the Lobos is very large. Whenever a SAR mission has to be conducted in the far end of the area the P-3P will fly to the Azores for refuelling. From there the Orion has an endurance of just three hours on station in order to be able to reach the Azores again. Until 1998 Esquadra 601's Orions carried MA-1 SAR kits which contained two 7-person dinghies and two survival packs. These MA-1 kits were dropped from the main entrance door, which required flying at low level to be able to drop the kit as near to the people in the water as possible. During the Summer of 1998 the squadron received new Unipac SAR kits which

are dropped from the aircraft's weapons bay, a much more accurate method. Every kit contains one 10-person dinghy and a survival pack. During 1997, Esquadra 601 flew 113 hours in support of SAR operations.

participation in Operation Sharp Guard, the control of the UN embargo against former Yugoslavia, out of NAS Sigonella (Sicily) between July 1992 and February 1996. Although the Portuguese took part in the operations



Unipac SAR Kits in the P-3P weapons bay

(Marco Borst)

Of course the Lobos are regular participants in NATO exercises like Dogfish, Strong Resolve and Tapon. Further operational training is done in cooperation with the STANAVFORLANT fleet while flight-crew training is done at the Dutch P-3C-II $\frac{1}{2}$ flight simulator at RNLNAS Valkenburg. Besides operations from Montijo, 601 is also operating from Forward Operation Locations such as Lajes (Azores) and Ovar near Porto. These deployments usually last seven to fifteen days.

A very important period in the short history of the squadron was their

with only one aircraft and one crew, they were responsible for 11.5% of the total number of Maritime Patrol missions. This made them number two of the operation, immediately behind the US Navy which was responsible for the greater part of the Maritime Patrol missions with 63%. The Royal Netherlands Navy (taking part with two aircraft) was third with 9%. Numbers and hours presented by Esquadra 601 at the end of Sharp Guard are impressive: they flew 576 out of 607 planned missions (94%). During these 576 missions they logged 5,823 flight hours of which 3,712



Sensor 1 & 2 in battle condition on P-3P

(Marco Borst)

MARITIME PATROL AVIATION

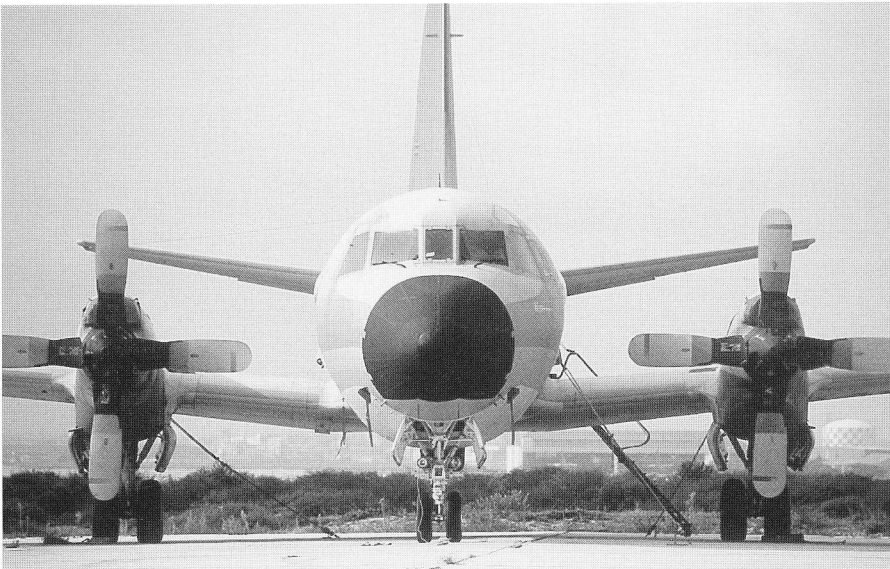
hours were on-station time. P-3P crews investigated 12,188 contacts. It may be clear that Operation Sharp Guard was the ultimate chance for the Lobos to gain a lot of operational experience in a very short period. Portuguese pilots who took part in Sharp Guard logged 500 - 600 flight hours each during this

tical companies that might be interested in the contract. Following the responses to this RFI (Request For Information), Portugal expects to issue the RFP (Request For Proposals) during 2000. LECIP is divided into two sub-programs: Life Extension and Mission Systems Update. Under the

igation, AGM-65F Maverick missiles capabilities and additional Electro-Optical and Image systems like the FLIR Systems "Star Safire" or Wescam's "Model 20". Portugal may benefit from recent experiences on extending the airframe's service life of the New Zealand's P-3K, and on systems upgrade of various operators, like US Navy's AIP, Dutch P-3C and Australian AP-3C. When LECIP is completed the Lobos can rely on a safe and modern platform for continued operations in the new century.

Special thanks to:

Maj. Barros Ferreira (XO Esq601)
Capt. Antonio Eugenio (MSC/Esq601)
Personnel Esq601



P-3P at Airbase 6, Montijo Portugal

(Marco Borst)

operation, while navigators logged 900 hours each!

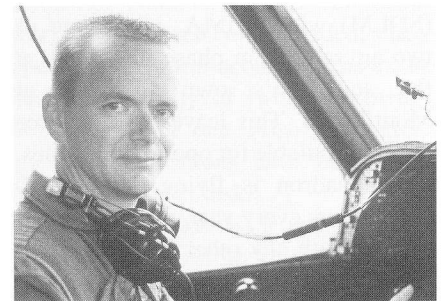
The squadron can rely on the Mission Support Center (MSC) at Montijo AB. Although it is independent from the squadron, MSC personnel frequently augment 601's crews on operational missions, usually in the role of navigators or TACCO's. The MSC is comparable to the USN Tactical Support Centers (TSC). Missions are planned and supported by the MSC and afterwards debriefings and analysis of data collected during the missions (photos, FLIR images, acoustic sounds) are done at the MSC.

The Portuguese Air Force has planned a capabilities-improvement program for its six P-3P aircraft, in addition to a 25-year extension program of the aircraft's service life. The program, designated LECIP (Life Extension and Capabilities Improvement Program) is already underway, following the decision to maintain the actual fleet until the year 2025. Last year Portugal requested formal information from several aeronau-

Life Extension program airframe structural components and systems identified as having potential for significant impact on future aircraft availability due to excessive time/cost to repair are likely to be replaced. It is expected that structural improvements will include replacement of the wings and stabilizers along the lines of the RNZAF "Kestrel" project which is currently being carried out by Hawker Pacific near Sydney, Australia. The Portuguese Air Force intends to replace some items of the mission-systems configuration that are either technologically obsolete (e.g. MAD) or critical due to maintenance problems (e.g. computer, radar, ESM). The actual configuration, based on a P-3B standard lay-out, includes some systems that are exclusive to the P-3P. Based on the experience, the Portuguese Air Force is now emphasizing commonality in order to minimize costs associated with the maintenance of an exclusive system. Esquadra 601 has, of course, a number of wishes: a new ISAR radar, digital MAD, Global Positioning System nav-



About the Author



Marco P.J. Borst made it his hobby to describe the history of the Lockheed Martin P-3 Orion. As a freelance journalist, he has visited several P-3 operating squadrons, and has written several articles on the P-3 Orion. He co-operates with Jaap Dubbeldam in the P-3 Orion Research Group. In 1997, they published a booklet about the Orion in Dutch with a P-3 location list in English. The P-3 Research Group has recently published a second booklet on the P-3 in English.

Marco Borst also established, and maintains, an informative home page about the P-3 Orion on the Internet. This page, which is frequently updated, can be found at: <http://home.wxs.nl/~p3orion/>. Besides an extensive news section, and other P-3 information sections about the P-3 Orion, the home page also provides several links to other P-3-related home pages.