



## IBAC Bulletin 05-1

### **Subject: Strategic Lateral Offset Procedures (SLOP)**

This subject was addressed in two previous Bulletins (B01-1 and B04-4).

This Bulletin draws attention to, and conveys, relevant excerpts pertaining to SLOP from two ICAO documents. These are:

- **an excerpt from PANS-ATM (Document 4444) Amendment 4, for applicability 25 November 2005, and**
- **an excerpt from the final draft of the 10th Edition of the NORTH ATLANTIC MNPS AIRSPACE OPERATIONS MANUAL.**

It is to be noted that, notwithstanding the above referenced applicability date of PANS-ATM Amendment 4, for NAT operations the SLOP is a currently required procedure.

Operators, pilots and the providers of flight crew training services are invited to be cognizant of this material.

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16 September 2005

*Attachments.*

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Attachment a (- excerpted from PANS-ATM (Document 4444) Amendment 4, for applicability 25 November 2005)

**15.2.4 Procedures for strategic lateral offsets in oceanic and remote continental airspace**

*Note 1.— Annex 2, 3.6.2.1.1 requires authorization for the application of strategic lateral offsets from the appropriate ATS authority responsible for the airspace concerned.*

*Note 2.— The following incorporates lateral offset procedures for both the mitigation of the increasing lateral overlap probability due to increased navigation accuracy, and wake turbulence encounters.*

*Note 3.— The use of highly accurate navigation systems (such as the global navigation satellite system (GNSS)) by an increasing proportion of the aircraft population has had the effect of reducing the magnitude of lateral deviations from the route centre line and, consequently, increasing the probability of*

*a collision, should a loss of vertical separation between aircraft on the same route occur.*

15.2.4.1 The following shall be taken into account by the appropriate ATS authority when authorizing

the use of strategic lateral offsets in a particular airspace:

a) strategic lateral offsets shall only be authorized in en route oceanic or remote continental airspace.

Where part of the airspace in question is within radar coverage, transiting aircraft should normally be

allowed to initiate or continue offset tracking;

Attachment b.

**Excerpt from the final draft of the 10th Edition of the NORTH ATLANTIC MNPS AIRSPACE OPERATIONS MANUAL**

"SPECIAL IN FLIGHT PROCEDURES

Strategic Lateral Offset Procedure (SLOP)

ATC clearances are designed to ensure that separation standards are continually maintained for all traffic. However, the chain of clearance definition, delivery and execution involves a series of technical system processes and human actions. Errors are very rare but they do occur. Neither pilots nor controllers are infallible. Gross Navigation Errors (usually involving whole latitude degree mistakes in route waypoints) are made, and aircraft are sometimes flown at flight levels other than those expected by the controller. As previously indicated, when such errors are made, ironically, the extreme accuracies of modern navigation and height keeping systems themselves exacerbate the risk of an actual collision. Within an SSR environment the controller is alerted to such errors and can therefore intervene in a timely fashion. In Oceanic airspace, such as the North Atlantic, in which the controller's awareness of traffic disposition is reliant largely upon pilot voice position reports, this is not the case. Consequently, it has been determined that allowing aircraft conducting oceanic flight to fly lateral offsets will provide an additional safety margin and mitigate the risk of traffic conflict when non-normal events such as aircraft navigation errors, height deviation errors and turbulence induced altitude-keeping errors do occur. Collision risk is significantly reduced by application of these offsets. This procedure is known as "Strategic Lateral Offset Procedure (SLOP)".

This procedure provides for offsets within the following guidelines:

- along a route or track there will be three positions that an aircraft may fly: centreline or one or two miles right; and
- offsets will not exceed 2 NM right of centreline.

Distributing aircraft laterally and equally across the three available positions adds an additional safety margin and reduces collision risk. This is now a standard operating procedure for the entire NAT Region and pilots are required to adopt this procedure as is appropriate. In this connection, it should be noted that:

- Aircraft without automatic offset programming capability must fly the centreline.
- Operators capable of programming automatic offsets may fly the centreline or offset one or two nautical miles right of centreline to obtain lateral spacing from nearby aircraft. (Offsets will not exceed 2 NM right of centreline and offsets left of track centreline must not be made). An aircraft overtaking another aircraft should offset within the confines of this procedure, if capable, so as to create the least amount of wake turbulence for the aircraft being overtaken.
- Pilots should use whatever means is available (e.g. TCAS, communications, visual acquisition, GPWS) to determine the best flight path to fly.
- For wake turbulence purposes, pilots should also fly one of the three

positions shown above. Pilots should not offset to the left of centreline nor offset more than 2 NM right of centreline. Pilots may contact other aircraft on the air-to-air channel, 123.45 MHz, as necessary; to co-ordinate the best wake turbulence offset option. (Note. It is recognised that the pilot will use his/her judgement to determine the action most appropriate to any given situation and that the pilot has the final authority and responsibility for the safe operations of the aeroplane.) As indicated below, contact with ATC is not required.

- Pilots may apply an offset outbound at the oceanic entry point and must return to centreline prior to the oceanic exit point.
- Aircraft transiting radar-controlled airspace mid-ocean should remain on their established offset positions.
- There is no ATC clearance required for this procedure and it is not necessary that ATC be advised.
- Voice Position reports should be based on the waypoints of the current ATC clearance and not the offset positions.

#### Special Procedures for In-Flight Contingencies WAKE TURBULENCE

Any pilot who encounters a wake turbulence incident when flying in NAT MNPS Airspace should ensure that a detailed report is provided to the NAT CMA. A suggested 'Wake Turbulence Report Form' for this purpose is shown at Attachment 3 to this Manual.

The Strategic Lateral Offset Procedure (see Chapter 8) is now a standard operating procedure throughout the NAT Region. Thus when flying within NAT MNPS Airspace, if the aircraft encounters wake turbulence and the pilot considers it necessary to offset from the current track then the pilot may only elect to fly another of the three options allowable in SLOP (i.e. Cleared Track centre-line, or 1 nm or 2 nms right of centre-line). It is no longer possible to offset left of the track centre-line to avoid wake turbulence. If neither of the remaining SLOP offset tracks are upwind of the other aircraft which is causing the wake turbulence, then the pilot should co-ordinate with the other aircraft via the inter-pilot frequency 123.45 MHz, and perhaps request that the other aircraft adopt an alternative allowable downwind offset."

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