

Application of Strategic Lateral Offsets in North Atlantic Region Airspace

Introduction

During recent years, the introduction of very accurate aircraft navigation systems, along with sophisticated flight management systems, has drastically reduced the number of risk bearing lateral navigation errors reported in North Atlantic (NAT) airspace.

Paradoxically, the propensity of aircraft to navigate to such a high level of accuracy has led to a situation where aircraft on the same track but at different levels, are increasingly likely to be in horizontal overlap. The effect of this is to increase the risk of collision in the event that, for whatever reason, an aircraft departs from its cleared level.

It must be stressed that the current estimated risk of a mid-air collision in NAT airspace is at an all time low, and is exhibiting a downward trend. However, NAT Service Providers' have a responsibility to their customers to continually assess the level of risk in the NAT and make modifications to system operation to ensure the highest possible level of safety. Accordingly, following a successful trial in the West Atlantic Route System (WATRS), it has been determined that by allowing aircraft conducting oceanic flights to fly lateral offsets not exceeding 2 NM right of centreline, an additional safety margin will be provided and will mitigate the risk of collision when non-normal events such as operational altitude deviation errors and turbulence induced altitude deviations occur.

The strategic lateral offset procedure

The procedure provides for the application of lateral offsets within the following guidelines:

- strategic lateral offsets and those executed to avoid wake turbulence are to be made to the **right** of a route or track;
- in relation to a route or track, there are three positions that an aircraft may fly: centreline, one or 2 NM **right**; and,
- offsets are not to exceed 2 NM **right** of centreline.

The intent of this procedure is to reduce risk (increase the safety margin) by distributing aircraft laterally and equally across the three available positions. In this connection, pilots must take account of the following:

- aircraft without automatic offset programming capability **must** fly the centreline;
- aircraft capable of being programmed with automatic offsets may fly the centreline or offset one or 2 NM right of centreline to obtain lateral spacing from nearby aircraft;

- pilots should use whatever means are available (e.g. TCAS, communications, visual acquisition, GPWS) to determine the best flight path to fly;
 - any aircraft overtaking another aircraft is to offset within the confines of this procedure, if capable, so as to create the least amount of wake turbulence for the aircraft being overtaken;
 - for wake turbulence purposes, pilots are also to fly one of the three positions at above and never offset to the left of centreline nor offset more than 2 NM right of centreline;
 - *Note — It is recognized that the pilot will use his/her judgement to determine the action most appropriate to any given situation and has the final authority and responsibility for the safe operation of the aeroplane. The use of air-to-air channel, 123.45, may be used to co-ordinate the best wake turbulence offset option.*
 - pilots may apply an offset outbound at the oceanic entry point but must return to centreline at the oceanic exit point;
 - aircraft transiting radar-controlled airspace e.g. Bermuda, are to remain on their established offset positions;
 - there is no ATC clearance required for this procedure and it is not necessary that ATC be advised; and,
 - position reports are to be based on the current ATC clearance and not the exact co-ordinates of the offset position. An example of a report when passing 54N 020W while being offset from track is “*Shanwick, Austrian 73, position 54N 020W, 1222, estimate ...etc*”.
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