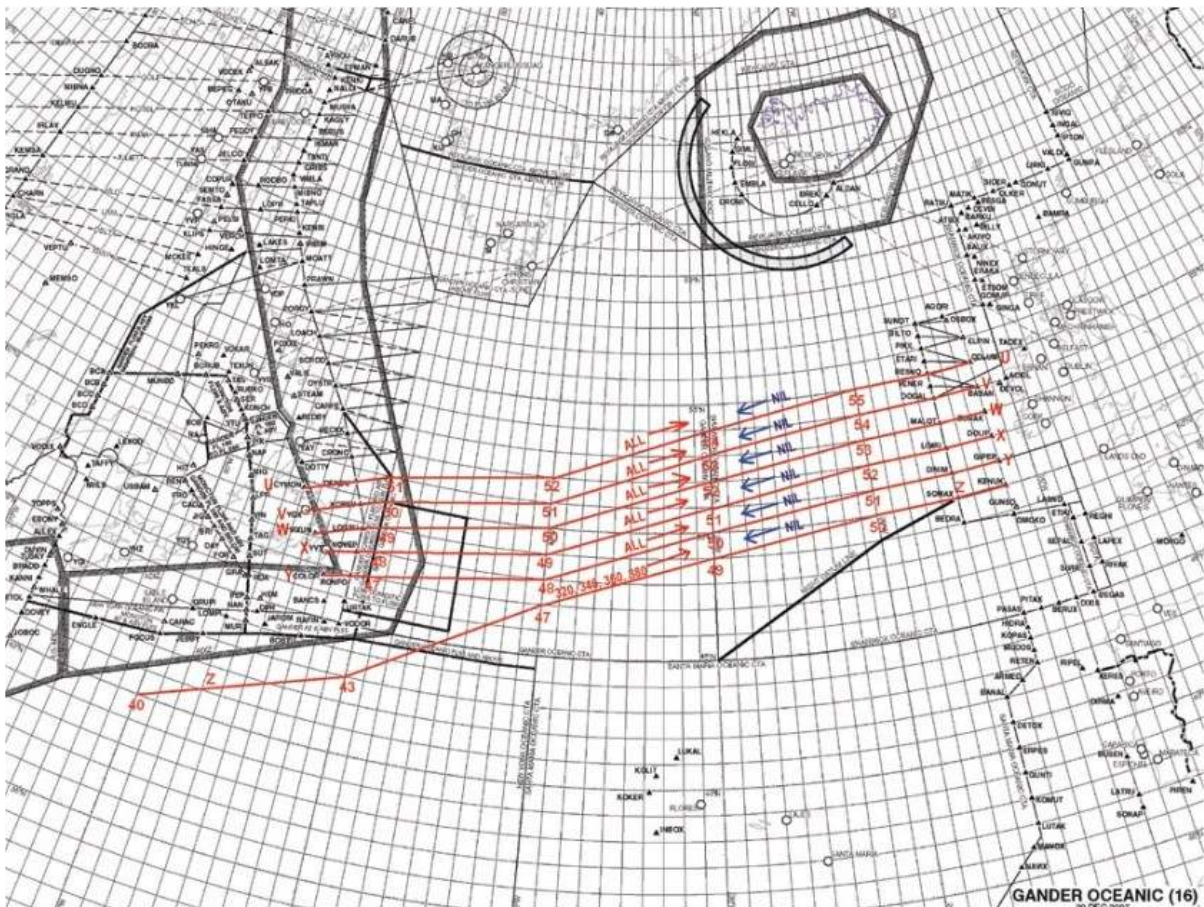
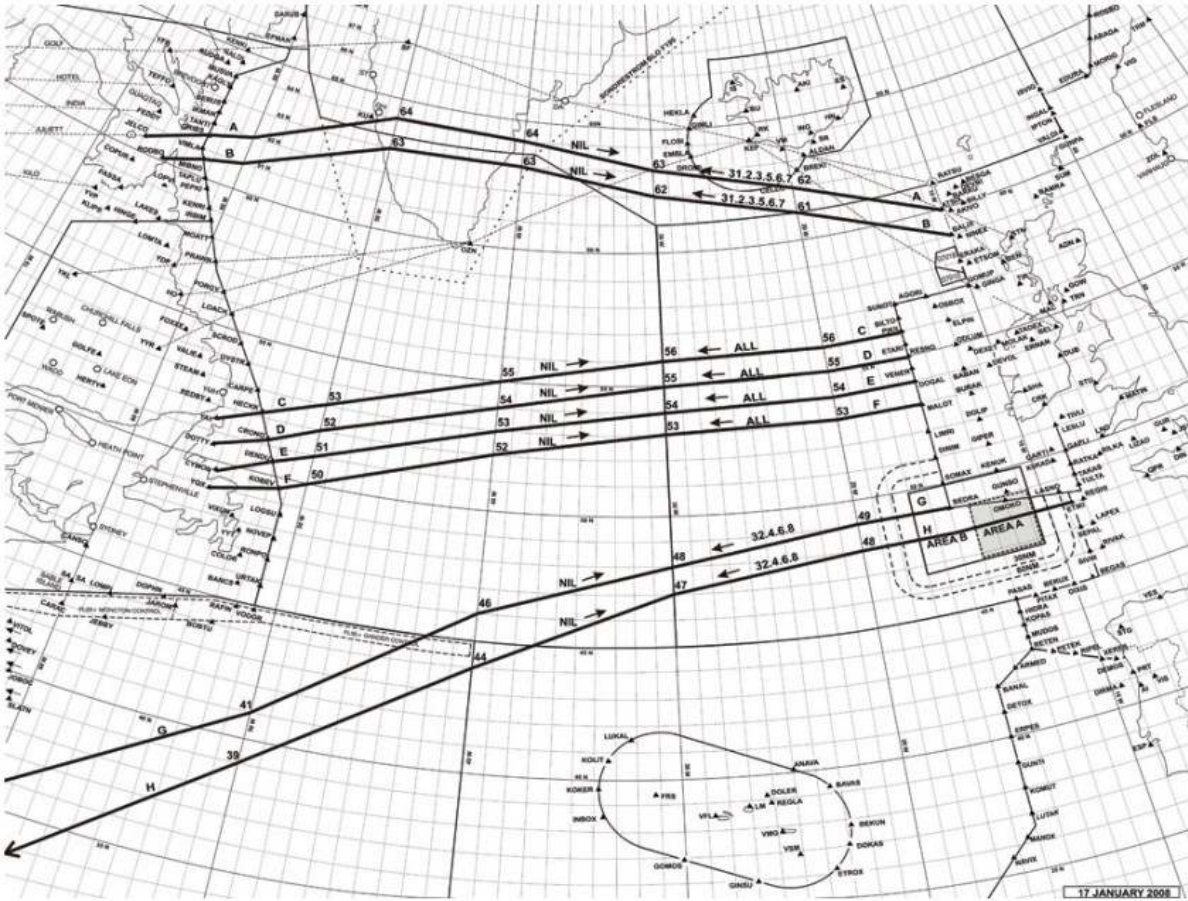


North Atlantic Organized Track System (NAT OTS)

Last Updated: 19th April 2013



Traffic Flow and OTS

North Atlantic (NAT) air traffic contributes to two major westbound and eastbound alternating flows.

Separate Organised Track Structures (OTS) are published each day for **sub-sonic traffic**.

The effect of these flows is to concentrate most of the traffic **uni-directionally**.

Westbound Flow:

- Departing Europe in the **morning**.
- Peak westbound traffic crossing the 30W longitude between **1130 UTC and 1900 UTC**.
- The daytime structure is **published by Shanwick**.

Eastbound Flow:

- Departing North America in the **evening**.
- Peak eastbound traffic crossing the 30W longitude between **0100 UTC and 0800 UTC**.
- The nighttime structure is published **by Gander**.

Due to the energetic nature of the NAT weather patterns, including the presence of jet streams, consecutive eastbound and westbound minimum time **tracks are seldom identical**. The creation of a different organised track system is therefore necessary for each of the major flows.

All NAT operators should provide their proposed flights and optimum tracks (preferred route) to the oceanic planners by AFTN.

The Preferred Route Message (**PRM**) should be received by:

- **Shanwick copy Gander no later than 1000 UTC** for the following nighttime OTS.
- **Gander copy Shanwick no later than 1900 UTC** for the following daytime OTS.

NAT Airspace

- Over the high seas (at and **above FL55**), primarily **Class A airspace** (IFR at all times)
- Below FL410, 1000ft vertical separation is applied.

Track Message Identification (TMI)

- NAT Track Structure Messages are identified by a 3-digit Track Message Identification number (TMI) appearing at the end of the Track Message.
- This number relates to the **day of the year** (no reference to month).
- Any subsequent NAT track **amendment(s) on a given day will carry a successive alpha number**.
- e.g. TMI33B would reflect the 2nd amendment of the TMI for the 33rd day of the year.
- Crews should also be given **copy of the track message(s)** at time of briefing.

Flight Level Allocation Scheme (FLAS)

- FL430 - May be flight planned for both East- and Westbound NON-RVSM certified aircraft
- FL410 - Eastbound FL
- FL320, 340, 360, 380, 400 - Westbound FL (except within Eastbound OTS)
- FL310, 330, 350, 370, 390 - Eastbound FL (except within Westbound OTS)
- FL300 and below - Even FLs Westbound ; Odd FLs Eastbound

Additionally, to accommodate demand:

- During the eastbound OTS, **eastbound non-OTS aircraft** may Flight Plan at **FL360 or FL380**
- During the westbound OTS, **westbound non-OTS aircraft** may Flight Plan at **FL310 or FL330**

Unless suitable eastbound Tracks exist, during the eastbound OTS times, eastbound traffic originating in New York OACC, planned to enter Shanwick OACC, is recommended to Flight Plan as follows:

- FL310 or FL360 and restrict routing to landfall BEDRA or south;
- FL340 or FL380 and restrict routing to landfall either: BEDRA or south, or to remain south of the OTS, whichever is further south.

During the westbound OTS, random westbound aircraft, flight planned to enter Shanwick via Scottish airspace and routing at, or north of PRAWN, should not flight plan at FL 340. FL 340 is reserved for flights between Reykjavik and Gander OACCs.

Random Flight Planning (other than OTS)

The **route and estimates** should be given for:

- At or South of 70N
 - Last domestic reporting point **prior to Oceanic Entry** Point.
 - **OCA boundary entry and exit** point (only required by the Gander, Shanwick, New York and Santa Maria OACs).
 - Significant points formed by **intersection of half or whole degrees of latitude with meridians spaced at intervals of 10 degrees** of longitude from the (Greenwich) Zero degree up to 70W.
 - First domestic reporting point **after ocean exit**.

The **requested Mach Number and FL** should be specified at:

- Either the last domestic reporting point **prior to Oceanic Entry Point or the OCA boundary**.
- At each point at which a change of Mach Number or Flight Level is requested must be specified and followed in each case by the next significant point.
- North of 70N
 - **Same as above, except** that the route should be specified in terms of significant points formed by the intersection of latitude expressed in degrees and minutes with **longitude spaced at intervals of 20 degrees** from the Greenwich Zero degree up to 60W;
- Generally North or Southbound Direction
 - **Same as above, except** that the route should be specified in terms of significant points formed by the **intersection of whole degrees of longitude with latitude spaced at 5 degrees intervals** from 20N to 90N.

Mach Number Technique

ATC uses Mach No. together with pilot position reports to calculate estimated times for significant points along track. These times provide the basis for longitudinal separation between aircraft and for coordination with adjacent ATC units.

Pilots must adhere strictly to their assigned True Mach Numbers including step climbs or descents.

If an immediate temporary change in the Mach Number is essential e.g. due to turbulence etc., ATC must be notified as soon as possible. **After leaving Oceanic Airspace** pilots must **maintain** their **assigned Mach No.** in domestic controlled airspace unless and until the appropriate ATC unit authorizes a change.

Adherence to ATC Approved Route

Regain route within 100NM from the position where the inadvertent route deviation was observed.

5-Minute in Trail Climb/Descent Procedure

- A new separation minimum in the Gander, Reykjavik and Santa Maria OCAs.
- ATC will allow aircraft to **climb/descend through the altitude of another aircraft when separated longitudinally by 5 minutes** where previously 10 minutes was required.
- Eligible flights must be equipped with an **approved GPS receiver.**
- Pilots shall **advise ATC of any deterioration of navigation performance,** including loss of GNSS integrity, as soon as practicable.
- Application of the climb/descent procedure is based on the assumption that the **last assigned Mach number will be maintained** during step climbs or descents, and that **in the event this is not feasible, ATC will be informed** at the time of the climb/descent request or clearance.

Disclaimer: "NAT OTS" are personal notes of the undersigned that do not sanction any pilot to violate his/her company's standard operating procedures or ignore the original documents. These notes are based on procedures that were valid in Feb 2012. These notes may or may not be updated in future.