

ARCHIVED REPORT

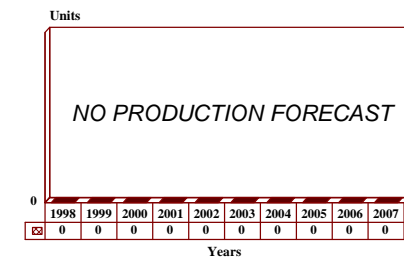
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Dassault Atlantique ATL2 - Archived 1/99

Outlook

- ATL3 proposed to French, German, Italian navies as Atlantic 1 replacement
- No ATL3 production forecast

10 Year Unit Production Forecast
 1998-2007



Orientation

Description. Unpressurized twin-turboprop anti-submarine warfare/maritime patrol aircraft.

Sponsor. Government of France, Ministry of Defense.

Contractors. Dassault Aviation, Vaucresson, France, with work done at Saint-Cloud, France. Overall program work being shared by SECBAT (see below).

Status. Production of 28 ATL2 units for the French Navy was initiated in 1988; production completed in 1995. ATL3 version on offer but unlaunched.

Total Produced. Twenty-eight Atlantique 2 aircraft, excluding the two original converted prototypes, produced

through 1995. Eighty-seven Atlantique 1 aircraft were produced between 1964 and 1973.

Application. Land-based anti-submarine warfare; surveillance, search and track, attack. Additional maritime roles include open ocean surveillance, anti-ship warfare, personnel and cargo transport.

Price Range. Approximately \$66 million unit flyaway cost, in 1991 US dollars. Total program cost is \$4.3 billion (1986 dollars) for a program unit cost of \$102.38 million.

Technical Data

Design Features. Cantilever mid-wing monoplane of conventional all-metal construction. Fuselage is double-lobed, with the wing-carry-through structure about 30

percent above aircraft center line. Aircraft is equipped with a conventional cantilever tail section, and retractable tricycle landing gear.

	<u>Metric</u>	<u>US</u>
Dimensions		
Length overall	33.63 m	110.333 ft
Height overall	10.89 m	35.729 ft
Wingspan ^(a)	37.42 m	122.771 ft

	<u>Metric</u>	<u>US</u>
Wing area, gross	120.34 sq m	1,295 sq ft
Weights		
Operating weight, empty	25,500 kg	56,218 lb
Max gross weight	45,000 kg	99,200 lb
Capacities		
Standard fuel	23,120 liters	6,108 gallons US
Military load	2,000 kg	4,400 lb
Performance		
Take-off run to 10.5 m (35 ft)	1,840 m	6,037 ft
Max cruise speed @ 7,619 m (25,000 ft)	555 km/h	300 kt
Ceiling	9,143 m	30,000 ft
Max endurance ^(b)	18 hours	18 hours
Ferry range ^(c)	9,075 km	4,900 mi
Propulsion		
Atlantique ATL2 (2)	Rolls-Royce plc Tyne RTy.20 Mk 21 two-spool, axial-flow turboprop engines rated 4,224 kW (5,665 shp), each driving a Ratier-Figeac/British Aerospace four-blade all-metal propeller.	
Atlantique ATL3 (2)	Allison AE2100H turboprops rated at 4,500 kW (6,000 shp), each driving a Dowty six-bladed composite propeller.	

Armament

Standard patrol mission - four AM.39 air-to-surface missiles.

ASW missions - up to eight Mk 46 or Murene torpedoes.

Long range patrol mission - one AM.39 air-to-surface missile.

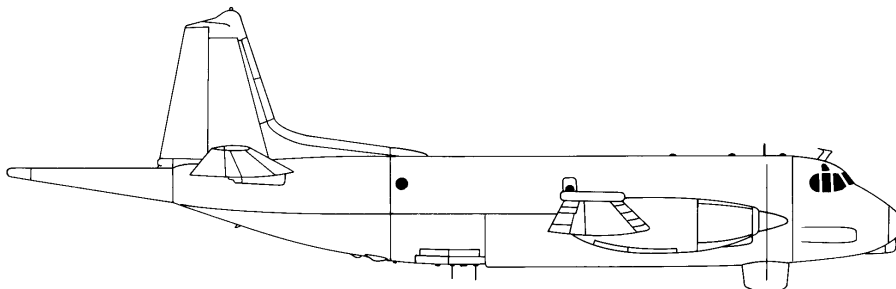
100 sonobuoys, sea markers, flares.

Crew. Normal flight crew of 12 with provision for relief flight crew or 12 other personnel.

^(a) Including wingtip pools.

^(b) No reserves.

^(c) With max fuel.



DASSAULT ATL2

Source: Forecast International

Variants/Upgrades

Atlantique ATL2B. Proposed during development of the ATL2, this model would have incorporated SNECMA M45H turbofans under the wing and outboard of the Tyne.

Jet Atlantique. Proposed for UK RAF requirement in 1991, this variant would feature addition of two

underwing, podded turbofan engines, with main turboprop powerplants switched from Tyne to Allison T406 or GE T407. Garrett TFE 731 considered for turbofan powerplant component.

Atlantique ATL3. Upgraded version offered for German, French, Italian maritime patrol aircraft (MPA) requirement

for Atlantic replacement. Powered by updated Allison AE2100H engines, this model features a state-of-the-art cockpit, optional in-flight refueling capability, and a much improved mission system suite and sensors. At its economical patrol speed of 170 knots, the ATL3 has an 18-hour endurance.

Program Review

Background. The original Atlantic 1 (Breguet Br 1150) was developed in the 1950s for a NATO requirement, and a European consortium was then established to produce the aircraft on a cooperative basis. Prototype flight testing began in 1961. The original requirements, 40 aircraft for France and 20 for Germany, would have carried production through 1968, but the program was stretched out due to orders from The Netherlands (9 units) and Italy (18). Production of the Atlantic 1 ceased in 1974. During the final years of Atlantic production, the consortium sought to stimulate follow-on orders and also proposed modernized variants. These efforts, however, proved unsuccessful, and by mid-1974 the French had decided to push ahead on their own.

Atlantic 2 development proceeded slowly, the program a recurring victim of budgetary constraints. Dassault also proposed an ATL2B, similar to the ATL2 but with a pair of underwing-mounted M45H turbofans fitted outboard of the turboprops. A low cost ATL3 variant was also proposed, but these designs all fell by the wayside in favor of the ANG (Atlantic Nouvelle Generation) version, ordered into prototype development by the French government in March 1977. The aircraft has since been redesignated Atlantique 2 (ATL2).

Work on the ATL2 was shared by the European consortium SECBAT (Societe Europeenne de Construction de Breguet Atlantic) that was responsible for the earlier program, with minor modifications to the arrangement to reflect varying national interests. Companies involved, under the direction of Dassault, were SABCA and SONACA of Belgium, MBB and Deutsche Aerospace/Dornier of the Federal Republic of Germany, Alenia of Italy and Aerospatiale of France. Fokker of The Netherlands, a member of the original

consortium, opted not to participate in the ATL2 simply because it decided to buy the Lockheed P-3C Update 2 aircraft.

Externally, the ATL2 was very similar to the original Atlantic 1 except for a redesigned tail fin and the addition of wingtip avionics pods. A completely new and advanced avionics suite is included which has the following equipment: Thomson-CSF Iguane long range maritime surveillance radar, capable of simultaneously tracking multiple targets; a Thomson-CSF ECM system for locating and analyzing radar transmissions; optoelectronic systems under development by TRT and SAT; the 15M/125X tactical computer by CIMSA and a management computer provided by Electronique Marcel Dassault (EMD) and SAGEM; a Thomson-CSF color tactical display system; two SAGEM ULISS 53 inertial nav systems; and the Thomson-CSF SADANG acoustic detection system.

Third Generation. The proposed ATL3 competed unsuccessfully for the UK's Replacement Maritime Patrol Aircraft requirement in 1995-96; that contest was ultimately won by a major refurbishment/upgrade of the RAF's existing Nimrod aircraft. Both Germany and Italy operate the baseline Atlantic model and both plan to replace these around 2010. Stiff competition is expected from the Lockheed Martin P-3C and, for the Italian requirement, possibly by special mission variants of that same manufacturer's C-130J.

Aside from updated, more economical engines, the ATL3 offers an in-flight refueling probe to increase on-station loiter time and ferry range, a new glass cockpit, and an updated tactical system which includes interchangeable multi-purpose work stations.

Funding

The French government 1977 program estimate for the ATL2 was FFfr3,046 million in RDT&E and FFfr21,462 million for production. No further data available.

Recent Contracts

None noted.

Timetable

Mar	1977	Prototype development authorized by French government
May	1978	Program go-ahead announced; 42 aircraft to be produced
May	1981	Prototype 01 flew
Mar	1982	Prototype 02 flew
May	1984	Full-scale production authorized
Oct	1988	First production ATL2 began flight tests
	1989	Initial deliveries to French navy scheduled
	1995	Final delivery to French navy
	1996-97	ATL3 proposed for French, German, Italian requirements

Worldwide Distribution

(As of October 1, 1997)

France 22, plus six in storage

Forecast Rationale

Dassault continues to seek commitments for its proposed ATL3; Germany and Italy are currently studying candidates to fill respective requirements for 12 and 16 platforms. It is assumed that any joint ATL3 procurement would include the upgrade of France's recently delivered ATL2s to the new standard.

The ATL3 may appeal on grounds of commonality, particularly if existing Atlantic airframes may be upgraded in lieu of new production. However, the P-3C will offer very stiff competition to the French contender and Italy is

also reported to be looking at a specially-configured C-130J version as an adjunct to planned buys of the baseline Lockheed Martin transport.

The Italo-German finalist decision will undoubtedly hinge to a large degree on political considerations, while cost will also be a major factor as both nations are hard-pressed to fund a number of previously authorized programs.

We are not calling out an MPA finalist, hence we are not forecasting an ATL3 production go-ahead at this time.

Ten-Year Outlook

No production forecast.

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