Aurigny Air Services: Follow-up of the first commercial use of EGNOS for approach and landing operations

It's there. Use it.

In December 2011, Aurigny Air Services became the first regional airline making use of EGNOS during their approach and landing operations. Concretely, December 21st 2011 sets the date since when the company conducts LPV approaches at Alderney airport during their scheduled services using their Britten Norman Trislanders.

Some weeks before, 2 EGNOS based LPV approach procedures (RNAV GNSS approach to LPV minima) had been published at Alderney airport (EGJA), the only airport in the island of Alderney in the Bailiwick of Guernsey, a British Crown dependency in the Channel Islands. The publication of these procedures was possible after the signature of an **EGNOS Working Agreement (EWA)** between Guernsey Airport, acting as the ATS provider at Alderney, and the ESSP, the EGNOS Service provider.

The 2 LPV procedures complemented the 2 existing NPA procedures based on NDB and the 2 more recent NPA procedures based on GPS (RNAV GNSS approach to LNAV minima) published at the airport.

During these years, LPV approaches have become the main preference for Aurigny pilots when landing at this airport. In comparison to the previous NPA procedures based on NDB, the LPV procedures bring tremendous benefits, not only related to safety but also economical. Thanks to the vertical guidance provided by LPV procedures, pilots can stabilise their descents in a much easier way. Under degraded meteorological conditions and when visibility is limited, the situational awareness provided by a RNAV procedure is significantly increased with respect to NDB based operations, thus allowing the aircrafts to align their course to that of the runway centreline.

Today the company is conducting a very significant number of LPV approach operations not only at Alderney but also at Dinard (LFRD), a small regional airport serving the city of Saint-Malo in north-western France.

Several times a day, Aurigny connects the island of Alderney to their home base in Guernsey and to Southampton in the southern England. Roughly, the airline conducts around 75 LPV approaches per week into Alderney.

Dinard is about 55 miles from Guernsey, and is connected to Guernsey 4 times per week. At this airport, RWY 35 is served by one ILS approach, while LPV approaches serve both RWY35 and 17.

Aurigny's Trislander Fleet Manager, Mr Rob Davies, says "*In our particular aircraft we find the LPV much more stable than even the ILS approach, as it is not affected by deviations in the localiser and glide path caused by other aircraft* ". As Mr Davies indicates, the signal in space from GPS and EGNOS satellites is not affected by reflections caused by other aircrafts or by any other kind of element on the ground.

"We find the LPV much more stable than even the ILS approach", Rob Davies – Trislander Fleet Manager

"With EGNOS, our workload is reduced", Rob Davies – Trislander Fleet Manager

"In addition, during all phases of the approach we can use GPS/EGNOS navigation. This means we do not have to switch between autopilot modes while preparing the approach, and hence our workload is reduced. Taking into account that we conduct single-pilot operations in our Trislanders, this really makes a difference!" Mr Davies adds.

It is because all these reasons that after retrofitting the first Trislander in 2011 with a Garmin GNS 430W as part of a project with NATS and Eurocontrol, the company decided to upgrade the remaining 5 Trislanders with Garmin GTN750 units and Aspen PFD1000 Electronic HSIs. All Trislanders are nowadays approved to fly LPV approaches.

The company is now expecting the introduction of LPV procedures at other airports where revenue services are offered in commercial flights. In particular, new LPV approaches are to be soon introduced in Southampton, Bristol, Guernsey and Jersey (see map). Grenoble airport, at the foot of the French Alps, is Aurigny's farthest destination. Although the airport counts with LPV approaches, the fleet of ATR-72s does not possess LPV capabilities yet. However, based on the experience accumulated with the fleet of Trislanders, the company would like to have such LPV capability on-board their ATR-72s and is actually looking for formulas to do so.

A reason to support this argument is the upcoming improvement in the EGNOS Service Level by the end of 2015. The release of the new EGNOS version 2.4.1 will offer the so-called LPV-200 service level, which means that airports will be able to implement LPV procedures with a Decision Height of 200 feet, thus becoming an equivalent alternative to ILS.

The investment in EGNOS landing procedures will be recovered many times over by the savings realized on not having to make costly ILS maintenance and replacement investments.

To sum up, Aurigny Air Services discovered the benefits of EGNOS and is committed to continue using it.

For questions & information

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We certify you're there.