NAT Guide 2025 – My First NAT Flight is Tomorrow

OPSGROUP Team
15 October, 2024

The **latest edition** (2025) of the NAT Guide ("My First North Atlantic Flight is Tomorrow") has now been published. This **24-page guide** is for pilots and dispatchers, to help you understand the basics of North Atlantic flying.

In the fewest number of words possible we will tell you what you need to know about crossing the North Atlantic. If you have a couple of days to spare, then read the official ICAO North Atlantic Operations and Airspace Manual (NAT Doc 007). Otherwise, pay attention and you'll be an expert in 15 minutes.

So, what's different about the NAT?

It is BUSY
There's a ton of traffic on the NAT. So, ATC squeezes most of it onto the "**NAT Tracks**" to make it easier for them to keep everyone apart. That doesn't mean it's easier for you.

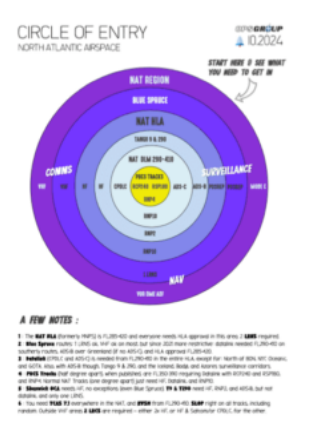
The rules keep changing
As soon as you think you've got things figured out, the rules will change. So we'll start with "What Changed" … read on.

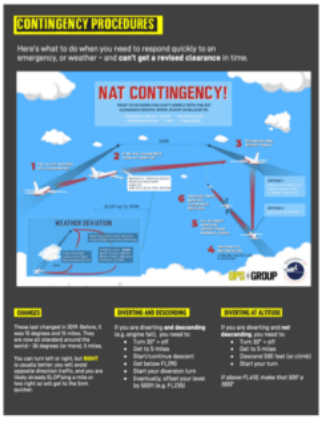
There's a lot of water
And not many airports. So it pays to know which ones are suitable, and closest.

Shanwick Shanwick
When you talk to "**Shanwick Radio**" it means you're not talking directly to ATC. So, when something major happens, know how to get off track safely without a clearance.

Acronym heaven
HLA, RCL, CPDLC, RNP, NAT OTS, TMI, OCA, OEP, SLOP, PBCS. Know 10 out of 10? Good. There's more.

"It's complicated"
Normally, you can get airborne, read the paper, do what ATC says, yawn, and land again. Easy. On the NAT, things are a good deal more challenging. **Read on** …





Contents:

- 14. **Flight Plan Filing** Addresses by FIR
- 15. NAT Clearance or no Clearance, guide to the new RCL process.
- 16. **Common Gotchas**: ATC and OPSGROUP Member favorites.
- 17. Links, Questions, Guidance

There are two options to download a copy of the NAT Guide 2025 (24 pages, 6Mb)

OPSGROUP Members

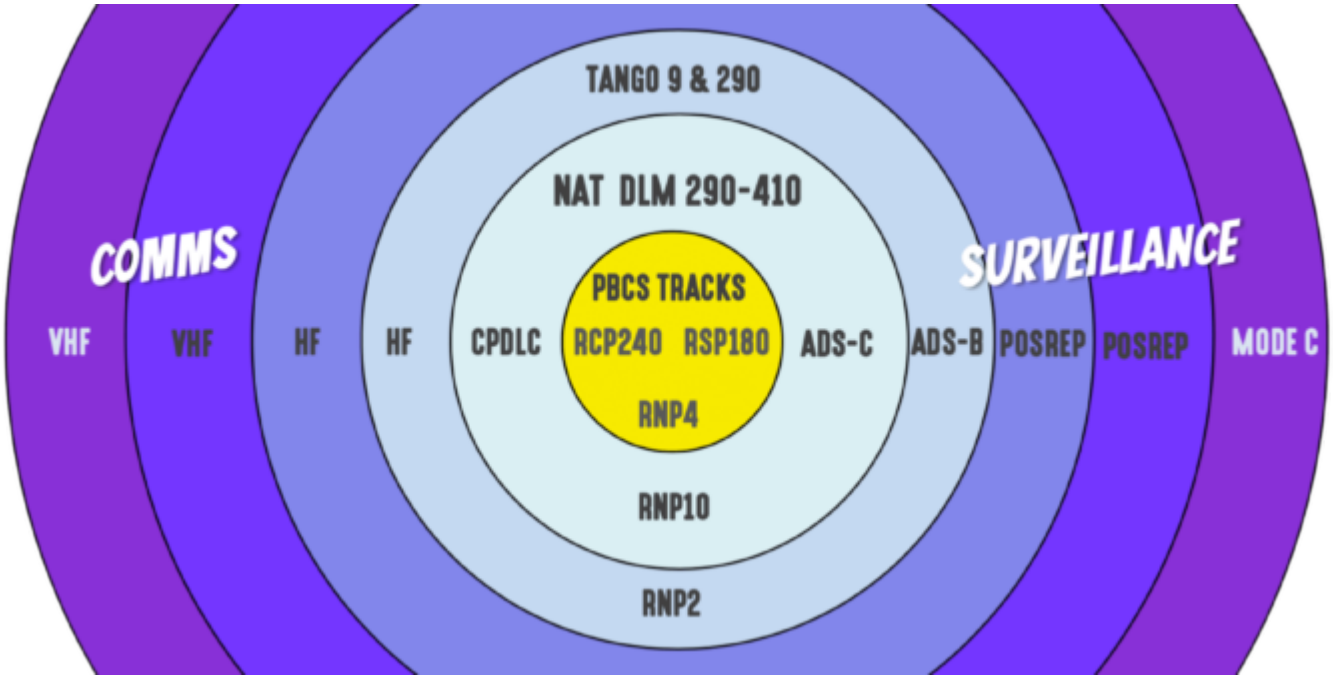
You can get it in your Dashboard, under **Briefings and Guides**.

Get it from the OPSGROUP Store

Not a member? Get a copy from the **OPSGROUP Store**.

NAT Circle of Entry (2025)

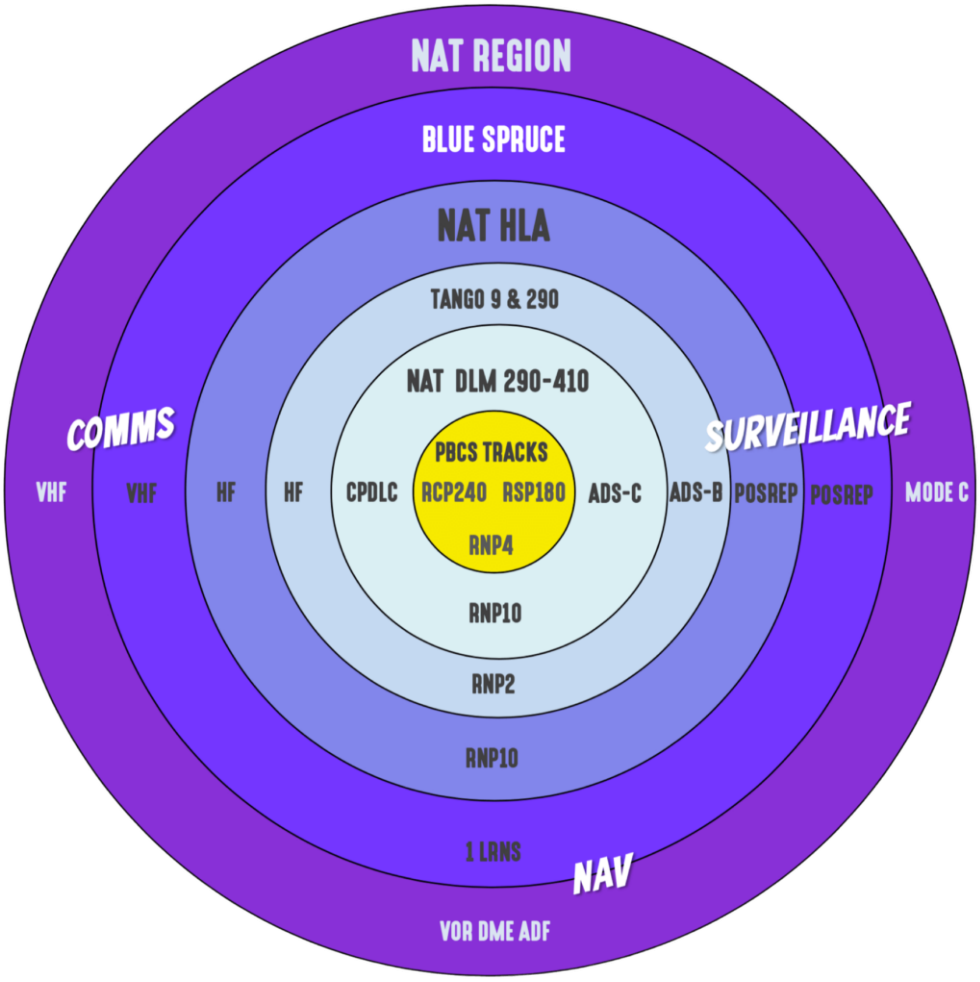
OPSGROUP Team
15 October, 2024



> For the **latest changes and updates on the North Atlantic**, including our most recent **Guides and Charts**, use our NAT reference page at **ops.group/blog/nat/**

We've updated the NAT Circle of Entry for 2025. As always, changes on the NAT continue without pause for breath – this version is the latest information as at October 2024. The Circle of Entry tells you what you need to get into each different sliver of North Atlantic airspace.

Click on the circle to **download** the more detailed PDF.



We've also published a new version of the **NAT Guide ("My First North Atlantic Flight is Tomorrow")**

Get a copy here.

NAT FAQ: No Datalink – Where can we go?

Mark Zee
15 October, 2024

NORTH ATLANTIC

COMMON QUESTIONS AND USEFUL ANSWERS TO HELP YOU CROSS ...

No Datalink – Where can we go?

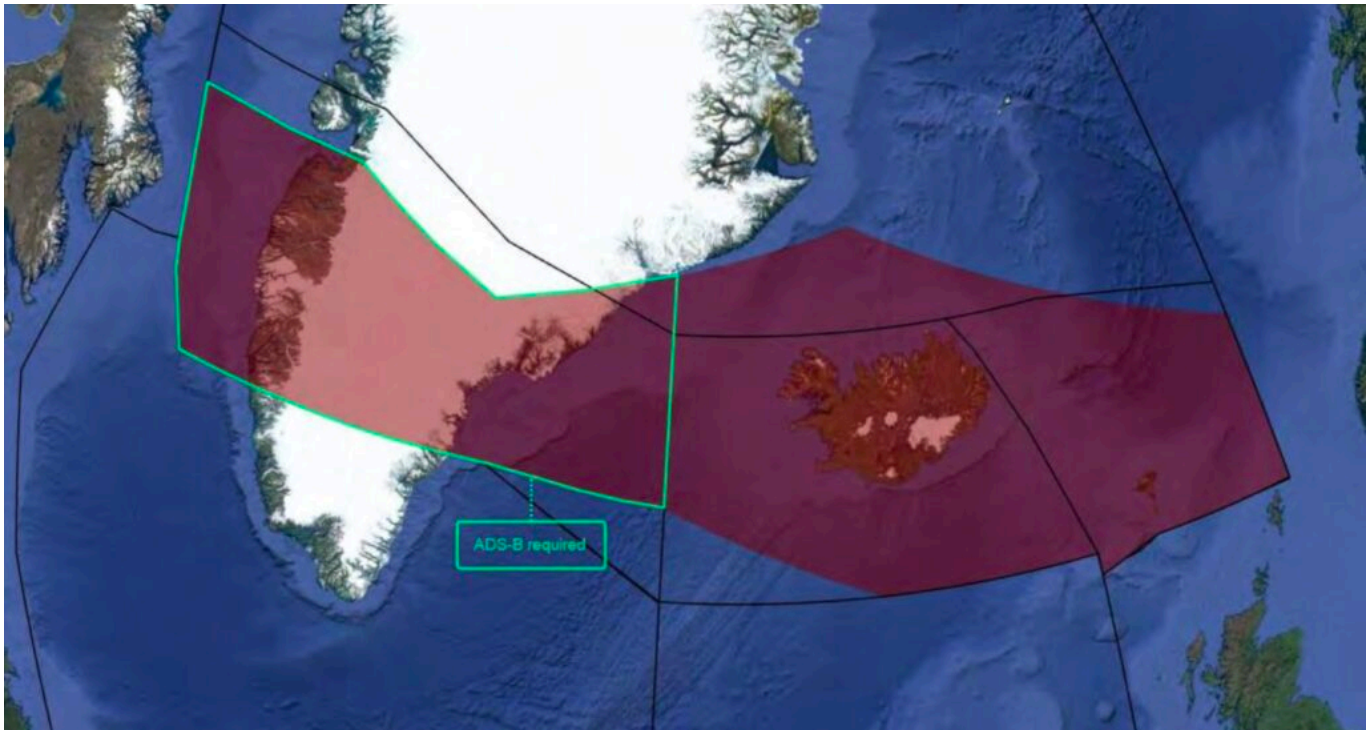
- **You can** make a crossing at FL280 or below, or FL430 or above
- **You can** cross via the Iceland-Greenland corridor if you have ADS-B
- **You can** enter NY Oceanic, the Bodo and Azores corridors, GOTA, and fly down T9/290.

Datalink is defined as **CPDLC** and **ADS-C**. If you're missing either CPDLC or ADS-C, then you're not datalink equipped. Since 2021, datalink is mandated (DLM) for the entire NAT region between **FL290-410** [NAT Doc 007, Ch 1.8]. The only exception is flights STS/FFR, HOSP, HUM, MEDEVAC, SAR, or STATE.

Without datalink, you can only enter these areas on the North Atlantic FL290-410 [NAT Doc 007, 1.8.2]:

- **Anywhere north of 80N**
- **New York Oceanic East**
- **The Iceland-Greenland Surveillance corridor** (ADS-B required west of 30W)
- **The Bodo corridor** (ADS-B required)
- **The Azores corridor** (ADS-B required)
- **Tango 9 and 290** (ADS-B required) (per UK AIP)
- **GOTA** (ASD-B not required but please do if you can, says ATC)

The only complete crossing available is therefore via the **Iceland-Greenland** corridor. For this, you need **ADS-B** west of 30W.



So, if you have ADS-B, and the remaining **NAT HLA** requirements, you can make a crossing at normal altitudes (eg. FL380) through this airspace.

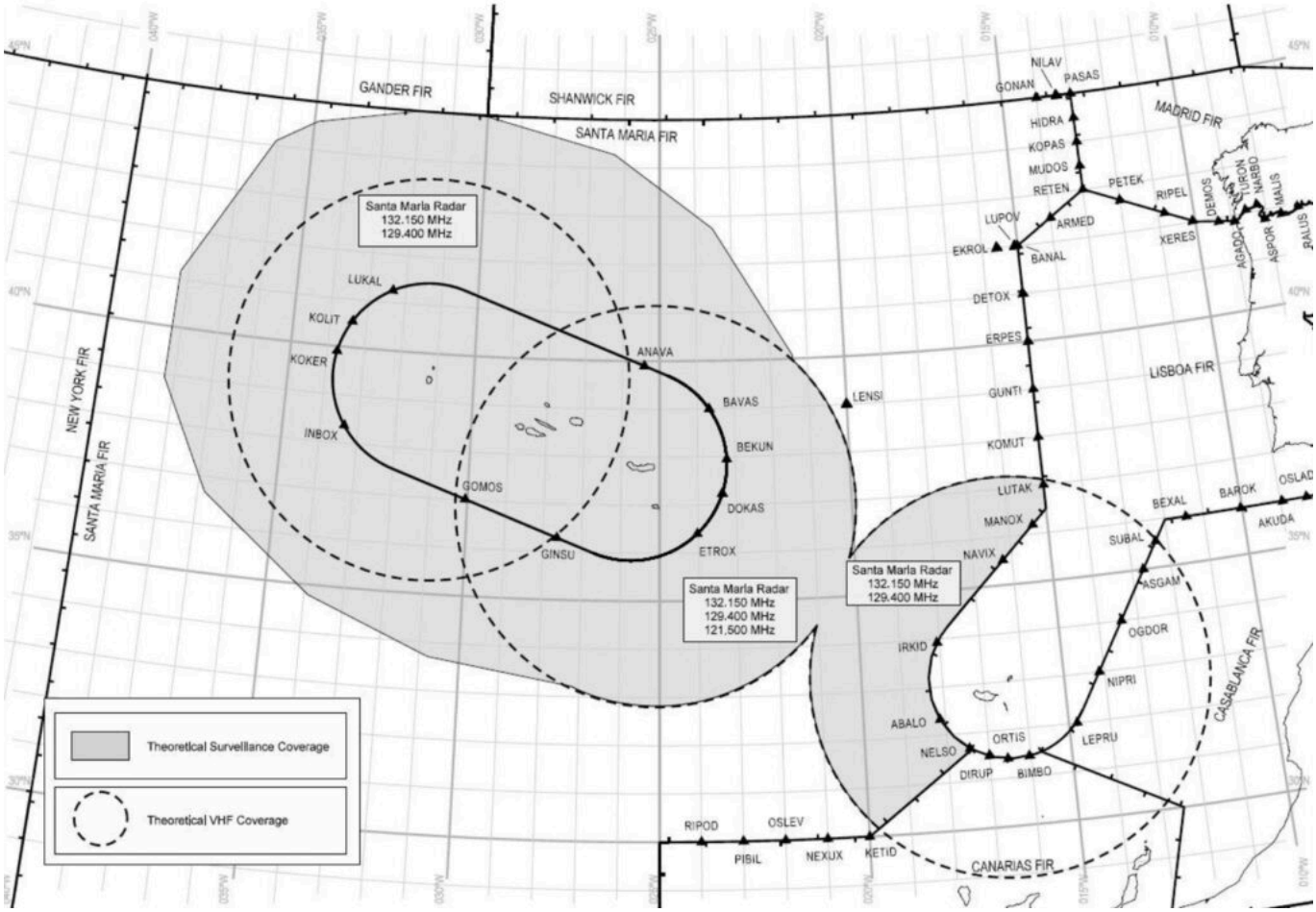
For planning purposes, this area is bounded by the following:
Northern boundary: 65N000W – 67N010W – 69N020W – 68N030W – 67N040W – 69N050W – 69N060W – BOPUT.
Southern boundary: GUNPA (61N000W) – 61N007W – 6040N010W – RATSU (61N010W) – 61N020W – 63N030W – 6330N040W – 6330N050W – EMBOK. [NAT Doc 007, 1.8.5]

If you don't have ADS-B, then this crossing is not available between FL290-FL410.

In this case, you should plan to cross the ocean at FL280 or below, or FL430 or above. This in turn places you outside the NAT HLA, as the HLA levels are FL285-FL420. A crossing at FL280 may mean a fuel stop, in Iceland for example (BIKF or BIRK are commonly used).

You **can** request a climb or descent through Datalink Mandated airspace from ATC, and this is commonly granted, but you do need **HLA approval**.

Santa Maria Corridor



The Santa Maria Corridor will allow you to fly out to the Azores and back, but won't help with a full NAT crossing due to the gap between Santa Maria surveillance and the New York oceanic boundary. To use this corridor, you need a Mode S transponder with extended squitter for ADS-B. [NAT Doc 007, 1.8.5 b]

This didn't answer your question?

Comment below. Sadly (for us), we enjoy digging into this stuff. So, post your question below and we'll update this page with the answer (probably quite quickly!)

Useful links for more on this ...

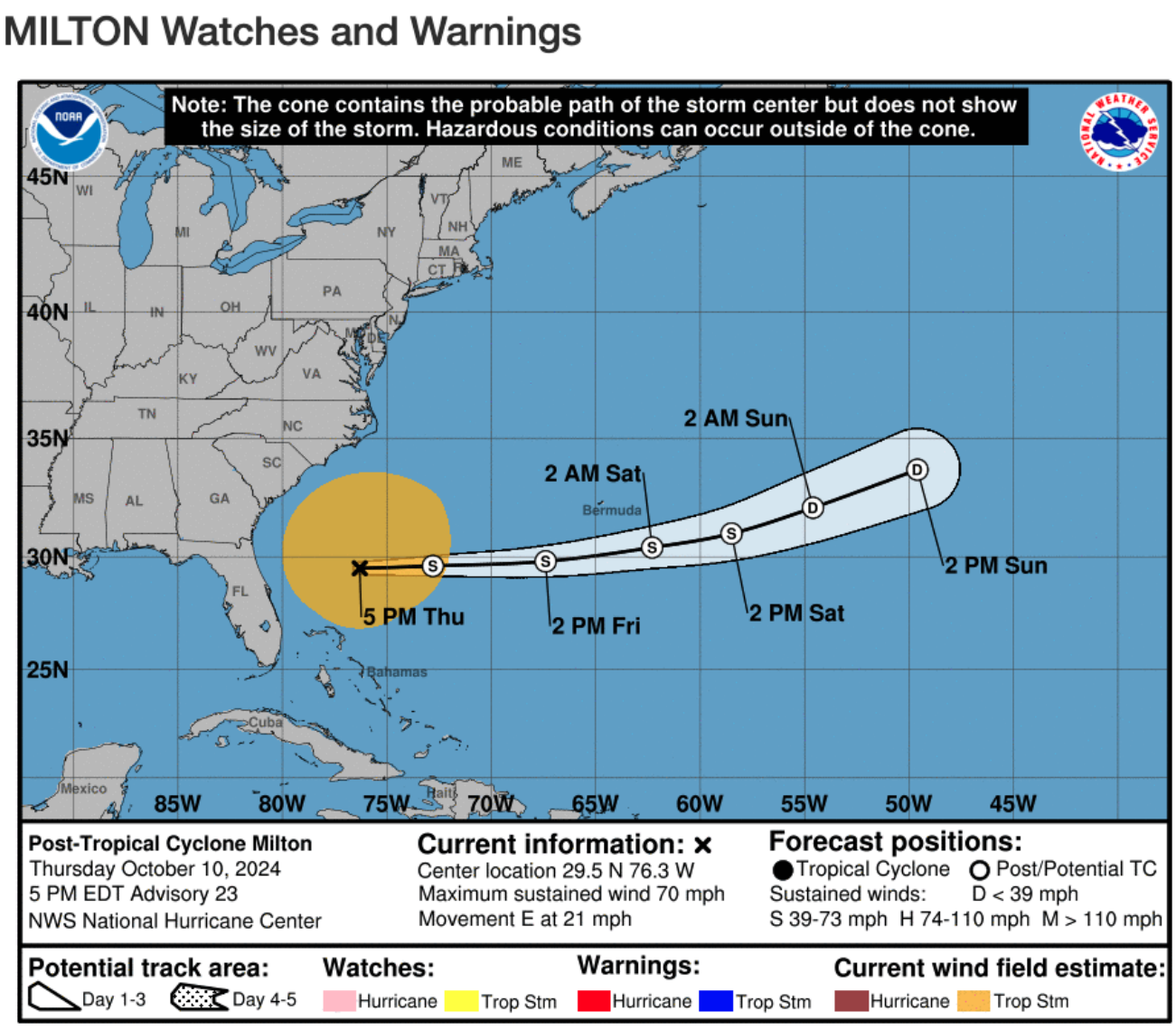
- NAT Timeline – new rules, year by year
- NAT Datalink – current rules
- NAT Doc 007 (ICAO)

Hurricane Milton – Florida Under Warning

Chris Shieff
15 October, 2024

** *Final Update Oct 11, 0500z.*

Hurricane Milton has now weakened into a tropical storm and is headed away from Florida into the Atlantic. It will pass south of Bermuda on Oct 12 but with little to no impact expected at **TXKF/Bermuda**. Damage assessments at airports are still underway.



Here is a summary of the current situation as at **0500z Oct 11** – unless things change, this will be our last update on Milton.

Mexico

The **Northern Yucatan Peninsula** is no longer under any active storm warning or advisory.

The only aviation impact was to **MMMD/Mérida** which re-opened on Oct 8 – no significant damage was reported.

Gulf Routes

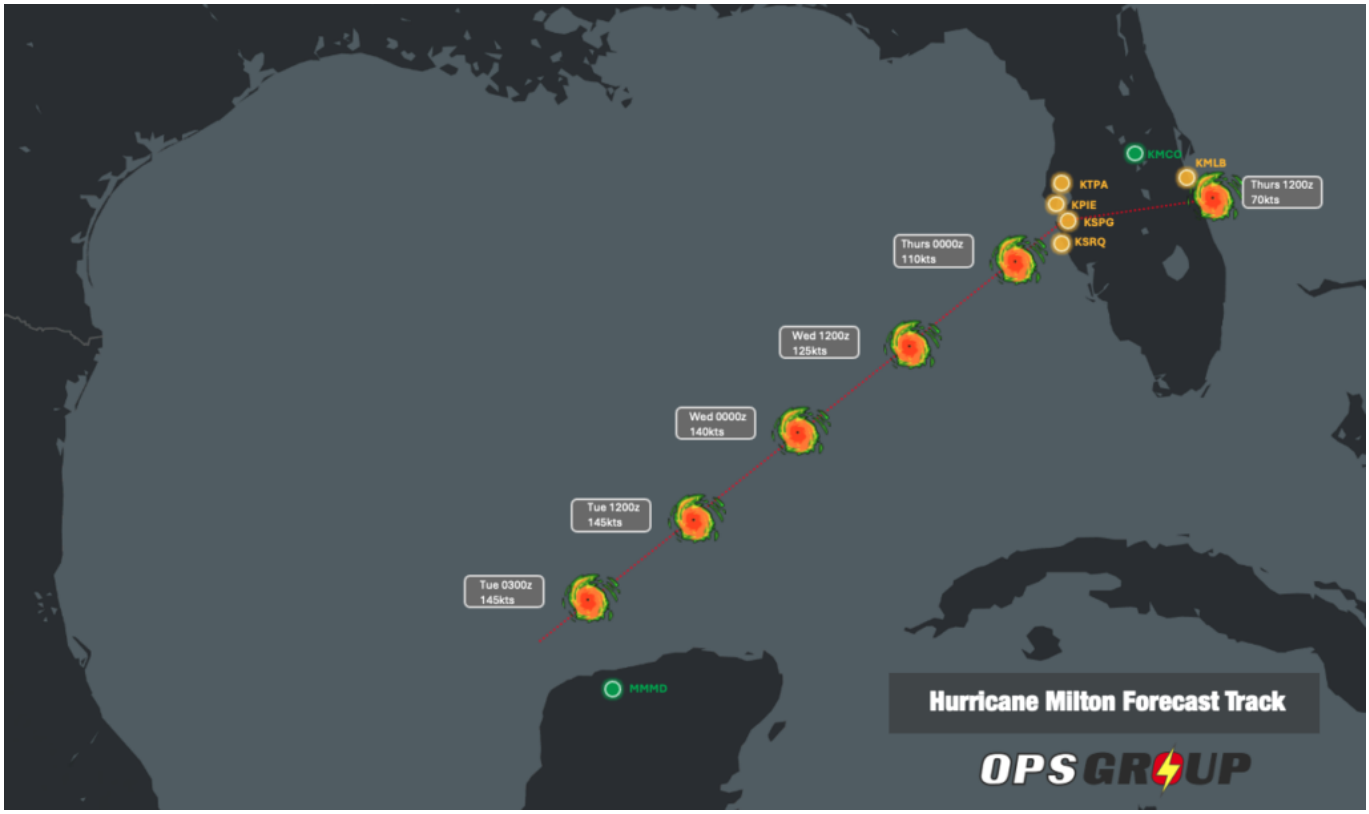
Gulf route closures as a direct result of Hurricane Milton have now finished.

Florida

The worst is now over for Florida – Milton is tracking eastwards away from land and into the Atlantic. Most airports are planning to reopen today (Oct 11), however damage assessments are still ongoing so Notam timings may change or be extended.

Airport Closures

KTPA/Tampa	**Re-opening** Oct 11, 1200z *(est.)*
KPIE/St.Pete-Clearwater	**Re-opening** Oct 11, 2000z *(est.)*
KSPG/St.Petersburg	**Re-opening** Oct 12 1600z *(est).*
KSRQ/Bradenton	**Re-opening** Oct 12 1000z *(est.)*
KMCO/Orlando	**Open** *Fuel limited, check availability.
KMLB/Melbourne Orlando	**Re-opening** Oct 11 1300z *(est.)*



The FAA has now finished its telcon briefings for Milton.

Stay Informed

For **live operational updates**, keep an eye on the FAA NASS website which will be updated constantly as Milton passes.

The National Hurricane Center will provide accurate forecasts and tracking info here.

Have we missed something? If you have an update to share regarding airport or airspace status, please

reach out to us via news@ops.group.

NAT Conundrums: Volume I

Chris Shieff
15 October, 2024

Originally published 2021, Updated 2024

- Changed **SLOP requirement** in GOTA: now only in the Oceanic portion
- **More to read!** NAT Conundrums Vol II, NAT Conundrums Vol III (GOTA), NAT Conundrums Vol IV (Contingencies)

It's no surprise to most that the North Atlantic is the busiest oceanic airspace in the world. To keep things running smoothly there are a bunch of procedures to follow. We write about them a lot, especially when they change. From time to time questions continue to pop up that make us scratch our heads. And so we thought this might be a good chance to share a few of those with you – *naughty NAT conundrums* if you will.

To SLOP or not to SLOP?

Chances are if you fly in oceanic airspace you already heard of Strategic Lateral Offset Procedures (SLOP). They're pretty straightforward – you're supposed to **offset up to 2nm right of track without needing a clearance**.

We do this because humans are fallible and mistakes can be made. Ironically the extreme accuracy of modern navigation systems mean that in the case of gross navigational errors, level busts or incorrect clearances, these systems actually *increase* the chance of a collision. So we pull over to the side of the road a little more, just in case.

Do we have to SLOP?

If you're in the **NAT HLA** and your aircraft is capable then **yes, it's 'required'** (as per ICAO NAT Doc 007). The only time you shouldn't is if your aircraft's FMS cannot automatically maintain an offset i.e. it doesn't have that function. In that case you 'must' stay straight up the middle.

Remember, your SLOP can be in **increments of 0.1nm** and "0 nm" SLOP is also a thing!

You SLOP from the ENTRY point only, and need to have stopped the SLOP by the EXIT point.

- Don't go 'direct to' the EXIT, this will put you on a different track. Cancel the SLOP to return to 'centreline'
- Only SLOP from the ENTRY to the EXIT
- If you are routing from a NAR into the NAT, the last point is your entry into the NAT and you can SLOP from here

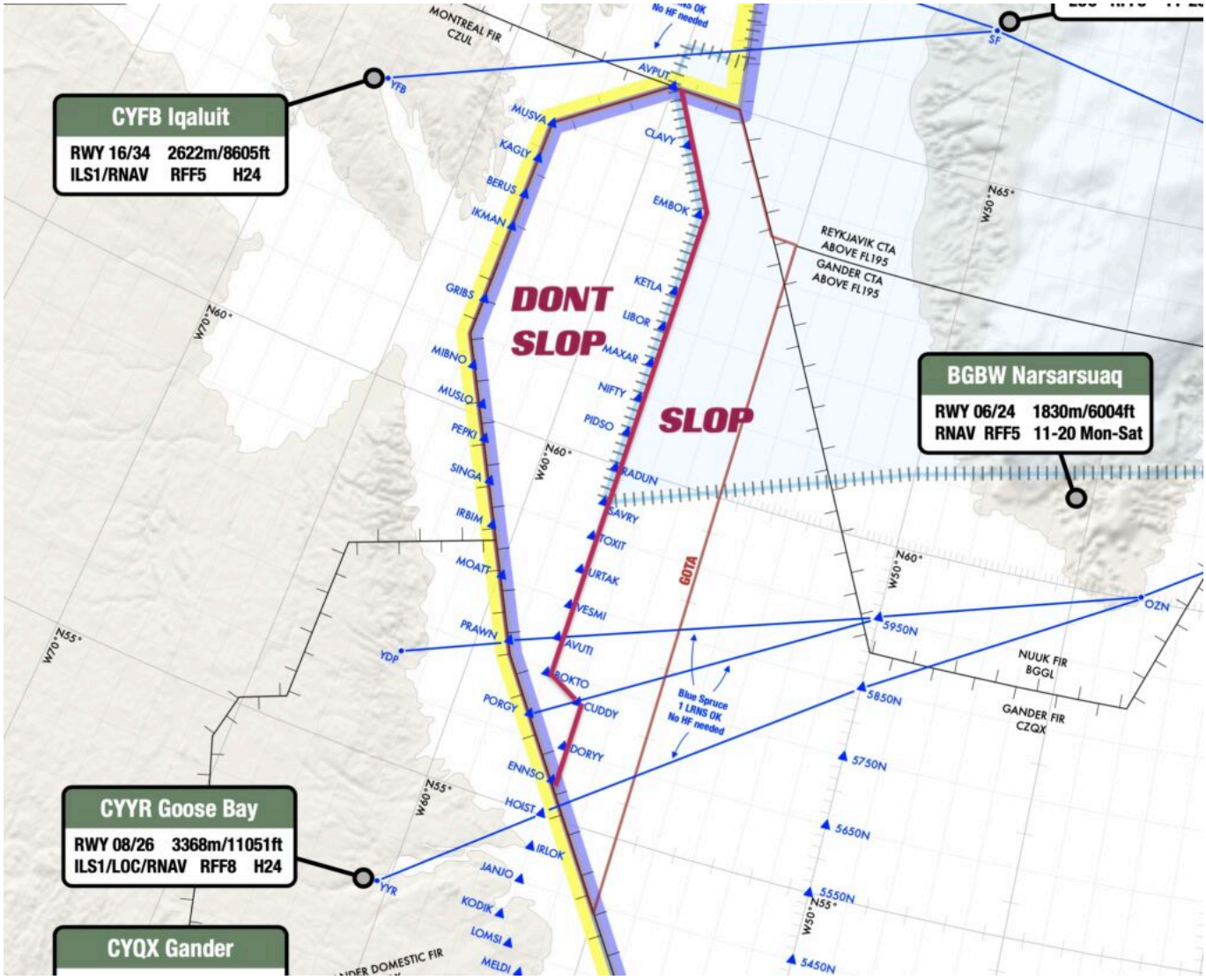
Can we SLOP in the Oceanic Transition Areas?

Or in other words in NOTA, SOTA, BOTA or GOTA? Good question.

NOTA and SOTA: The short answer is no. The slightly longer one is that the both NOTA and SOTA are under radar control with domestic separation from Shannon Radar. You should only apply SLOP between your oceanic entry and exit points.

BOTA: It's a similar story. BOTA radar control services are provided by Brest Control in France – essentially domestic rules still apply. So no SLOP-age.

GOTA: This is the odd one out. GOTA (the Gander Oceanic Transition Area) is off the coast of North-eastern Canada. You should SLOP only once you have passed the Oceanic Entry Point (OEP) eastbound and within Oceanic Airspace "proper", and vice versa westbound – sto SLOP at the Oceanic Exit Point (for example NIFTY on the chart below).



Are there any other ‘gotchas’?

Yes – three main ones:

1. T**he ENOB/Bodo and BIRD/Reykjavik FIRs.** Look out for these. Buried in the NAT Doc 007 it says that you are only allowed to SLOP above FL285. So don’t get caught out in the lower levels.
2. **Tango Routes T9 and T290.** These lie just outside of BOTA airspace. According to the UK AIP ENR 3.5, SLOP does not apply here.
3. And whatever you do – **never SLOP left!**

What’s the difference between the NAT Region and the NAT HLA?

The NAT Region is virtually all of the non-domestic airspace over the Atlantic – from around 20 degrees north all the way up to the pole (excluding New York Oceanic West). It contains seven Oceanic Control Areas – BGGL/Nuuk, BIRD/Reykjavik, ENOB/Bodo Oceanic, CZQX/Gander, EGGX/Shanwick, KZWY/New York Oceanic East and LPPO/Santa Maria.

Within the NAT region (and occupying a large amount of it) is the **NAT HLA**, which stands for *High Level Airspace*. It only exists from **FL285 to FL420.**

Because the NAT HLA is some of the busiest airspace in the world, there are a number of stringent navigation and communication requirements that you must meet to enter it. This includes being either RNP 4 or RNP 10 capable, having two independent long range navigation systems and in most cases, datalink. Operators also need state approval.

If you don't meant those requirements you can still fly through the NAT *Region*, but you'll have to fly below or above the NAT *HLA.* Blue Spruce routes are the exception, which allow aircraft with only one long range navigation system or limited comms equipment to enter.

Can I fly across the North Atlantic without Datalink?

Yes, but it's gonna be tricky.

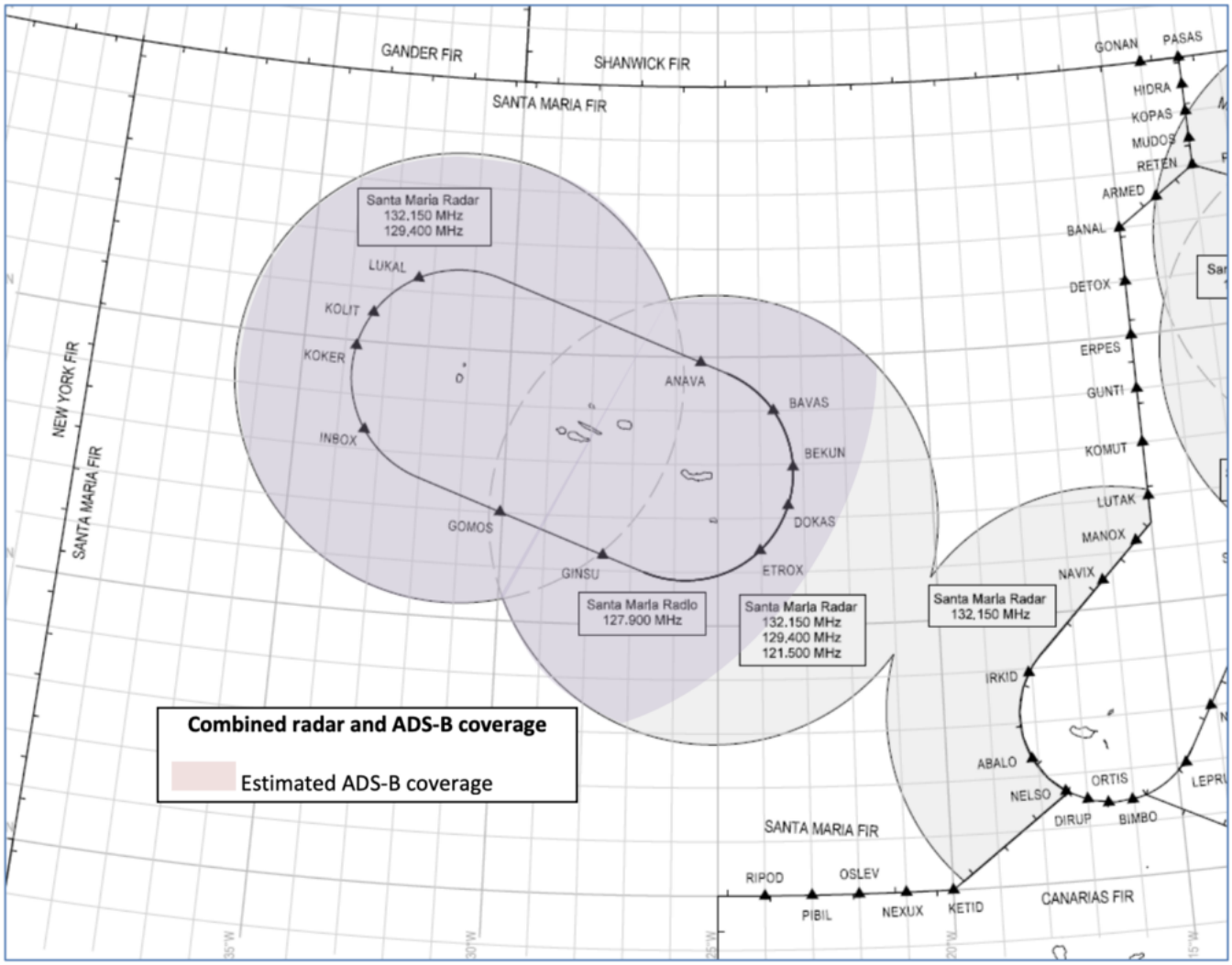
The North Atlantic Datalink Mandate (NAT DLM) means aircraft need to have **CPDLC and ADS-C** to operate between **FL290-FL410** throughout the NAT Region.

There are a few exceptions where the NAT DLM does not apply:
– Everything north of 80°North.
– New York Oceanic East FIR.
– Tango Routes T9 and T290. The other Tango Routes (T213, T13, T16) all require datalink.
– ATS Surveillance airspace, where surveillance service is provided by means of radar and/or ADS-B, coupled with VHF.

That last one about "ATS Surveillance airspace" is essentially just a section of airspace over Greenland and Iceland, which looks like this:

So if you're on a NAT crossing and you **don't have datalink**, you technically have to **stay below FL290 until you hit the blue shaded area**. It's worth noting that aircraft without datalink can request to climb/descend through datalink mandated airspace, but will only be considered on a "tactical basis" by ATC.

Further south, there is another section of "ATS Surveillance Airspace" in the area connecting the LPPC/Lisboa FIR (i.e. mainland Portugal) to Madeira and the Azores, which is **also exempt from the NAT DLM:**



So in theory, an Atlantic crossing without datalink would also be possible here – within the LPPO/Santa Maria FIR you would just have to ensure that you stay below FL290 or above FL410 outside of the bubbles until you reach the KZWY/New York FIR (where the NAT DLM does not apply).

Even further south, in the TTZP/Piarco and GVSC/Sal FIRs, CPDLC is the primary means of communication, but it's still **not mandatory**.

So down south, the bottom line is that as long as you stay out of the LPPO/Santa Maria FIR between FL290-410 where the NAT DLM applies... except for the ATS Surveillance Airspace bubbles where it doesn't apply... then you'll be ok with just HF. Got it?

For more info on the NAT Datalink Mandate, check out our previous article.

So, what's your conundrum?

We'd love to hear it. Chances are if you don't know the answer, many other people won't either, so it's always great to share.

Get in touch with us at team@ops.group with your question, and we'll include it in the next article on Naughty Nat Conundrums.

And if you want to download a PDF of our **North Atlantic Plotting Chart**, check how to get a copy here.

Do I need a TSA Waiver for a flight to the US?

David Mumford
15 October, 2024

If you're heading to the US and are trying to work out whether you need a TSA Waiver for your flight, we have an Opsicle to help with that.

OPSGROUP members can download a copy for free here.

If you're not an OPSGROUP member, but you'd like to be, you can join here.

Let's start with the basics

Here is the TSA Waiver site. This is where you **submit your requests.**

And here is the TSA site on waivers. This is where you can **find info on Waivers.**

Which Waiver is Right for You?

There are a few types. You have your Disney Theme Park, Washington DC Special Flight Rules Area/Flight Restricted Zone, Major Sporting Events and Special Events Waivers.

And then you have your International Waivers which include International Air Ambulance, No Transponder and **International Single Trip Waivers** – this last one is what we're interested in.

The Guidance

International Waivers are required for *'various aircraft to fly within US airspace, which includes the airspace above the United States and its territories'.*

Whether you need one depends on your **aircraft size, where it is registered and where you're coming from.**

Flying to and from the US

International TSA Waivers are not required for any aircraft arriving to or departing from the US or its territories. So this applies if you only make one stop in the US (i.e. you fly in and straight back out again).

Flying within US airspace

Planning to make more than one stop in the US? You'll need an International Waiver if you do this in a foreign registered aircraft which is heavier than 100,309 pounds MTOW (45,500 kg).

But, since most private aircraft generally fit under this weight limit, **you probably don't need one.**

Overflying the US

OK, here we go, the bit to know – this is for when you take off and land somewhere not in the US or its territories, and overfly the US in between.

If your aircraft weighs 100,309 lbs MTOW or more: you need a Waiver, even if your aircraft is US registered.

If your aircraft weighs less than 100,309 lbs MTOW: US registered aircraft do not need one. If you are foreign registered and overflying, you do need one – unless your aircraft is registered in a "Portal Country", and is flying directly from any one of these (prior to entering US airspace).

The Portal Countries:

- Canada
- Mexico
- Bahamas
- Bermuda
- Cayman Islands
- British Virgin Islands

Special Interest Countries

The black sheep of the World of Waivers. Probably the easiest category to work out the rules for. **You'll need an International Waiver for everything** – ops to, from, within and over the US, if your aircraft is registered in one of these countries. The list currently includes: **Cuba, Iran, North Korea, China, Russia, Sudan, and Syria.**

To recap…

Landings: Foreign registered aircraft over 100K lbs making 2 or more stops in the US need a Waiver.

Overflights: All overflights over 100K lbs need one – and that includes N-reg. If you are foreign registered and overflying, you need one regardless of size. There's one single exception: If overflying with an aircraft under 100K lbs registered in a Portal Country, and the flight is from any of those countries, then you're good.

Special Interest Countries: Aircraft registered in these need a Waiver for everything – ops to, from, within and over the US.

Where is this officially written?

There were some official, permanent Notams published back in 2016. **FDC 6/4255 and FDC 6/4256 (KFDC A0006/15 and A0006/16).** These have vanished though and we can't find any replacements.

The best spot to read it (officially) seems to be in the AIM Chapter 5 *(Air Traffic Procedures)*, Section 6 *(National Security and Interception Procedures),* and take a look at 5-6-7 for the stuff on transiting US airspace.

How to get it and what to do with it.

You need to submit your request to the Authorization Office here. It is recommended that you submit your request **at least 7 days before** your planned flight to the US.

When you apply, don't forget to include all those who may be onboard in your request.

Once you have it, it is only **valid for 90 days.** You need to **carry the hard copy** onboard with you.

Any other things to know?

If you do operate over US airspace then you need to stick to their rules which also require that you:

- Use an active VFR or IFR flight plan
- Be equipped with a Mode C or S transponder and use an ATC-assigned transponder code
- Communicate clearly with ATC

Any other gotchas?

A couple, as reported by an OPSGROUP member:

Watch your weight: *One in particular issue I have seen a few times is that of Private Global 7500s. Most owners of this aircraft are usually stepping up from a previous version like the Global 6000 series. Many fail to recognize that this step up has a significant impact on their US TSA requirements. I think most miss the weight class change and simply think of the aircraft as a Global XRS with better range. The implications of not having a valid waiver can be significant.*

Validity period: *A waiver can be valid for "up to 90 days" with the required dates being set during the initial application. A waiver may be modified up to three times with the end date being fixed (i.e. the end date on the original application must remain the same for each subsequent modification). There is a caveat I should mention regarding the number of allowed modifications, being that this is only valid within a calendar year.*

Anything we missed?

Let us know, at team@ops.group

Vegas F1: Brace Yourself for Special Event Fees

Chris Shieff
15 October, 2024

Brace yourself – the Formula One Grand Prix in Las Vegas is just around the corner, and metropolitan area airports are about to get really, *really* expensive. Here is an early rundown on what to expect so you can start planning your trip early.

The Grand Prix

The FAA has published the procedures for this year's event yet here.

While race day is Nov 24, **special procedures** will apply at KLAS/Las Vegas, KHND/Henderson, KVGT/North Las Vegas and KBVU/Boulder airports from **Nov 19–26.**

All arrivals and departures will need a **PPR number** issued by an FBO, including drop-and-goes. You'll need to include this in Item 11 of your flight plan.

Don't be tempted to try and land without one. Airport authorities will not allow you to de-plane your pax and you'll need to gas up and leave again without delay.

If you're looking to park overnight, **book now.** Last year it got so busy that the only option for many was to purchase a drop-and-go slot allowing thirty minutes on the ramp to offload, and another thirty to pick up.

Note that **Signature FBO** still cannot accommodate aircraft with wingspan more than 80ft, due to ramp construction works. **Atlantic Aviation** (the only other FBO at the airport) don't have any similar restrictions.

Even airports further afield, such as **KBVU/Boulder City** are already reporting they're booking up. If you're really stuck, it might be worth considering the likes of **KIFP/Bullhead City** (Signature) or **KSGU/St George** (Million Air) – although these would mean a long drive to downtown Las Vegas.

Traffic Jams

Inevitably, arrival rates will exceed airport capacity. ATC will use terminal initiatives to put the brakes on. It may go without saying, but it's important to carry **extra fuel** for airborne holding and reroutes.

Domestic IFR aircraft can also expect Departure Clearance Times for all inbound flights to the three major airports.

Within 200nm of the Vegas terminal area, ATC will not process airborne reroutes or changes of destination unless there is an emergency.

Special Event Fees

The biggest gotcha for anyone operating an aircraft to Las Vegas during the Formula One event is **special event fees** charged by FBOs.

At last year's event, we reported these exceeding $8,000 USD. This year we've already seen quotes as high as **$25,000 USD** from OPSGROUP members. So this year, we are effectively witnessing this fee more than triple. And that's just for the special event fee. On top of this there would be all the other standard fees (Facility, Parking, Hangar, etc).

AOPA has been crying foul on this very issue for some time now. As they explain, there is currently **no FAA policy** regarding special event fees. However, existing regs do require charges for the aeronautical use of a public airport to be 'reasonable', or sufficient to sustainably cover costs.

In this sense, the charge of tens of thousands of dollars to park an aircraft does seem exploitative – especially to those operating under Part 91 who may not even be using the airports for the special event they're being forced to pay for.

One last thing – Pacer.

If you're in Vegas for the F1, it would be a good idea to register and use Pacer before you take off again.

If you haven't heard of it, it's basically an **online information exchange** to help operators avoid leaving at peak periods by uploading their intended departure time.

Don't worry – your personal information won't be visible to anyone else, but you will be able to predict when ground delays will be at their worst. It was used at last year's event with good success and becomes more effective as more people use it. So, it's worth a shot.

Heard anything else?

Let us know, we'd love to hear from you. You can reach the OPSGROUP team on team@ops.group.

ADS-B Controversy? Landing Fee Fuss in Florida

Chris Shieff
15 October, 2024

Several airports in Florida are proposing **new landing fees using ADS-B to automatically invoice operators** as early as next month.

AOPA, along with other industry collectives, are crying foul. Not necessarily at the prospect of more bills, but because of the use of ADS-B data to **collect fees.**

Simply put, in both design and mandate, **ADS-B was never intended for this purpose.** It exists due to its ability to improve the safety and efficiency of air traffic – not to clip the proverbial ticket.

What's Being Proposed

Long story short, Florida has contracted a partnership of **third-party companies** that collect real-time airport operational data using ADS-B and use it to produce landing fee invoices.

The proposed billing structure will be **based on weight**, and the heavier you are, the more you will pay. The figure being widely thrown around is **$3USD per 1000 lbs.**

These fees may be introduced as early as 1 October 2024. Nearly a dozen Florida airports have already shown an active interest in implementing the new scheme.

For business jet operators, it's hardly earth-shattering news. $225 USD in fees to land a Gulfstream 550 for instance is well within the realm of normalcy – given publicly available fees.

So why should we be taking note? Because of the **precedent** being set and the implications that this may have for the future use of ADS-B data.

Push Back

AOPA have written to the FAA asking them to **block the use of ADS-B to collect fees.** They're also seeking legislative action to try and make sure this doesn't happen.

They make the following points:

- The fees will be collected by not-for-profit, public-use airports already operating in surplus thanks in part to Federal grants.

- The domino effect. Airports have expressed concerns that if other airports introduce the new fees, they will have to do the same to protect themselves from the resulting influx of traffic.
- This is not what ADS-B was intended for.

ADS-Being Watched

This is not the first time ADS-B has come under the spotlight for being used in ways that were never intended.

Case-in-point was the **recent controversy** of its data being used to track and publicize the whereabouts of prominent VIPs – one celeb famously described these as his *'assassination co-ordinates.'* You can read about that more here.

In a similar vein, one can argue ADS-B data should not be used to collect billing information either.

It was never intended for this purpose. The technology was invented, and in many cases *mandated* for the better-than-radar effect it has on separation and airspace safety. Just take the fairly recent transition of the NAT HLA to space-based ADS-B for instance.

Where the lines become blurry is that **ADS-B data isn't protected** – with the obvious exception of things like the FAA's LADD and PIA Programs, which are limited in scope for international operators, and will be for some time yet.

The reality is that virtually anyone with around a hundred bucks worth of ADS-B receiver can track most 1090 MHz ADS-B equipped aircraft.

Unfortunately, the use of this data **opens the door to commercial interests** – the precedent arguably being set in Florida.

It is our data, and belongs in the aerospace system. Florida's proposed landing fees may be of more concern to flight training and lighter aircraft right now, but we have a **collective interest in supporting ADS-B only in its use for safety, and nothing more.**

Staying Switched On

What we don't want to see happen is **more pilots and operators switching off ADS-B** because they are skeptical of the system. Having your ADS-B switched on, even in areas where it's not required, provides a **massive advantage to aviation safety** of being able to see other planes around you.

The risk with schemes like this new one in Florida is that it will drive more pilots to avoid the system, which could ultimately lead to more incidents and accidents.

Have more info?

We'd love to hear from you. You can reach us on team@ops.group around the clock.

Italy: New Disinsection Procedures

Chris Shieff
15 October, 2024

In March 2024, an OPSGROUP member reported a fuss on arrival at LIRA/Rome from the US over **disinsection procedures.** Turns out their aircraft needed to be sprayed – a process that local agents appeared thoroughly confused about.

This was completed by the crew, but the Italian Health Department later said *not good enough* and they were required to arrange a cleaning company to do this for them at considerable delay and cost the next day.

We did some digging, and it turns out there are indeed some new (and pretty specific) procedures that now apply to **US operators** – along with a healthy dose of the rest of the world – due to concerns about mosquito borne illnesses. You'll save yourself a headache (no pun intended) if you can get it right the first time.

Here's what we know.

New Procedures

Health authorities now require one of two things on arrival, depending on where your aircraft has been in the **past 28 days:**

- **Aircraft been in an affected country = a disinsection certificate (aircraft sprayed)**
- **Aircraft NOT been in an affected country = an aircraft declaration**

Check this list to see what applies to your aircraft. This is the list of countries, according to WHO, with current or previous Zika virus transmission. This seems to be the source that the Italian authorities are referencing when they talk about "affected countries" – it seems a bit odd that they're doing this, because this list was last updated by WHO all the way back in Feb 2023, but .

Been in an affected country?

Option 1

If your aircraft has been in an affected country in the past 28 days (which includes the US), you'll need to show a **Residual Disinsection Certificate.**

This should be in line with ICAO Annex 9, Appendix 4 – you basically get the cabin sprayed with insecticide, and **get a certificate which is valid for 8 weeks** (i.e. the slime sticks around and kills any mozzies for this period of time).

⬆ This is what Italy wants you to do. Spray the cabin in the US (or wherever else) with the heavy duty stuff, get your certificate, and show it to them on arrival. And in theory, it sounds like a nice easy option. **The only problem is that you can't do this in the US** – according to the US Environmental Protection Agency who say so here.

Option 2

So if you can't get this whole thing done in advance, option 2 is this: **when you land in Italy they will do a mandatory spray of your aircraft** – but this might take time to arrange through your handler and could cause delays.

Option 3

As of Sep 2024, authorities said that if you can't do the residual disinsection (the preferred option) then they will allow you to **spray the aircraft before departing to Italy.** It's valid for one flight only, and has to be before the pax board, in accordance with the "pre-embarkation" rules in this WHO document. We checked with several FBOs at airports in Italy, and only half of them had heard about this latest update, so don't count on everyone being up to speed with this change!

Not been in an affected country?

If your aircraft has not been in an affected country, you will need to **submit a declaration** instead.

The requirements are quite specific. You don't need to spray, but you'll need to list every country your aircraft has been in the last 28 days (including any transit stops).

This must be emailed to the Italian Health Authority office at your point of entry at least twelve hours before you land.

This should be on your company's letterhead, and signed by a manager. If possible, include a version in both English and Italian.

Here is the example template Universal Italy put together.

Show me the official guidance

Welcome to *Operation Confusion*. Of the four local handling agents we reached out to, not one could actually direct us to the 'official' announcement from the Italian authorities they were referring to. Officially for us, this was **highly frustrating.**

But an intrepid OPSGROUP member found this link from the Italian Ministry of Health – it certainly looks like the one that talks about all these new rules.

So the advice above is our best attempt to streamline the process, based on the recent experience of OPSGROUP members and all available information.

Crew Reports

We have received several of these since first posting this article, from various different airports across Italy:

LIML/Milan Linate (March 2024): *We had to proceed with disinsection (organized by the FBO). The process lasted 30 mins with a requirement of having all aircraft doors closed for one hour. They accepted to postpone until the crew was ready to leave. Expect a light greasy deposit on the furnitures. No odour.*

LIPE/Bologna (March 2024): *We did two trips into LIPE this week, hardly a mention of any spraying. I gave them a letter saying I treated with AeroSafe, presented 3 empty canisters and requested our ship not be sprayed. Our aircraft was not sprayed on either trip into LIPE.*

LIMC/Milan Malpensa (April 2024): *We set up disinsection through Universal and it took 5 mins. I told their crew I didn't want any of the seats sprayed and just the carpet. APU was running and crew was outside for the 5 mins. After they finished we continued to clean up the airplane. They gave a cert in Italian to the handler and one to me in English. Cost was around 400 Euros. The stuff they used was EMULDRY 50 Plus Residual Insecticide.*

LIRP/Pisa (April 2024): *Plane was shut down, when they said oh by the way we have to do this. So back out to the plane, open it up, fire up the APU for air circulation, set the bug bomb in the plane, and set it off. It was all done by some company contracted by the airport – they didn't let us have anything to do with it. Close all the doors with no one on board, APU running, for 20 minutes. Then open cargo door and main entry door for 20 minutes for venting, APU still running. Process is done at this point. Plane needs to be secured and back in to clear customs, etc. This took an extra hour or more of time. Plane is now good for 8 weeks they say, make sure you get the certificate they give you. The spray didn't smell much. It was a massive time suck, and I haven't seen such nonsense since Covid.*

LIRA/Rome (April 2024): *We arranged to have the airplane treated upon arrival. After the airplane was cleaned and crew ready to depart for the hotel, a contracted individual boarded the airplane with a Ryobi electrostatic sprayer loaded with chemical. After treatment, we closed the doors and left for the hotel. 4 days later, there wasn't any trace of the chemical. The service costs around €450. We are headed back to*

LIRA in a few days with the same airplane. They have accepted the disinsection certificate since we are still within the 8 week active period of the chemical.

LIRA/Rome (May 2024): *They made up the process on the spot. Charged €500 and the actual process took about 5mins. They would not do the disinsection or any other services at the long term parking stand, or at the short term parking stand with the APU running. So we had to shut down the APU, get the fuel/lav done, start the APU back up to have the beacon on for towing to the long term stand, wait for a follow-me car and clearance to tow about 150' then open all the doors, sign 5 pieces of paper, remove all blankets and pillows and let them do the spray and close the doors. After we closed the doors (this is now 2hrs after arrival) one ministry official said we had to leave it for 2hrs and the other one told us we'd have to leave it for 40 mins then come back and open it for 20. They instructed us to leave the APU on during this time and leave the area. I told them this was not happening and that we were already over our duty day. That I would have to shut down the APU and re-close the doors and leave. I further told them I would be back a few days later and would open the doors for 20mins before we entered the airplane. After a 5 min conference, they allowed this but wanted me to take all the pillows and blankets with us. This was simply not practical so I said no and put them in the coat closet before I left. They said OK to that also. They didn't seem to know what was to be done other than signing the papers. Everything else they made up as they went along and capitulated to any pushback.*

LIML/Milan Linate (Aug 2024): *On arrival, we told them that we really didn't want to get the aircraft sprayed. The FBO advised us that we needed to pay the charge anyway. We said no problem, so we paid the charge, but we didn't get sprayed! I was surprised, but they were very easy about accommodating our request not to be sprayed. Overall, couldn't have been better service, 5 lineman greeted us upon arrival.*

LIRI/Salerno and LIEO/Olbia (Aug 2024): *Last week we flew into both of these airports from the US and we were not asked a single question about dissection, seems that they did not care at all.*

Keep an eye out for new requirements elsewhere too

Dengue, in particular, seems to be in the outbreak stage of its cycle. Zika virus is also showing signs that things may soon get worse again.

Both the Centers for Disease Control and Prevention (CDC) and World Health Organization (WHO) provide the most up-to-date information on active outbreaks of these kinds of illnesses. If you have layovers in affected countries, it is highly recommended you keep an eye on things – both for your own health, and for potential impact to your operation.

If you do experience new procedures, **please let us know** so we can pass that info to the rest of the group: team@ops.group

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GPS Spoofing: Final Report published by WorkGroup

OPSGROUP Team
15 October, 2024

Key Points

- **Final Report of the GPS Spoofing Workgroup published today**
- **950 participants across full spectrum of aviation industry**
- **Significant concern regarding safety impact of GPS Spoofing**
- **Report download below**

Final Report Published

The Final Report of the GPS Spoofing WorkGroup has been published today, September 6th, 2024.

Over a six-week period between July 17-August 31, the WorkGroup tackled the complex issue of GPS Spoofing affecting civil aviation.

950 people participated in the project, representing the full spectrum of the aviation industry. Led by OPSGROUP, the WorkGroup comprised hundreds of commercial pilots, safety managers, and representatives from airlines, aircraft operators, and air traffic control. Additionally, a diverse group of aviation authorities, avionics manufacturers, aircraft manufacturers, and experts in GPS and GNSS systems participated. Industry organizations including EBAA, IFATSEA, IBAC, ALPA, IFALPA, the Dutch VNV, and BALPA contributed significantly. Support and expertise were also provided by various organizations and agencies, including the Royal Institute of Navigation, Eurocontrol, the Israel National Cyber Directorate, the UK Ministry of Defence, the UK Royal Air Force (RAF), NASA (Langley), U.S. Space Command, the German Aerospace Center (DLR), Zurich University of Applied Sciences, and the University of Texas.

The result is a comprehensive study of the GPS Spoofing problem, including detailed analysis of the technical background, impacts to aircraft handling and operation, best practices for flight crew, and a series of safety concerns and recommendations for industry attention.

Overall, the Workgroup assessed that the impact of GPS Spoofing on flight safety, aircraft operation and handling, and ATC operations, is extremely significant. **The WorkGroup is very concerned about the overall impact of GPS Spoofing on flight safety**. A total of 8 overall safety concerns, and a further 33

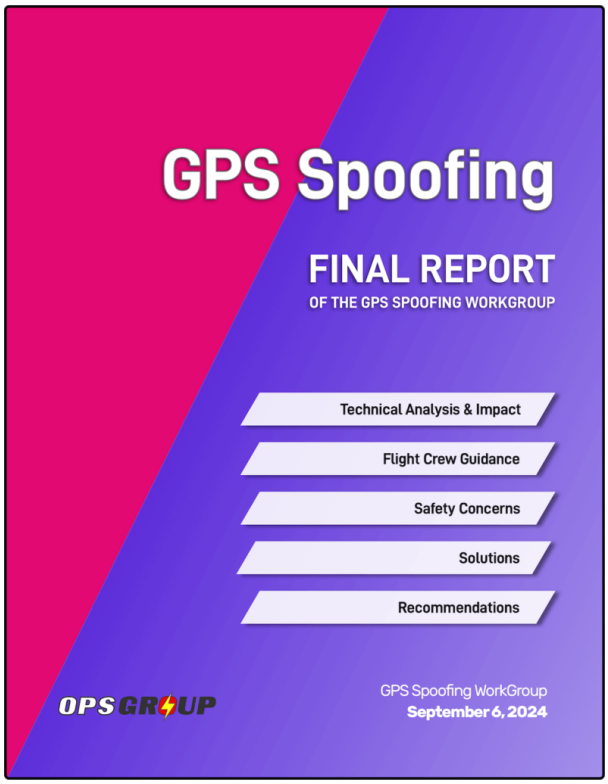
specific concerns were raised.

This year, a 500% increase in spoofing has been observed. On average 1500 flights per day are now spoofed, versus 300 in Q1/Q2 of 2024. This is coincident with the summer months in spoofing affected areas. **With winter approaching**, the operating environment changes from predominantly good weather and VMC conditions, to poor weather, icing, and IMC conditions. **This change will increase the risk factors significantly.**

A survey of flight crew was carried out as part of the Workgroup. The response was excellent – almost 2,000 completed surveys were returned to the Workgroup. The results show that a full 1,400 crew members (~70%) rated their concern relating to GPS Spoofing impact on flight safety as very high or extreme. 91% of all crew members rated their concern as moderate or higher.

The future of GPS use in aviation is unclear. The Workgroup assessed that the vulnerabilities in public-use GPS that are now becoming evident (although known to experts for a decade or more), mean that the high involvement of GPS in aircraft systems is a major issue. Further, the over-reliance on GPS for primary navigation places great importance on preserving a sufficient network of conventional ground-based navaids. This aspect of the issue requires deeper study and conversation.

Download Final Report



Download the Final Report of the GPS Spoofing WorkGroup
PDF, 10 Mb, 128 pages.

Thank you!

Everything you see in this report is the result of community effort. If you know OPSGROUP, you know that this is our approach to solving problems in international flight operations. We have a strong, safety-focused industry, but sometimes things come up that affect us all, yet can't be solved by an individual

aviation authority or group. GPS Spoofing is one such “thing”.

This WorkGroup was truly something special. The participation of 950 individual people, across the entire industry – pilots, ATC, authorities, manufacturers, GPS experts, industry groups – is a marker of how much concern there is about the GPS Spoofing problem. But participation is just the first step. What stands out in this WorkGroup is the above-and-beyond efforts from so many participants.

Seemingly confounding technical questions were answered quickly, data was offered, contacts were sourced, ideas and solutions were hammered out into the small hours. For six weeks, we worked weekends and late nights, and no stone remained unturned. The energy, drive, and commitment of so many to solve this many-headed Hydra never faded.

There is so much knowledge, experience, and expertise in the international ops community, along with the key ingredient: a desire to share our skills, to tell each other what may harm us, to lead groups and to push for change. It’s amazing to see.

Thank you to everyone who took part. From here, we hope that our efforts lead to better-informed flight crews, attention on the safety risks we have listed, and consideration of the recommendations presented at the end of this report.

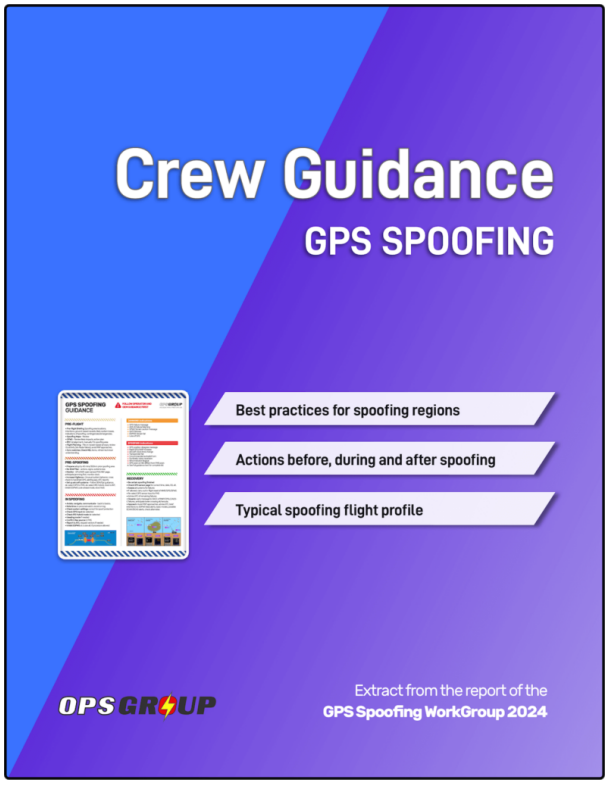
GPS Spoofing Guides

Some sections of the report were made available as reference guides, prior to the full release. These are available below.

Crew Guidance: GPS Spoofing

If you are operating a flight into a spoofing area tomorrow, this guidance will help to mitigate the impact of GPS Spoofing. This is based on best practices collected from the flight crew participating in the GPS Spoofing Workgroup, as well as OEM and other expert input.

- Best practices for spoofing regions
- Actions before, during and after spoofing
- Typical spoofing flight profile
- One-page Checklist style summary
- Diagrams: GPS Spoofing Flight Profile, GPS Reception during Jamming & Spoofing

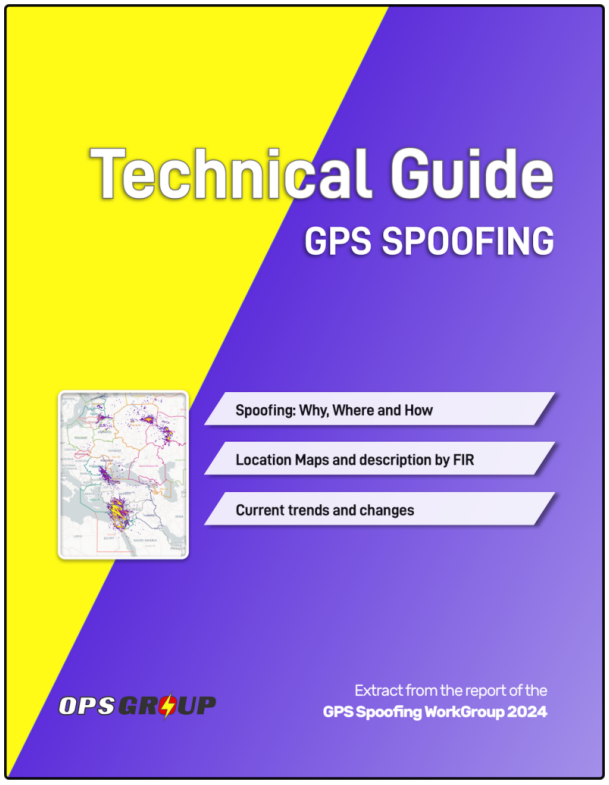


Download the Crew Guidance for GPS Spoofing, PDF, 2.7MB, 17 pages.

Technical Guide: the Where, Why and How of GPS Spoofing

This extract from the report of the GPS Spoofing Workgroup 2024 covers the technical details of GPS Spoofing:

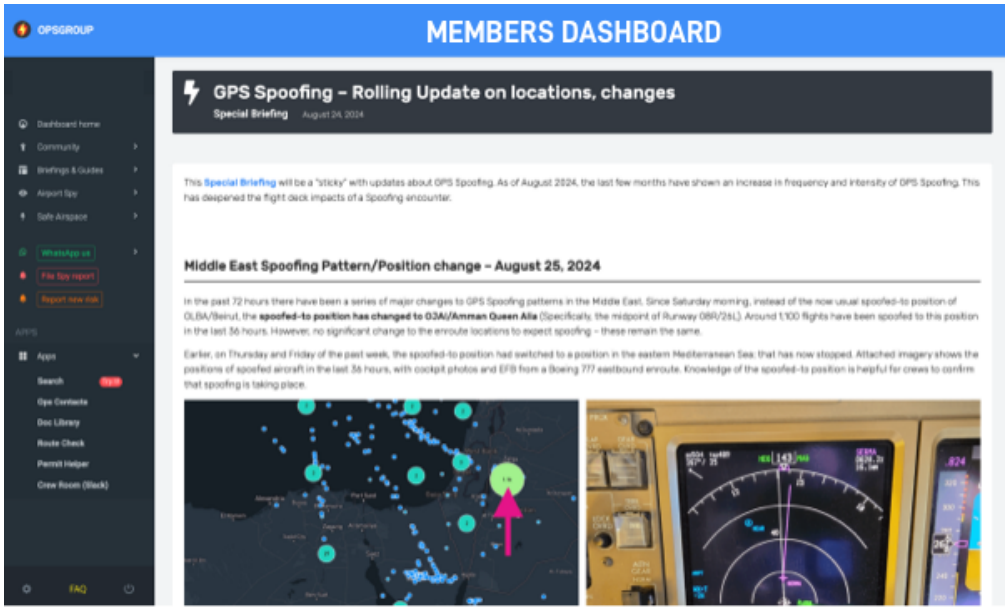
- Why, Where and How GPS Spoofing is happening – full technical details
- Location Maps: Worldwide, Mediterranean, Black Sea, Russia & Baltics, India/Pakistan
- Spoofing statistics and details by FIR
- Aircraft types affected
- Spoofing Patterns
- Changes and current trends



Download the Technical Guide to GPS Spoofing, PDF, 5.3MB, 29 pages.
[This links to the Guide, available in your Members Dashboard]

Ongoing GPS Spoofing Guidance

You can find a “rolling” **Special Briefing** in the Members Dashboard. This Special Briefing will be a “sticky” with updates about GPS Spoofing. As of August 2024, the last few months have shown an increase in frequency and intensity of GPS Spoofing. This has deepened the flight deck impacts of a Spoofing encounter.

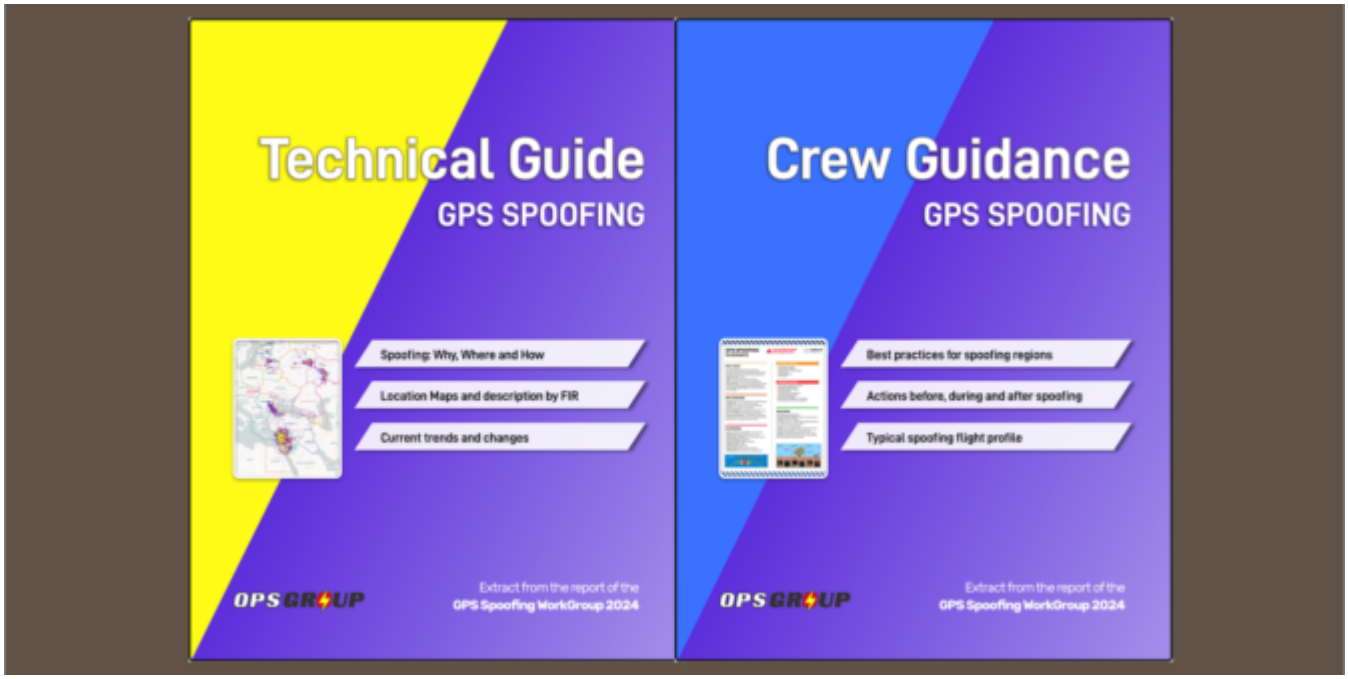


Special Briefing: GPS Spoofing – Recent updates:

- Middle East Spoofing Pattern/Position change – August 25, 2024
- Black Sea – Spoofing platform destroyed by Ukraine – August 15, 2024
- New Location: Western Ukraine – August 14, 2024
- New location: India/Pakistan border – July 2024
- 400% increase in GPS Spoofing – July 2024

Crew Guidance published by GPS Spoofing Workgroup

OPSGROUP Team
15 October, 2024



In August 2024, OPSGROUP co-ordinated a GPS Spoofing WorkGroup, to investigate **the GPS Spoofing problem**. The aim of the WorkGroup was to assess the impact, analyze safety risks, gather best practices and guidance for Flight Crew, and provide recommendations to industry. 950 people took part, from airlines and aircraft operators, ATC, aviation authorities, OEM's, GPS experts, and a variety of aviation organizations and other industry bodies.

Thank you to all who took part □□□. The Workgroup is now complete, and was a great success!

The complete report is available on this page. (after September 6th, 2024)

Report section extracts specifically for flight crew are below:

- **Crew Guidance**
- **Technical Guide: the Where, Why and How of GPS Spoofing**

Crew Guidance: GPS Spoofing

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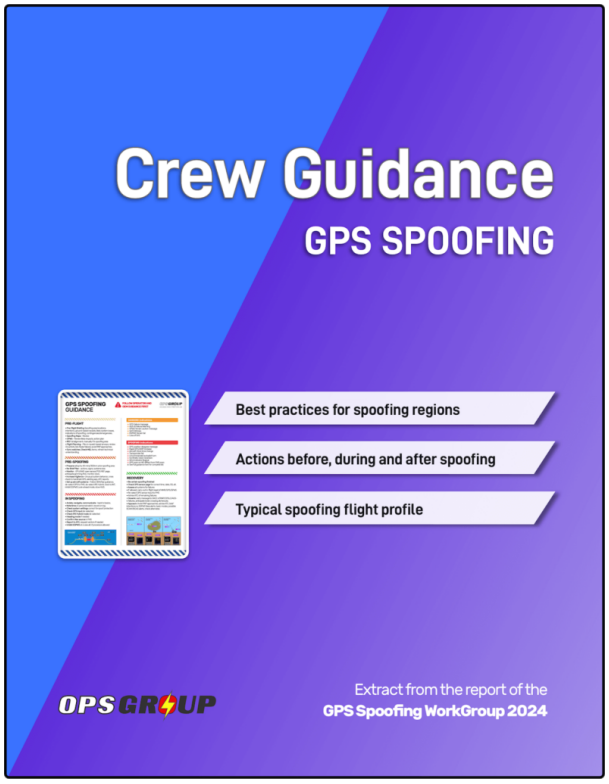

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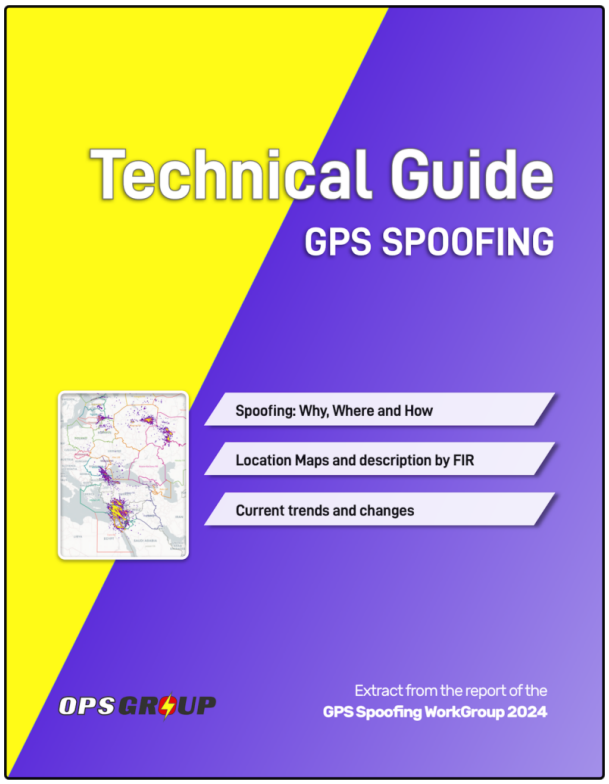

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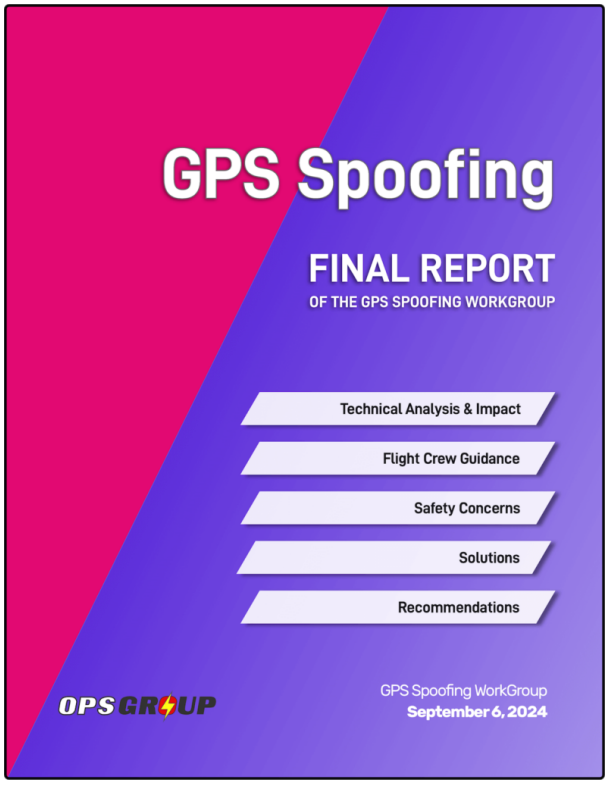
Final Report



Link to the Final Report of the GPS Spoofing WorkGroup.
PDF, 10 Mb, 128 pages.

Mpox: What We Know Right Now

Chris Shieff
15 October, 2024

Key Points

- **There is an active outbreak of the Mpox virus in the Democratic Republic of the Congo.**
- **Sporadic cases are reported elsewhere.**
- **It does not spread easily between people.**
- **ICAO has released limited guidance to operators.**
- **Screening, vaccination requirements and travel restrictions are not recommended.**

What's going on?

Earlier this month, the World Health Organisation (WHO) declared the current outbreak of the Mpox virus a **'public health emergency of international concern.'**

A **more virulent version** of the virus emerged in the Democratic Republic of the Congo and has since

been detected in several other African countries.

ICAO has now published limited guidance to airports and operators which effectively repeats what is publicly available advice from the WHO.

While the information is not alarming, we are of course monitoring things closely.

Here is a **brief and no-nonsense** rundown of what we know about Mpox and how it is affecting our industry right now.

A little context

It was previously called Monkeypox. Mpox is an infectious virus. Its symptoms have been well publicized. If you'd like to know more about those, click here.

The Mpox outbreak is **not new.** It has been spreading between people in a sustained outbreak since 2022. What's changed recently is that a new strain (or 'clade') has emerged in Africa which is linked to more severe symptoms. Cases have sporadically appeared elsewhere.

But what does 'Public Health Emergency of International Concern' *actually* mean? That comes directly from the WHO's own regs:

An *'event which is determined to constitute a public health risk to other states through the international spread of disease, and potentially require a coordinated international response…'*

It sounds alarming, but really suggests methods may need to be introduced to prevent another upswing in cases with perhaps more severe consequences than 2022. In their own words, WHO doesn't want history to repeat itself.

These methods may be as simple as **better health screening** of passengers to prevent them from travelling while contagious.

Give it to me straight – how bad is this going to be?

According to WHO, Mpox is spread between humans primarily through extended direct skin-to-skin contact. **It is not a respiratory virus.**

Contaminated bedding, clothes, utensils and surfaces have also proved contagious.

Inevitably, aviation will have some part to play. But what's important to note is that despite being a public health emergency, *Mpox is not the new Covid.*

When Covid emerged in 2019, it was novel – i.e. it hadn't been seen before. There were no vaccines or natural immunity.

Mpox is not new (it was first identified in the 1950s). It is also far **less efficient** at spreading between humans. WHO themselves have said they know how to control it (through public health measures) and a pre-existing vaccine that is already available. They key is getting that vaccine to those who need it.

The risk of it spreading widely remains low.

Aviation Guidance

Thus far, it's limited.

ICAO are saying this about international travel:

- Travellers should be given **relevant information** to protect themselves where Mpox may be a higher risk.
- Advise anyone who may have Mpox, or has been close to someone else with it, not to travel.

Notably they are **not advising** states to implement any entry/exit screening, travel restrictions or requirements for testing or vaccination.

Despite this, we have seen reports of temperature screening at airports in South Africa, Bangladesh and Pakistan – this isn't cause for alarm.

Pilots and crew may need to travel to countries experiencing active outbreaks. In that case it is important you are familiar with **signs and symptoms**, along with ways to protect yourselves.

Keep in mind when you return, symptoms usually take up to three weeks to appear. You can chose to get vaccinated but it would be worth seeking medical advice from your aviation doctor prior to receiving it. We haven't seen any guidance to suggest more an impact on fitness to fly than any other pre-existing vaccine.

We're watching it closely

Keep an eye on our ops alerts and briefings.

We will report any **significant operational changes** from Mpox as we see them, but for now impact appears to be minimal. You won't hear from us on any health or non-aviation related impacts, so we suggest the WHO's website if you're looking for that.

Of course, you can always contact us via team@ops.group with any updates.

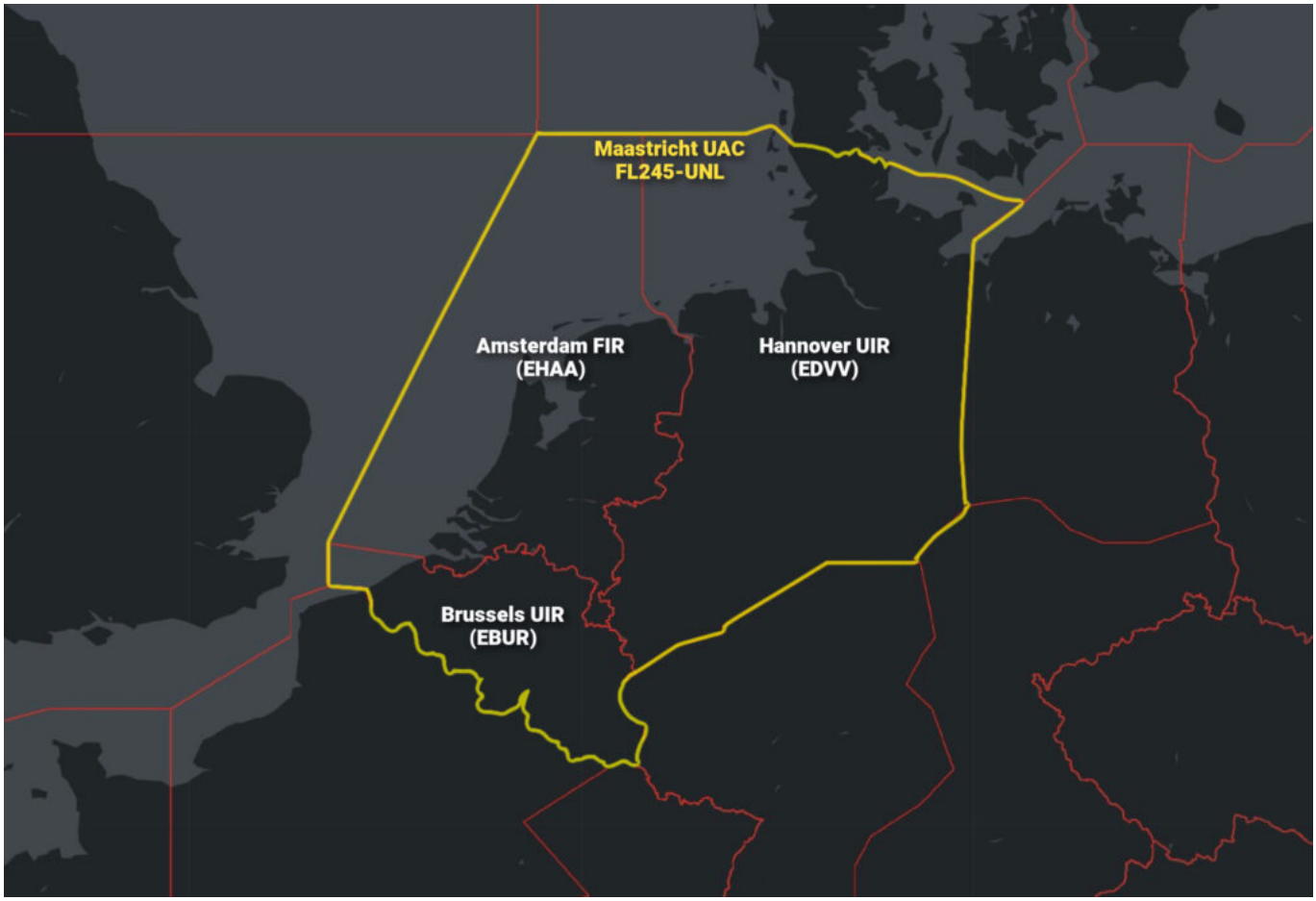
Climb for Contrail Prevention – What's Happening in the Maastricht UAC?

Chris Shieff
15 October, 2024

A few weeks back, the following Notam was issued for the **Maastricht UAC** (i.e. the busy airspace above FL 245 over Belgium, the Netherlands and Luxembourg):

A1832/24 NOTAMN
Q) EHAA/QSUXX/I /NBO/W /245/660/5255N00454E140
A) EHAA B) 2408010000 C) 2409192359
E) IN AN EFFORT TO MINIMISE THE IMPACT OF AVIATION ON THE ENVIRONMENT, MAASTRICHT UAC WILL BE RUNNING A CONTRAIL PREVENTION TRIAL. FLIGHTS MAY BE TACTICALLY REQUESTED TO DEVIATE FROM THE PLANNED/REQUESTED FL BY THE SECTOR CONTROLLER USING PHRASEOLOGY: FOR CONTRAIL PREVENTION CLIMB/DESCEND. ANY FLIGHT FLYING VIA MAASTRICHT UAC MAY BE CHOSEN. THE TRIAL WILL GO AHEAD DEPENDENT ON WEATHER CONDITIONS. FOR TACTICAL ENQUIRIES CTC MAASTRICHT UAC 0031 43 366 1428

Essentially if you are flying through that airspace between now and September 19 you may be instructed to climb or descend using the phrase *'for contrail prevention.'*



Maastricht have teamed up with DLR (the German Aerospace Center) in a bid to lower aviation's **'non-CO2' climate impact.** In other words, the effect aviation is having on the environment *beyond* fossil fuel emissions.

In that sense, this trial is one-of-a-kind and has been running on-and-off since 2021.

If you're wondering why you're being asked to deviate from your desired level, and what that has to do with contrails, read on.

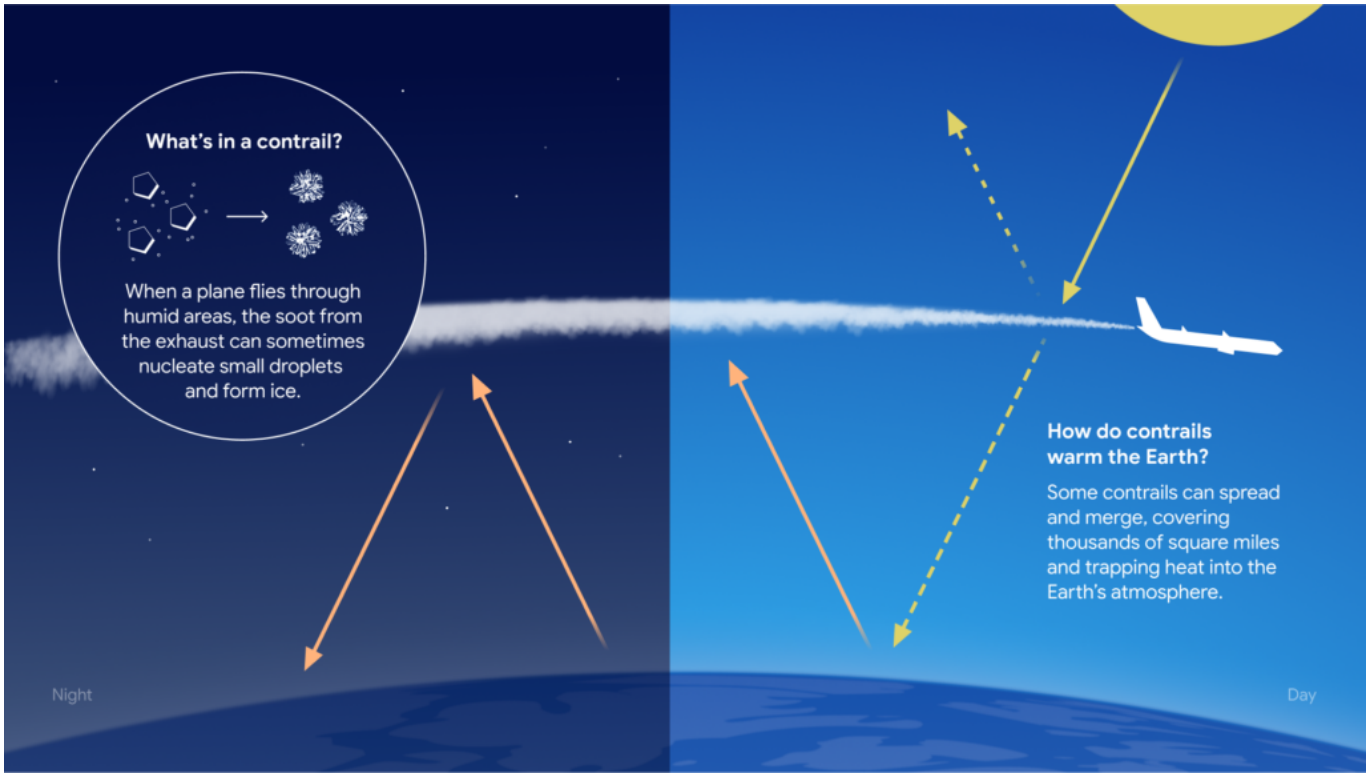
What does any of this have to do with contrails?

The concept of **non-CO2 impacts** may be less familiar to operators. Non-CO2 effects have to do with complex interactions between aircraft emissions and their effect on the surrounding atmosphere.

This includes **soot particles** – a byproduct of combustion. It may come as a surprise that contrails are not (as is often misrepresented) *just* water vapor. When water vapor exits the exhaust nozzle of a jet engine, it condenses and freezes to these soot particles creating tiny ice crystals.

These crystals form **contrails**. They are in fact a type of cirrus cloud with a fancy name that sounds like a bad cold – homogenitus. And if conditions are right, they can persist for hours – long after the aircraft that created them has disappeared over the horizon.

At night in busy airspace (such as the Maastricht UAC) these contrails can have a warming effect by trapping heat in the atmosphere, just like naturally occurring clouds.



This process occurs across quite a shallow band – around FL300 in Winter and FL360 in Summer.

So, contrails are important. Why do I need to change levels?

The strength and persistence of contrails has a lot to do with the state of the atmosphere around them. Part of the industry's approach is **predicting when the atmosphere is favourable to form contrails** and making **small flight path adjustments** to avoid the worst of those conditions.

Enter the Maastricht UAC Contrail Prevention Project.

Covering your tracks

The airspace of Maastricht often experiences conditions favorable for the formation of contrails. Therefore, it is the **ideal testbed for the trial.**

The project focuses on identifying those conditions and preventing prolonged level flight through them. In a nutshell, the German Aerospace Center identify when conditions in the Maastricht UAC are favorable for the formation of contrails by looking at satellite data.

Taking predicted traffic levels into account, the duty supervisor then gives the thumbs up for controllers to conduct **'contrail prevention activity.'**

If it goes ahead, it will begin **after 4pm local and run through the night until 6am local.**

Affected aircraft will be **directed by air traffic control to change flight level** using the phrase *'for contrail prevention.'*

What about fuel burn?

EUROCONTROL advise that **ATC will only request the minimum level change required** – i.e. will keep you as close as possible to you chosen level as conditions permit.

Anyone operating in Maastricht airspace may be selected to participate in this trial. It is important to

inform the controller if the level change will affect flight safety for which all levels will remain available.

US Rule Change for Carrying Dogs

Chris Shieff
15 October, 2024

Key Points

- **New rules apply to carrying a dog into the US, effective August 1.**
- **These rules depend on where the dog has been in the past six months.**
- **If the dog has not been a high-risk country, there is only one form to fill out.**
- **If the dog has been in a high-risk country, it will only be allowed to enter if vaccinated.**
- **Dogs vaccinated outside of the US will also need a rabies test beforehand.**

How do the new rules work?

On August 1 the **rules for bringing a dog into the US** from overseas changed.

Essentially the new requirements depend on where the dog has been in the preceding six months, and whether it has been **vaccinated** against nasties like rabies.

These may now come as a surprise to some owners who have been travelling with their pets regularly.

As the **penalty** for not doing having the right paperwork is as high as $250,000 USD and a year in prison per dog, it’s important operators check everything is in place before wheels up – and not on arrival.

Introducing Peggy – OPSGROUP's unofficial mascot for this article. Peggy was recently in a major Hollywood motion picture. Here's what her owners would face if they wanted her to re-enter the country by air.

Scenario #1 – Peggy has only been in a rabies-free, or low-risk country:

Check this list. If the dog hasn't been in one of these countries in the past six months, the owner only needs to fill out a CDC Dog Import Form.

This can be completed **as late as the day of travel**, but CDC recommends doing it at least a few days in advance.

Once you receive a receipt, it will be valid for **six months** and can be used as many times as you like provided that the dog hasn't been to a high-risk country since it was issued.

It's free, but one must be completed per pooch. No group concessions here! The owner must then show the receipt on paper or via their phone to US customs and air carrier.

A few other things the dog will need:

- It must be healthy on arrival.
- At least six months old (no puppers).
- **It must be microchipped.**

Scenario #2 – Peggy has been in in a high-risk country but is vaccinated:

Note that the list includes several countries from the Middle East, South America, Asia and Africa.

In addition to the Dog Import Form and microchip above, the owner will also need something called A Certification of US-issued Rabies Vaccination form. These need to be filled out by a veterinarian accredited by the US Dept. Of Agriculture and endorsed by the USDA.

If Peggy was vaccinated **outside of the US**, things start to get more complicated. In addition to the Dog Import Form, it will also need:

- A *Certification of Foreign Rabies Vaccination and Microchip.* This must be filled out by the owner's vet and endorsed by an official government veterinarian.
- A valid rabies test from a CDC-approved lab.
- A reservation for Peggy at a CDC-registered kennel for up to 28 days.

Scenario 3 – Peggy has been in a high-risk country and isn't vaccinated:

Peggy will not be allowed to enter the US! Nor will any other dog that falls under this category.

Rules for Air Operators

In addition to the above requirements, there are new procedures for air operators too.

From August 1, operators need to create something called an air waybill (AWB) for each dog they transport to the US. This is a document that accompanies goods shipped internationally by air. It is essentially a receipt of goods for the operator, and a contract of carriage between you and the dog's owner.

The good news is that you can request a waiver to this requirement by emailing cdcanimalimports@cdc.gov and asking for one.

They'll get back to you within one working day with a waiver **valid for 90 days.** You can only do this once though, and beyond that you will need a full AWB to carry the animal on future flights.

Beware the saga of Pistol and Boo

Whether it be in the US or abroad, customs officials take non-declarations of animals extremely seriously and the penalties can extend to the air operators carrying them.

While our clientele may like to take their family pet with them on business or vacation aboard private aircraft, they need to be aware of their obligations and meet them – as is often the case for pets carried between Europe and the US.

In other words, **don't be like Johnny.**

Back in 2015 a high-profile celebrity, Johnny, carried his Yorkshire terriers, Pistol and Boo, illegally into Australia on his private jet. He did so knowingly but (in his words) under the belief that his staff had completed the necessary paperwork – they hadn't.

He and his partner potentially faced several charges including perjury. Pistol and Boo also faced being put down. The case became went infamously public, and even involved the Australian Prime Minister before most charges were dropped.

The moral of the story is what may seem like an oversight to some, are **taken extremely** seriously by authorities – the US included. The passengers we carry may not always realize that to the extent that they perhaps should.

More Questions?

Check the new requirements on the CDC website here, and if you have any really specific questions your best bet is to get in touch with the CDC directly on (800) 232-4636.

Hab Dich! German Ops Gotchas

David Mumford
15 October, 2024

OPSGROUP members have reported several strange things happening at airports in Germany recently. We asked the German Aviation Authority and a few local handling agents and FBOs, who confirmed these were not isolated incidents. So here's the lowdown on these latest German Ops Gotchas…

#1: The Baggage Hold Gotcha

After a few back-and-forth emails with the German Aviation Authority *(LBA – Luftfahrt-Bundesamt, website here)*, the following is what applies.

If you are operating a **commercial flight** (i.e. Part 135) out of a German airport, and your aircraft has an inflight-accessible baggage hold, then **ALL baggage will be required to be screened and deemed cabin baggage**. Size isn't considered, so it could be a Citation or an Airbus 330.

This means that passengers won't be able to take any security-restricted items in their luggage. If they want to carry something sharp, or perhaps some hunting gear, then this would need to have some big lockable box.

You can apply for **approval to carry prohibited items** from the Ministry of the Interior BMI. The list of goods is here. However, LBA have said that it is not an exhaustive list, and the screener shall have the final judgement.

Bottom line, if you are flying most bizav aircraft out of a German airport and you have something that could be "dangerous", you are likely to have the item confiscated if screened correctly.

Possible solution: one member has reported that authorities accepted in their AOC to **install a wire-lock to the "impact-curtain"**, so it is not easy to access the compartment during flight.

#2: Sneaky Security Checks

Jan 2025 update: We're now hearing that the LBA have started charging operators for these checks! One member reported receiving a 330 Euro invoice for a check that took place at EDDM/Munich. It seems that opting-out of these checks is not possible!

These are not ramp checks, they are "security checks" performed by LBA staff to see whether crew follow the right security procedures.

They basically try to enter the aircraft, and your job is to make sure you stop them. So man the doors! **Check their identity**, make sure they're wearing **the right ID cards**, and you will have passed the test. Another common thing is that they **leave a note behind the GPU hatch door** to check if you do the security check properly.

EDDS/Stuttgart is one of the top spots for this, but we've had reports of this happening at **EDDV/Hannover** and other airports in Germany too.

We asked LBA about this one too. They reference EU Implementing Regulation 2015/1998 which is all about *basic standards on aviation security*. We read it, and couldn't find anything in it warning flight crew to watch out for people in yellow jackets trying to trick them by switching their ID cards around and leaving weird notes on their aircraft.

So we don't like this one very much. Security is a team effort, and flight crew are a big part of this. Tricking them into compliance like schoolchildren isn't the way to go.

#3 Fuel Payments

The simple rule we're all used to: **if you're a commercial flight, you don't pay tax on fuel.** So you fuel up, pay the bill, then if you're a commercial flight you get Customs to issue you a refund of the fuel tax.

Problem is, what's been happening more often recently is that **Customs have not been showing up to aircraft** – presumably due to lack of staff.

We also heard one recent case where Customs **refused to accept an AOC** of a commercial flight, and the operators had to pay the associated taxes with a private operation.

Possible solution: one of the local handlers recommends that operators make sure they **always carry the charter contract** for the flight on board, along with the AOC. And if Customs don't show up for the refund, you can **fill in a form** and apply after the flight. Here's a copy. Email it to: poststelle.hza-

potsdam@zoll.bund.de

Been to Germany recently and know any more Ops Gotchas to watch out for? Let us know.

Lebanon Risk Update

Chris Shieff
15 October, 2024

- **Overflights risks of the OLBB/Beirut FIR are increasing. The outbreak of a larger scale conflict between Israel and Hezbollah is increasingly likely.**
- **Several airlines (Air France, Eurowings, Lufthansa, Swiss, Transavia and Middle East Airlines – the Lebanese flag carrier) have temporarily suspended flights to OLBA/Beirut airport.**
- **Canada has issued a new Notam (July 30) advising operators to avoid Lebanese airspace at all levels.**
- **Surface-to-air weaponry may be present capable of reaching aircraft at all altitudes.**

Risk to aircraft operating over Lebanon is increasing

There was a **significant escalation** in hostilities between Israel and Hezbollah in Lebanon over the weekend.

On July 27 a suspected Hezbollah rocket attack caused Israeli casualties in the Golan Heights region – although Hezbollah has been uncharacteristically quick to deny their involvement.

This was quickly followed by Israeli airstrikes well inside Lebanese territory.

The US Embassy has since issued an alert to citizens that scheduled flights to/from Beirut may change or be cancelled at short notice. They're also recommending anyone there develop a **'crisis plan'** to leave if the current situation escalates.

There is widespread concern that the two sides could imminently be drawn into a **full-scale conflict.** In which case the risk picture for aircraft in both the LLLL/Tel Aviv and OLBB/Beirut FIR could change dramatically.

Here is a brief summary of the situation.

Why are Israel and Hezbollah fighting?

The two have fought in several wars – the latest was in 2006. The background to these hostilities is beyond the scope and intent of this article – but you can read more about that here.

The most recent cross-border fighting began almost immediately after the Hamas assault in Southern

Israel which sparked the current war in Gaza.

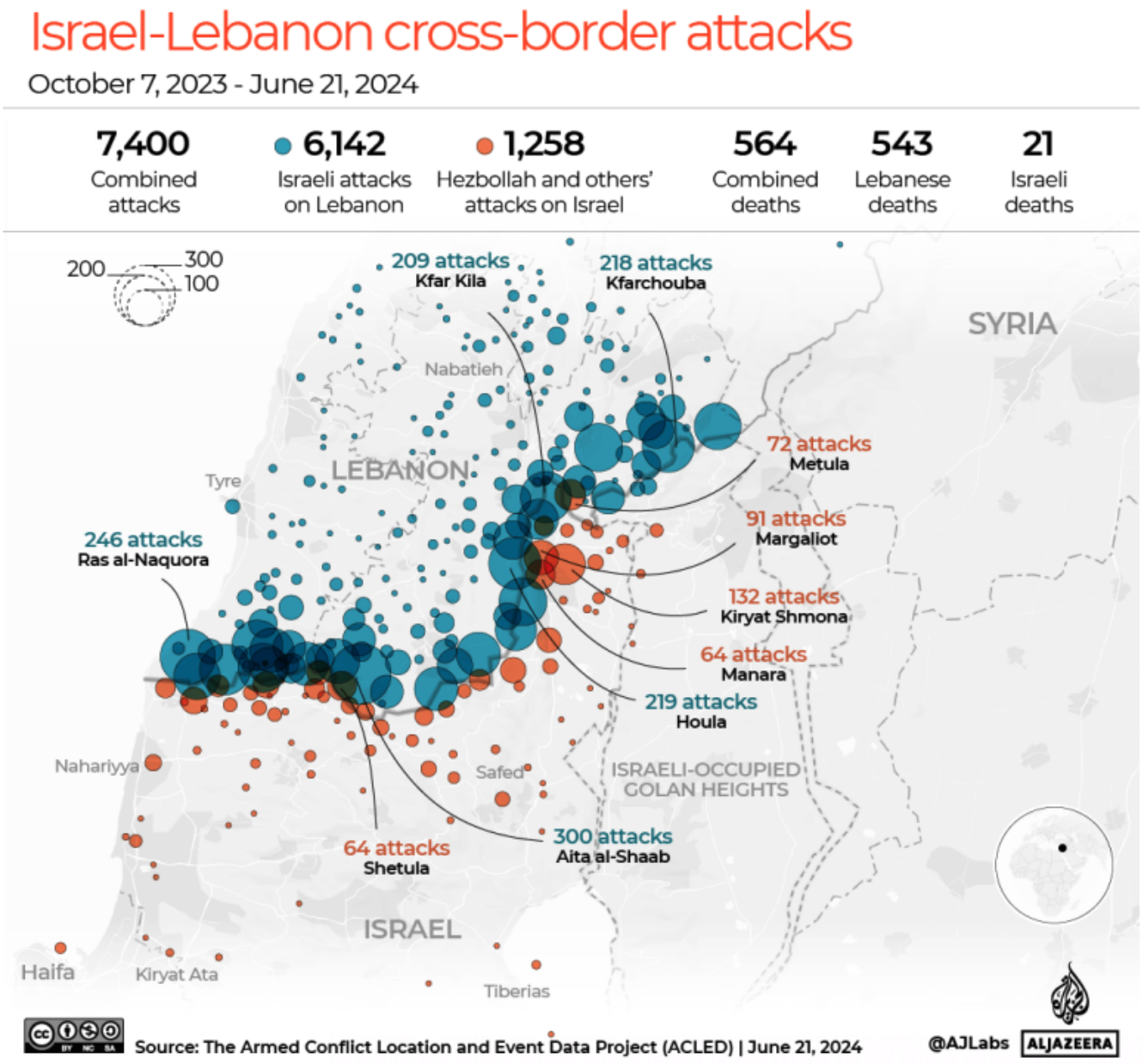
The situation in Gaza has mobilised Iranian-backed militants across the region to act, and Hezbollah is widely considered one of the **most powerfully equipped.**

Hezbollah has said they will not stop hostilities against Israel until there is a cease-fire in Gaza.

So Far…

Since the start of the war in Gaza, sporadic fighting across the Israeli/Lebanese border has been almost a daily occurrence. It is not immediately obvious in existing airspace warnings just how **frequent** these skirmishes have become.

Here is a statistic that may cause alarm to traffic regularly overflying – as of the end of June, the media reported 7,400 cross-border attacks between Israel and Hezbollah in the preceding nine months.



This has included artillery firing, rocket attacks, missiles, drones, and of most concern – air defense activations on both sides. Various instances of false identification have been reported.

This fighting has mostly been constrained. If a full-scale conflict develops as feared, things may get a lot

worse.

In the skies

Just last month, Hezbollah reported targeting Israeli fighter jets using **surface-to-air missiles** for the first time. Existing airspace warnings for the OLBB/Beirut FIR **do not any mention level restrictions.**

There has been some credible concern recently that Hezbollah might possess more sophisticated surface-to-air weaponry. One report speculates this includes mobile Iranian made radar-guided SAMs which are capable of targeting aircraft as high as **90,000 feet** with range of up to 100kms (depending on the variant).

The Wall Street Journal have also suggested another system may be present with similar capabilities supplied by Wagner Group mercenaries.

It is possible we have just not seen these types of weapons used by Hezbollah in this conflict to date.

While the LLLL/Tel Aviv FIR has arguably been a masterclass in how to maintain safe and informed overflights near a conflict zone in recent month, should a larger conflict arise it is **unlikely the safety of civil aircraft in the OLBB/Beirut FIR will be protected to the same extent.**

Existing Airspace Warnings

We maintain a Safe Airspace Risk Level of Two (Danger Exists) for the OLBB/Beirut FIR.

Here is a summary of existing state-issued airspace warnings for Lebanon:

- **Canada** Operators should not enter the OLBB Beirut FIR at all levels due to risk of military activity. CZQX Notam H3476/24. **New, July 29.**
- **US FAA** Exercise caution within 200nm of the Damascus FIR due to military activity. Possibility of GPS interference, communication jamming, and long-range surface to air missiles in the area. KICZ Notam A0009/18.
- **United Kingdom** Caution to UK operators in the OLBB/Beirut FIR due to potential risk from military activity. EGTT Notam V0025/24.

Why have these warnings not been upgraded?

History has taught us that we need to be more responsive to airspace threats – a danger may exist or develop before states publish official airspace warnings or restrictions. And all of that **takes time.**

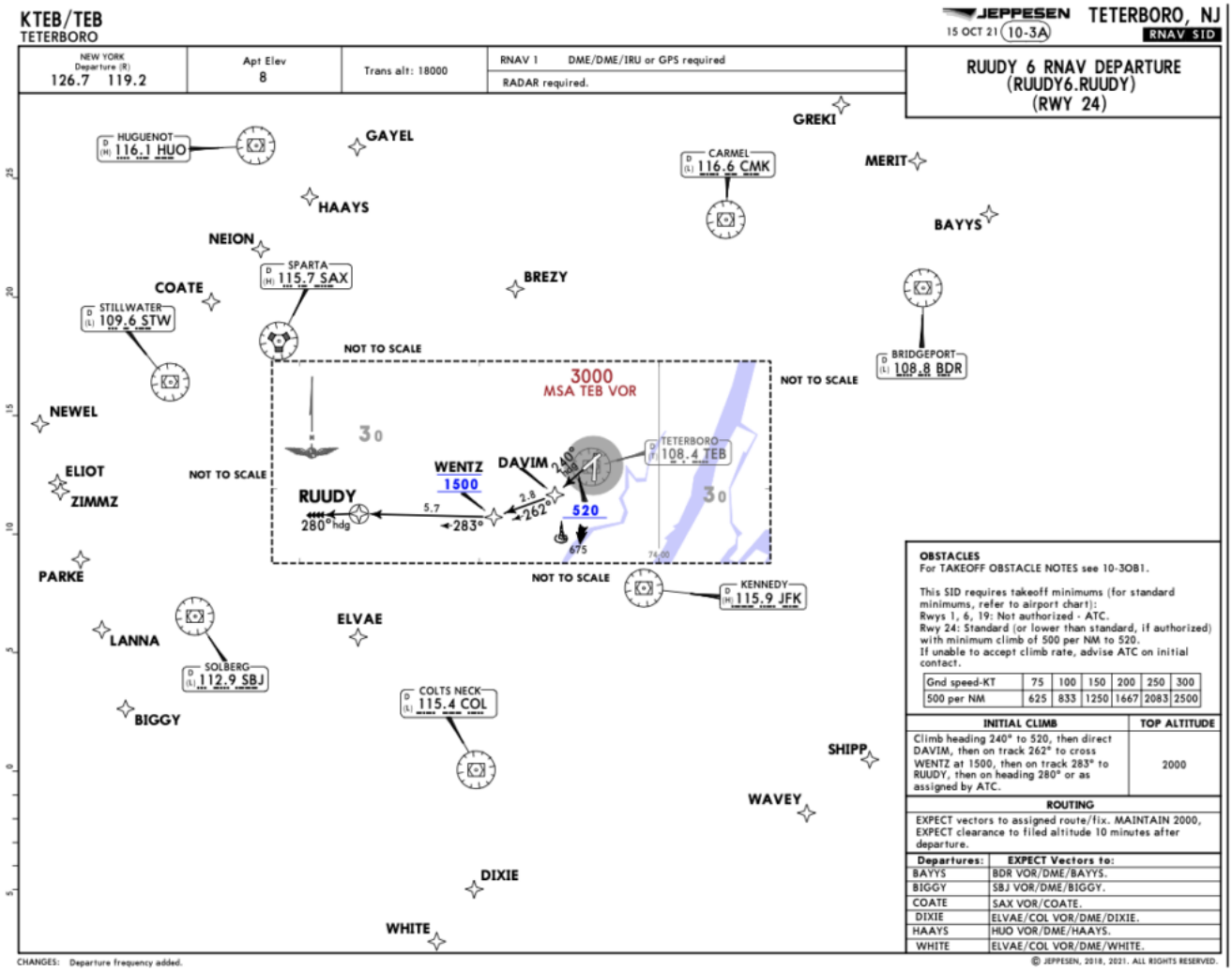
The events of the past days have happened quickly, and extensive diplomatic efforts are now underway to prevent a larger-scale conflict in the Middle East, but it remains to be seen if one can be avoided. **We're monitoring the situation closely** – keep an eye on safeairspace.net for updates.

Teterboro: RIP the RUUDY SIX

Chris Shieff
15 October, 2024

For some time now, the problematic **RUUDY 6 SID** out of KTEB has been causing trouble. In fact, just prior to the pandemic the FAA reported it had resulted in nearly two hundred **pilot violations** in just six years.

If you're not familiar with it, it is a departure from Runway 24. Here's the chart:



The reason for the high number of deviations is cause for debate with **both lateral and vertical excursions** reported. In the case of the latter, one suggestion is that the procedure itself isn't that clear. For instance, a typical IFR clearance out of TEB includes the phrase "*climb via the SID*."

Take another look at the chart – it requires a level off at 1500' and an instruction to maintain 2000'.

This can be interpreted in two different ways – either to maintain 1500' until cleared to 2000', OR to continue climb to 2000' passing the waypoint WENTZ.

The Teterboro Users Group (TUG) since clarified the latter is correct, given there are actually three things going on at once:

- **A turn to WENTZ to separate aircraft on Newark's 22L ILS above.**
- **A level restriction at WENTZ to keep aircraft away from aircraft descending to 2500' above.**
- **Achieving the minimum vectoring altitude for the area – hence the subsequent climb to 2000.'**

And all of this while managing the energy of high-performance business jets shortly after take-off into some of the busiest airspace in the world. There is little room to get things wrong.

But people were, and quite consistently. And so, work began to develop a **clearer SID** to replace the

troublesome RUUDY.

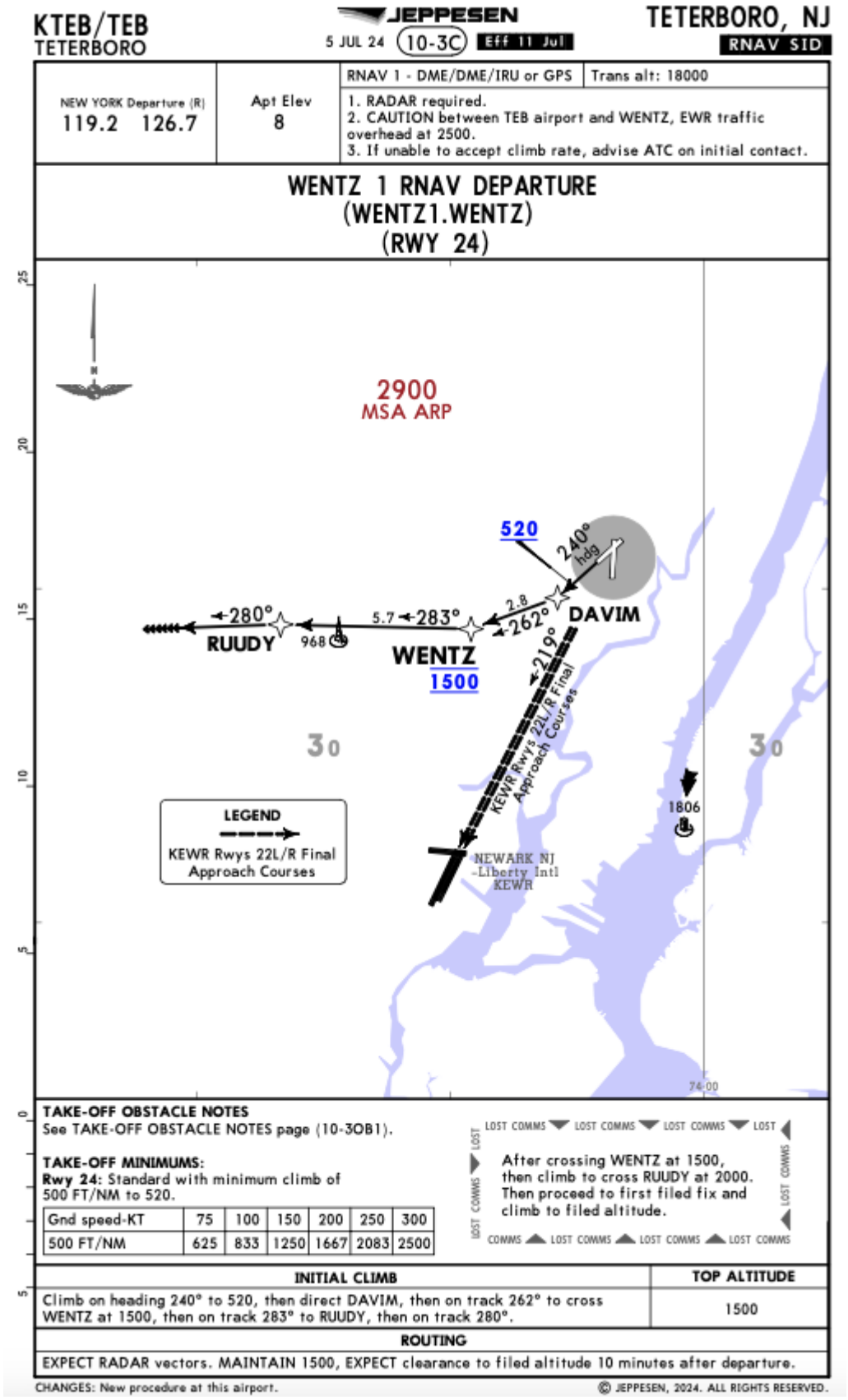
Welcome Wentz.

On July 11 that finally happened with the publication of the new **WENTZ ONE SID** – almost.

The WENTZ ONE is effectively an improvement to remove the ambiguity. It does away with the step climb to 2000', instead requiring aircraft using it to maintain the one level – 1500'.

ATC will issue any subsequent climb instruction.

Here's what the new procedure looks like:



Here's the kicker though, while the charts have been published, **no one is flying it just yet**. Why?

TUG explains that this is due to FAA controller training requirements, which are essential. Given the pending relocation of Newark's airspace from NY TRACON to Philadelphia TRACON it is difficult to predict exactly when this process will be finished.

So, while the plate will appear in your EFB, expect the RUUDY SIX for a short while yet.

What about an instrument approach to Runway 01?

While we have you here – there is another problem pilots need to contend with at TEB.

An instrument approach to Runway 01, or lack thereof.

Right now, the common procedure is the ILS 06, **circle-to-land** 01 to keep you clear of Newark.

This approach is **challenging** for a number of reasons. If you're not familiar with those, check out Code 7700's full briefing here.

For some time now TUG has been advocating tirelessly for a **proper RNAV approach** which is long since overdue. There has been some progress for some Honeywell users. Since last year there has been a **coded FMS visual approach** that replicates the visual to Runway 01, but with lateral guidance and vertical guidance using familiar waypoints DANDY and TORBY. It does this with moderate angles of bank and a gentle 3.5 degree slope alleviating some of the existing threats of the procedure.

You can watch that approach below:

With regards to a publicly available instrument approach to KTEB's 01, TUG advises we will need to wait a while longer yet. They will have a formal update for us later this year.

400% increase in GPS Spoofing; Workgroup established

OPSGROUP Team
15 October, 2024

GPS Spoofing Risk changes, grows

- **900 flights a day on average are now encountering GPS Spoofing**
- **Safety risks changing and growing: EGPWS primary concern**
- **GPS Workgroup established to address issue**

Troubling data shows a significant spike in GPS Spoofing over the last few months, with an increasing impact on flight safety.

The number of flights affected has risen from an average of 200 daily in the period January-March, to around 900 daily for the second quarter of 2024. On some days, as many as 1350 flights have encountered spoofing. Flight crews also report that the intensity of the spoofing is increasing.

At the same time, the number of locations where spoofing is highly active has increased from three to more than ten. At the outbreak of the new spoofing phenomenon in September 2023, spoofing was encountered in northern Iraq (near Baghdad), Egypt (near Cairo), and Israel. Since then, the Black Sea, Cyprus, the Korean border, and Russia have become spoofing hotspots.

Safety risk changing and growing

For flight crews, the workload and knock-on safety risk resulting from spoofing encounters is both changing and growing. Initially, the primary risk from a GPS spoof was navigational: autopilots began turning aircraft unexpectedly, aircraft position became uncertain, IRS was sometimes lost. With ATC help, often through radar vectors, the situation could be resolved.

With both the increase in intensity and frequency of spoofing this year, a second, more concerning set of risks is emerging.

The list is long. GPS is interwoven into many, if not most, aircraft systems these days. The EGPWS – our trusted friend to keep us away from terrain – is suffering heavily, and is becoming unreliable. False alerts – sometimes hours after the spoofing event – are now routine, and as a result, many are inhibiting the system. Crews are losing trust in what was until now an exceptionally reliable and critical device to eliminate CFIT accidents.

Go-arounds directly caused by GPS spoofing effects are also being seen more regularly. False EGPWS alerts are the primary culprit, but in some cases, the indicated wind on the Navigation Display is false and leads to confusion. In others, autopilot behaviour and unusual glideslope/localizer indications are causing missed approaches. Any go-around immediately increases crew workload and reduces the safety margin.

Safety layer of "Swiss Cheese" removed

Other aircraft systems directly affected include TCAS, ADS-B, HUD guidance, and transponders. The aircraft clock, which crews are getting used to seeing "run backwards", is often one of the first victims of a spoofing encounter, and has knock-on effects which include making CPDLC unusable. Eurocontrol report now seeing this on a daily basis.

For Air Traffic Control, especially in Oceanic and remote regions requiring on-board responsibility for navigation accuracy, life has thus become more challenging. Shanwick and Gander OACC's now deal daily with aircraft unable to meet the RNP4 requirement for oceanic crossings as a result of spoofing. Controllers have to work harder to separate aircraft, and this has caused occasional diversions to Iceland.

The trouble is that these shifts in safety risk are happening without much attention to them. They are largely unaddressed, latent pitfalls, that will become painfully clear when the first accident attributable to spoofing occurs. A single, full layer of the "Swiss Cheese" has quietly been pulled out of our safety system this year.

GPS Spoofing Workgroup established

A GPS Spoofing Workgroup has been hastily established to bring the international civil aviation community together and address the problem. The Workgroup is **now running,** and will tackle the issue by collecting data and information, surveying flight crew, discussing the distinct elements of the problem, and producing a community report. With the 14th ICAO Air Navigation Conference taking place at the end of August, the timing of the final report will aim to support discussions there.

450 participants have registered to take part in the Workgroup, which includes representatives of industry organizations IFALPA, IFATCA, OPSGROUP, IBAC, EBAA, ECA, and BALPA. Airlines and Operators represented include Aer Lingus, Air Atlanta, Alaska Airlines, Cathay, Cargolux, Singapore Airlines, Turkish Airlines, United Airlines, Netjets, El Al, Royal Jordanian, Italian Air Force, USAF, American Airlines, LOT Polish Airlines, and Fedex.

An encouraging element of the Workgroup is the involvement of PNT and GPS experts from NASA, Boeing, Collins Aerospace, FlightSafety International, Honeywell International, Safran Electronics & Defense, Satcom Direct, Aircraft Performance Group, Fokker Services, Honda Aircraft Company, Zurich University of Applied Sciences, and SkAI Data Services. Aviation Authorities participating include the Swedish CAA, Transport Canada Civil Aviation, Civil Aviation Authority of Singapore, Civil Aviation Authority of Thailand, CAA Isle of Man, Eurocontrol, FAA, and NATS UK.

To date, the industry has largely focused on ad-hoc mitigation efforts to deal with the GPS Spoofing problem. The focus of the Workgroup will be to shift to discussing quickly available solutions, and broaden industry awareness of the growing safety risks. It will also seek to provide Flight Crews with better guidance, actions and GPS systems information.

The Workgroup is now complete. A final report will be published on September 6, 2024.

GPS Spoofing WorkGroup 2024

OPSGROUP Team
15 October, 2024

GPS Spoofing WorkGroup 2024

- A GPS Spoofing WorkGroup is now up and running.
- We will collaborate and discuss all issues, and produce a report for the community
- **The Workgroup is now complete. A final report will be published on September 6, 2024.**

GPS Spoofing is starting to get out of hand. At first, very few aircraft were being affected – now, it's hundreds every day. Today we learned of a second fake location over the Black Sea. We are starting to get used to ignoring EGPWS warnings, that we once ALWAYS followed. Navigation is degraded, EICAS messages are confusing, clarity on GPS systems and how they actually work is missing. A single, full slice of the Swiss Cheese has been removed. It's likely we are heading for an accident directly caused by this issue.

This is why we are organizing a **GPS Spoofing WorkGroup**, starting this week. Our aim is to collaborate with as many experts, OEM's, operators, flight crew, ATC, agencies, and industry organizations as possible to discuss all aspects of this issue, and find solutions.

We will present a community report on impact, safety, security, and our recommendations together with crew guidance.

To contact the organzing team, send a note to **gps.workgroup@ops.group**.

The Workgroup is now complete. A final report will be published on September 6, 2024.

Participation – how much of my time do you require?

Participate as much or as little as your schedule allows. We'll have several calls and discussions, but if you

can’t make them, no worries. The WorkGroup will be kept updated by regular email summaries and updates. There will be a Slack channel to collaborate, and some shared Google Docs.

WorkGroup Calendar

Volunteers

We’re looking for a couple of volunteers to help with organizing things during the WorkGroup. This is turning into quite a big workgroup already (200+ registrations already), and there will be lots of admin tasks to keep the ball rolling. If you’re good with Google Sheets, organizing info, writing short summaries, organizing people, and that kind of thing .. we would love your help! This would just be “now and then”, when your time allows, during the workgroup which will run for the next few weeks.

July 2024: Afghanistan Overflight Update

Chris Shieff
15 October, 2024

Key Points

- **Read to the end for an OPSGROUP Team report from a recent flight over Afghanistan.**
- **Afghanistan's procedural Notams for overflights have been re-issued: the entire airspace remains uncontrolled.**
- **The US FAA has amended its airspace warning for the OAKX/Kabul FIR: US operators are still permitted to overfly at FL320 or above but they can now use airways P500/G500 in the far east of the airspace as low as FL300.**
- **For the large volume of traffic now using Afghanistan as an air corridor connecting Europe, the Middle East and Asia, we figured it was time for an update on what to expect, and the risks aircraft are taking to use it.**

A Little Background

For all intents and purposes, the security situation and the safety of the airspace above has not changed since the Taliban re-assumed control of the country in late September 2021.

What *has* changed is the **normalisation of risk** – as more traffic (including major carriers) has been using the airspace without incident, it is important to remember these two facts when considering an overflight (along with your own appetite for risk):

- **The entire FIR is uncontrolled.**
- **There is no guarantee of crew or passenger safety if you have to land.**

With these factors in mind, here is a brief refresher on what you need to know if you do choose to go ahead and overfly.

Before You Go

Essentially you need to check three things:

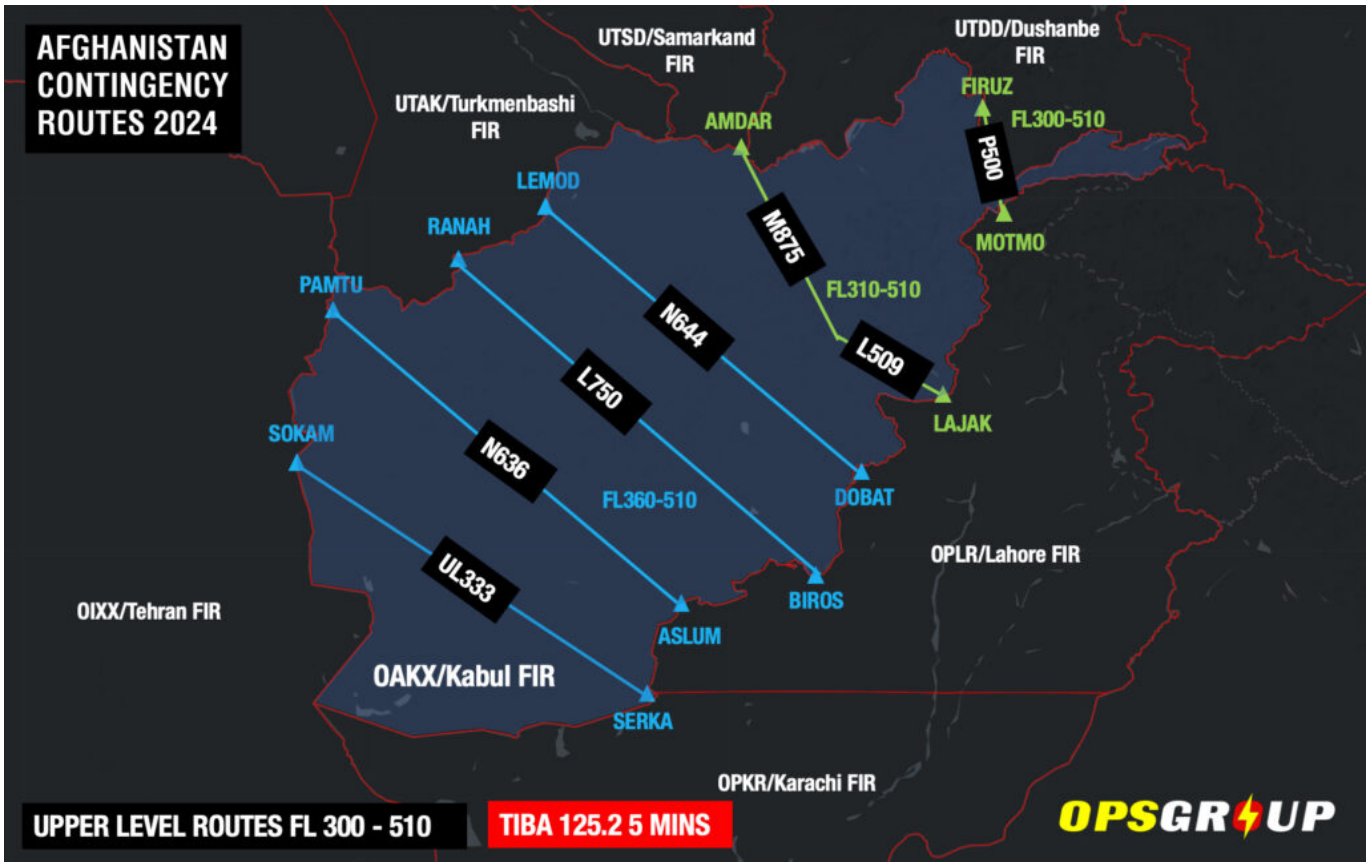
1. **PPR.** All operators need prior approval to enter the Kabul FIR with at least 72 hours' notice. To get that, you need to email flightpermissions.acaa@gmail.com.
2. **Compliance with state-issued rules.** Several states have long-term airspace warnings in place for Afghan airspace. US operators need to check the current SFAR (more on that below) and any applicable KICZ Notams.
3. **Insurance.** Some providers will not cover extended flight through uncontrolled airspace with the risks that apply both in the air and on the ground in Afghanistan.

Overflight

The procedures to overfly the Kabul FIR have not changed – they're found in a series of Notams recently republished and extended. We previously took a detailed look at those here.

For the purposes of this article, this is the highlight reel:

- Adjacent FIRs manage the flow in and out of the Kabul FIR and apply 15 minute spacing.
- Only some routes and levels are available.
- **The entire Kabul FIR is uncontrolled**, with TIBA procedures in effect.
- You can't change speed or level once inside the Class G (except to avoid traffic or you have an emergency).
- **ICAO contingency procedures** apply if you need to descend in a hurry.



Unplanned Landings

For traffic deciding to overfly the Kabul FIR, it is critical to have contingency plans in place for a diversion.

For most operators, this would be to consider a landing at an Afghan airport a last resort **(akin to a ditching in oceanic airspace).**

Enroute planning should include ETP considerations for the most **fuel critical scenario** so that aircraft have enough on board to remain airborne and clear Afghan airspace before landing.

As such, be aware of westward diversions into Iran (the **OIIX/Tehran FIR**). US operators are currently banned from entering at any level due to high risk of misidentification, anti-aircraft fire and unannounced military activity. France, Germany, Canada and the UK also hold similar warnings.

On the Ground

If you do need to land in Afghanistan, **welcome to the wild west.**

OAKB/Kabul airport is your most likely target and there is no approach control, or tower service in use. As such, weather forecasting and Notams should be considered unreliable at best.

They do provide a phone number you can try and contact for the Kabul Notam Office, +93730006669. Failing that, try +93705769453.

As for crew/pax security, there is none. No country officially recognizes the Taliban as a legitimate government yet.

The Latest US Department of State Travel Advisory is stark – **do not go there**. If you do, you are at risk of wrongful detention, kidnapping and crime. There is no consular assistance available.

Updated FAA Airspace Warning

Another change to report.

On July 5, the US FAA (slightly) amended its airspace warning for Afghanistan.

US operators are still permitted to overfly the OAKX/Kabul FIR at FL320 or above but they can now use airways **P500/G500 in the far east of the airspace as low as FL300.**

The FAA's reason for the change: *some operators were struggling to use these airways at higher levels. There have been no incidents here so far, and you don't spend much time in Afghan airspace while transiting them.*

You can view the updated SFAR here.

Our Pilot Report – here's what we did …

There is a hefty dose of 'at your own risk' about all of this. The choice to overfly is not an easy one. To give you a much better idea of what to expect, here's an **OPSGROUP Team report from a recent flight over Afghanistan:**

We operated through OAKX FIR on a EHAM/Amsterdam-WMSA/Kuala Lumpur flight

Overflight Permit: *Getting the permit was relatively easy. We emailed flightpermissions.acaa@gmail.com (cc to flightpermission.atm@mota.gov.af) and received a response within 24 hours. They replied to us saying that to cross the airspace is charged a flat fee of $700 USD. You will need to fill out the form provided (this Excel document) and then forward that, plus copies of your Insurance, Airworthiness Certificate, and Aircraft Reg. If you are operating commercially, they also want your AOC. They ask for a minimum of 48 hours' notice, although we put our application in a week in advance.*

Insurance: *Our insurance (like most) doesn't allow operations within certain countries; however, they permit overflights on ATC-approved airways, and if you end up diverting due to an emergency, you are covered. We checked, and L750 was considered OK. Several air routes are "open."*

Routing: *We had planned on L750, which runs from UTAV (Turkmenabat) to OPLR (Lahore). They also sent us the Kabul FIR Contingency Procedure document. The most important thing to read is the broadcast procedures since there is NO ATC service. The flight was very straightforward, and this route saved us a fair chunk of time and fuel.*

ATC Comms: *About 5 minutes before Kabul's boundary, the UTAV controller asked us to "report ATC established with Kabul." We tried calling Kabul on 125.2, knowing full well there was no ATC service. We told UTAV that we were going to continue TIBA procedures in Kabul FIR, and they told us, "Radar services terminated, frequency change approved. Good night." All our external lights were switched on. We used Comm 2 as our TIBA box (125.2), Comm 1 stayed with the UTAV frequency, and Comm 3 (our data link was set to SAT) to monitor 121.5. Revise your TIBA calls; they suggest you broadcast them every 5 minutes. We used each fix, and it worked at about the right time.*

Over Afghanistan: *There was one aircraft departing OAKB/Kabul airport, a commercial jet on its way to Dubai, and aside from that, there was no one else. Up at FL450, we had a great view of the terrain – the word is "inhospitable."*

We could continue to hear UTAV on Comm 1 until about 15 minutes into Kabul when we switched to 124.1, the OPLR (Lahore) FIR frequency; about 15 minutes before we got to the boundary, we could hear calls from other aircraft. We had about 10 minutes of "dead" time on Comm 1.

I had an ETP using UTAV/Turkmenabat and OPIS/Islamabad and did not consider using any of the airports within Kabul FIR as available airports. This was treated just like a NOPAC or NAT crossing. There is nowhere to go, so if something eventful happens, you can keep going or turn back based on your ETP.

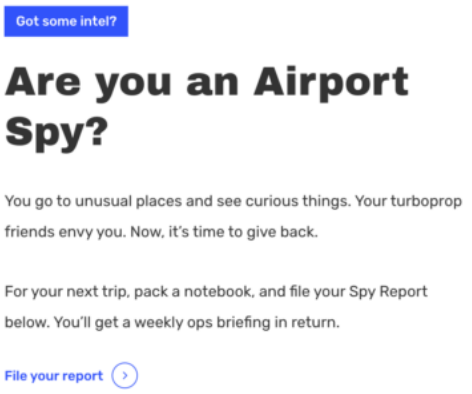
We checked in with Lahore about 10 minutes before reaching BIROS, and they told us to call overhead BIROS.

Key Points: *It is relatively straightforward; brush up on the TIBA calls. There is more traffic nowadays as several airlines are using the routes for daytime flights, so it was a bit busier the last time I used it. However, at best, you will have a couple of airliners in the mid to high FL300s. There was no GPS Spoofing / Jamming or bad ATC, so I would use this route again, considering the other options in that region.*

Let's help crew make a **more informed decision** with more reports from other pilots.

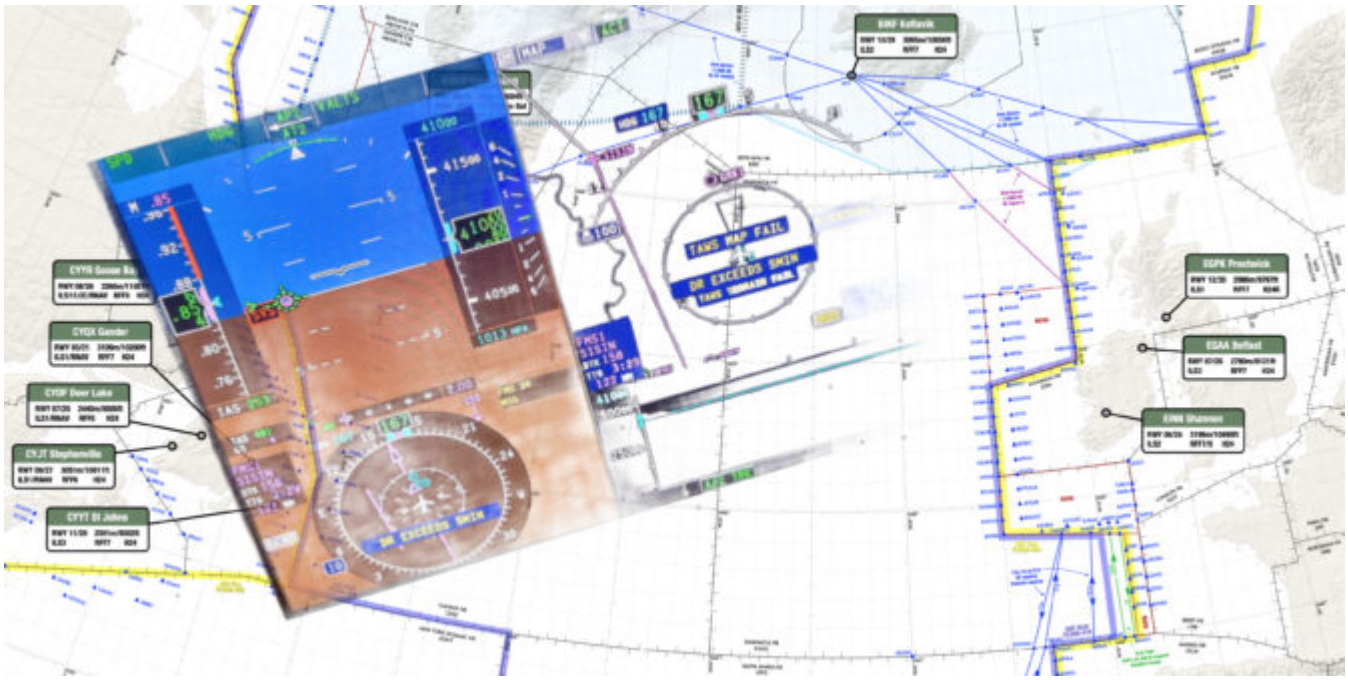
You experience is invaluable – if you are overflying Afghanistan and have some operational advice, please

share it with the group. You can reach us on team@ops.group, or **file an Airport Spy report anonymously** here.



NAT Crossing after GPS spoofing: a guide

Mark Zee
15 October, 2024



An increasing issue for the NAT Oceanic FIR's is how to handle aircraft with an in-flight degradation of GPS. This normally follows a **GPS Spoofing encounter** somewhere prior to Oceanic Entry, leading to a degraded RNP capability.

If you run into GPS issues before entering the Ocean, you will likely end up with RNP10 as the best you can manage for navigational accuracy. This presents some issues for the Oceanic controllers, as RNP4 is commonly used to ensure separation. We'll take a look at some scenarios and how to best handle these.

Normal RNP requirements on the NAT

NAT Doc 007 specificies two RNP options for entry into the NAT HLA.

The first is **RNP10** (accuracy of 10 nm, 95% of the time). An important consideration here is that **RNP10 is really RNAV10**, but they call it RNP10 to keep things simple [See NAT Doc 007, 1.3.4]. The critical difference is that for RNAV10, on-board monitoring is not required. Since this can only be done by GPS, that's an important relief when it comes to spoofed flights.

The other is **RNP4** (accuracy of 4nm, 95% of the time). RNP4 is only an absolute requirement for PBCS Tracks ("Half-Tracks"). In practice, ATC commonly uses RNP4 for separation purposes on the NAT (Since the introduction of ASEPS). GPS is required for the monitoring part of RNP4; without GPS, RNP4 is not possible.

Loss of GPS Prior to the NAT

Since GPS Spoofing became prevalent in September of 2023, increasing numbers of aircraft are arriving at the Oceanic Boundary with one or both GPS sensors inoperative. A textbook GPS Spoofing encounter will initially see the GPS sensors rapidly change from the real coordinates to fake coordinates. If all GPS sensors agree on the fake coordinates, the FMS becomes confused. IRU values will increase, and in some cases, the IRS may also become "infected".

The primary spoofing locations have not changed much since the onset of the issue: you will encounter spoofing at the Iraq/Iran border, the Sinai peninsula area (showing Tel Aviv as the spoofed location), Israel and Cyprus (showing Beirut as the spoofed location), and the Black Sea (showing Sevastopol as the spoofed location).

We have no reports in OPSGROUP that the other type of GPS interference – GPS Jamming – leads to lasting effects. Once the jamming has stopped, aircraft systems are normal.

However, we do have reports that if GPS inputs are turned off before departure, and later turned back on in flight, that issues may occur. This is mostly reported for departures from Tel Aviv (LLBG).

GPS failure, Ocean approaching

Since RNP4 requires a functioning GPS, if you encounter spoofing and lose your GPS, you can't fly RNP4. Assuming that you have an RNP10 approval (one of the only two options for the NAT HLA), you will become **RNP10**.

The problem occurs when Shanwick, or the OACC at the entry point, get late notice of this fact, and you are close to other aircraft. That leaves the Planning Controller with little time to figure out how to separate you (an RNP10 aircraft) from the others (RNP4 aircraft).

In some cases, "spoofed" aircraft have had to descend to FL280 to exit the NAT HLA, and this has caused diversions.

How to best handle a NAT crossing with a failed GPS

The key is to advise Shanwick, or the first OACC, **early**. Shanwick's preference is that you use the RCL request to do this, and add a note to the end of the RCL along the lines of ATC REMARK/GPS DEGRADED RNP10 ONLY. If using voice to get your clearance, that's what to say as well. Shanwick NOTAM EGGX G0106/24, and a note on the OTS Track message, has this information.

The RCL for Shanwick should ideally be sent **90 minutes** before the Oceanic Entry in this case. Normal RCL timeframes are -30 to -90. An RCL sent any earlier will be rejected, but if you have something more unusual to discuss, you could use SATCOM to contact the supervisor and ensure a smooth crossing.

RNP10 time limit

With the change to RNP10 for your crossing, double check the **time limit** for RNP10. ICAO Doc 9613 (Volume II, Part B, Chapter 1) specifies that RNP is limited to 6.2 hours of flying. The timing starts from when "the systems are placed in navigation mode" or at the last point at which the "systems are updated". The logic here is that the IRS will drift without updates enroute, and after 6.2 hours of flying, will no longer be capable of maintaining the RNP10 accuracy.

For an aircraft spoofed in the Mediterranean, or Black Sea area, it will take 4 hours before Oceanic entry, so this time limit becomes relevant. If the impact of the spoofing is severe enough, there is potential for inputs – including DME/DME or VOR/DME – to the IRS to stop working. This is one of the potential unknowns at present.

Shanwick comments

Shanwick are encountering several GPS jammed aircraft per day, and it is sometimes difficult (or impossible) to find optimum profiles for aircraft without moving several other aircraft to accommodate. The only instance where they have to insist on FL280 and below, is when an aircraft does not meet the requirements for MNPS (such as single LRNS), and needs to be cleared outside HLA.

If a pilot advises that they have lost RNP4, but are still capable of RNP10, Shanwick controllers will look to find a solution where the aircraft can be cleared with at least 10 minutes longitudinal and 60nm lateral separation. These aircraft also need coordinating with the next Oceanic Center before clearance, and sometimes there are limited options available.

In general, the earlier they informed about the degradation, the easier it is for the Shanwick controllers to find satisfactory solutions.

Member input

This is a developing issue and we gratefully welcome any input from members on this. Email us at **team@ops.group**.

NAT Doc 007 – New Edition

Mark Zee
15 October, 2024

A new version of NAT Doc 007 has been published today (July 4th, 2024).

NAT Doc 007 is the main go-to guidance doc for ops over the North Atlantic. All the specifics about how to operate your aircraft safely through the complex airspace of the region are here. **As of this morning, the latest version is NAT Doc 007 2024 Amendment 4**. Download a copy.

What's changed?

For this particular update, **not a lot**. The changes relate to the language around the new RCL process, and what to expect back from ATC once you send your RCL. This is part of the Oceanic Clearance Removal project.

Earlier in the year, the new RCL response included the language "**RCL RECEIVED BY [ANSP]. FLY CURRENT FLIGHT PLAN OR AS AMENDED BY ATC**"

That turns out to have been creating confusion, so the RCL response will now just say:
"**RCL RECEIVED BY [ANSP]**"

These changes are in section 6.2.26 onwards.

What's the latest with the RCL/OCR project?

Santa Maria and Iceland have made the change, so entering that portion of the NAT HLA does not require an Oceanic Clearance. You do still have to send an RCL in the same way as if you were requesting an Oceanic Clearance, but once sent, and you get an ACK – that's it. For more on the new process, read about Oceanic Clearance Removal.

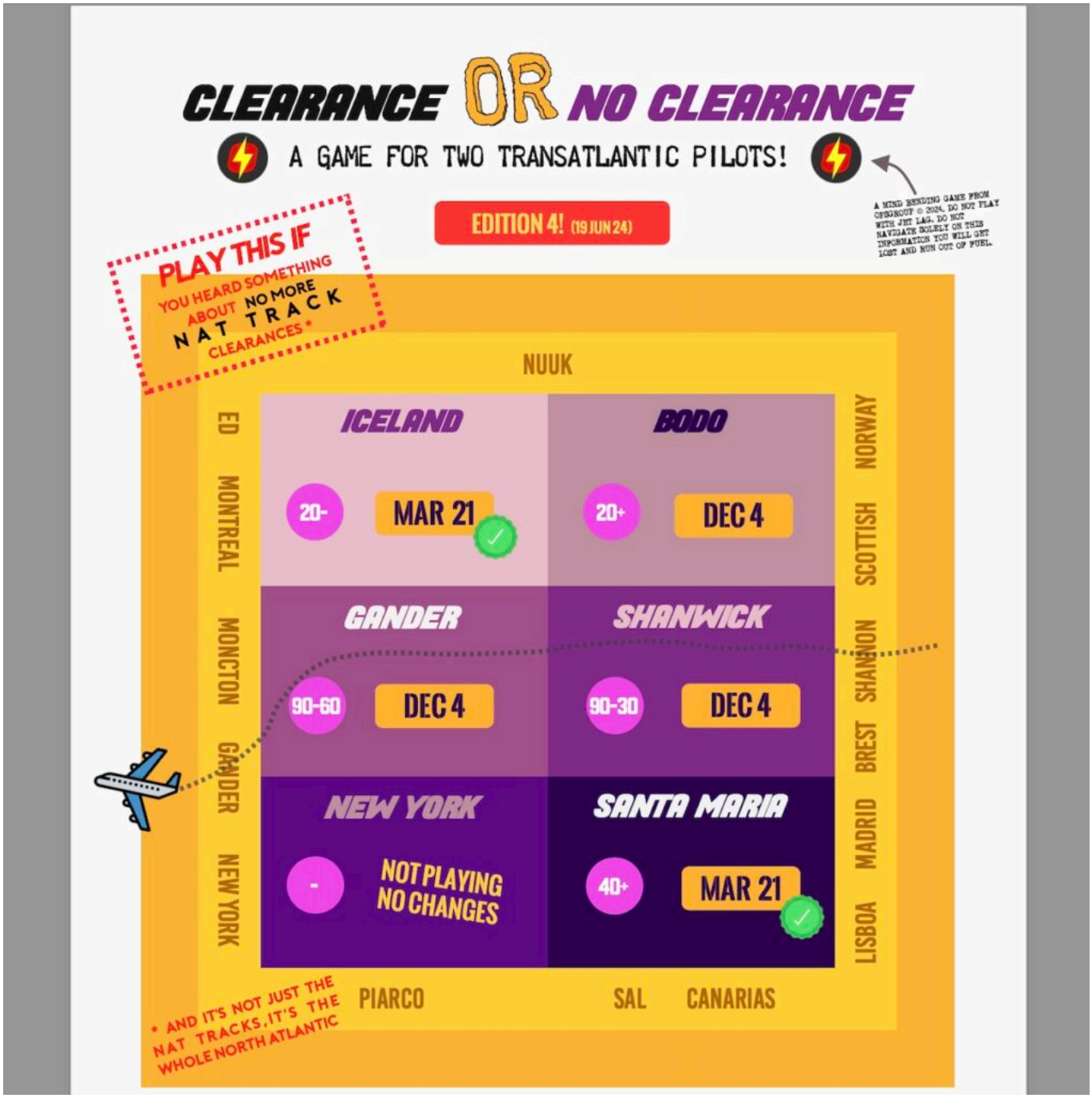
Gander, Shanwick, and Bodø have postponed their change to **December 4th, 2024**. This means that for now, nothing has changed – you get an old-school Oceanic Clearance in the same way you always did – with an RCL, or via voice.

So there are two kinds of RCL then?

Yep. For Gander, Shanwick, and Bodø, **RCL** means **Request Clearance**. You send this message, then wait to get your Oceanic Clearance back, usually via an OCL message on datalink.

For Iceland and Santa Maria, **RCL** means **RCL Message**. This is a “Check-In” of sorts, but the format is the same as the old meaning of RCL.

Confused? You’re not alone. But by Christmas, all will be easier – once everyone is on the same page. Play “Clearance or No Clearance” to help get things straight.



The hole in NAT Doc 007

There's one problem with NAT Doc 007 – we're in limbo land until Christmas. All of the guidance relates to how to send an RCL in a post-Clearance world. But for the next 5 months, most of us still need an Oceanic Clearance, and there's no information on how to actually get one.

In the previous version of NAT Doc 007, Chapters 5 and 7 related to the Oceanic Clearance process, but those **have been deleted**. So, here's a copy of the old NAT Doc 007 from 2023, which details that process.

Can we help?

If you have a question about this or need some help, just write us a note and we'll do our best: **team@ops.group**.

Hurricane Beryl

Mark Zee
15 October, 2024

The OPSGROUP Hurricane tracker is now active for **Hurricane Beryl**, which is on track to hit **Jamaica** on Wednesday, with sustained winds of 110 kts. A hurricane warning has been issued for the entire country, along with the **Cayman Islands.**

Click here for the interactive map.

MKJP/Kingston and **MKJS/Montego Bay** are **already closed.**

Further west, **MWCB/Cayman Brac** and **MWCR/Grand Cayman** will **close on Wednesday** at 1500 and 1800 local.

MKJP	Kingston	● Closed	Notam	**Wed** 0600 ET	Closed until 0500LT Thurs. No ATC avail.
MKJS	Montego Bay	● Closed	Notam	**Wed** 0600 ET	Closed until 1200LT Thurs. No ATC avail.
MKBS	Ocho Rios	● Closed	Notam	**Wed** 0600 ET	Closed until 0700LT Thurs.
MWCR	Georgetown	● Restricted	Notam	**Wed** 0600 ET	Will close 1800LT Weds.
MWCB	Cayman Barac	● Restricted	Notam	**Wed** 0600 ET	Will close 1500LT Weds.

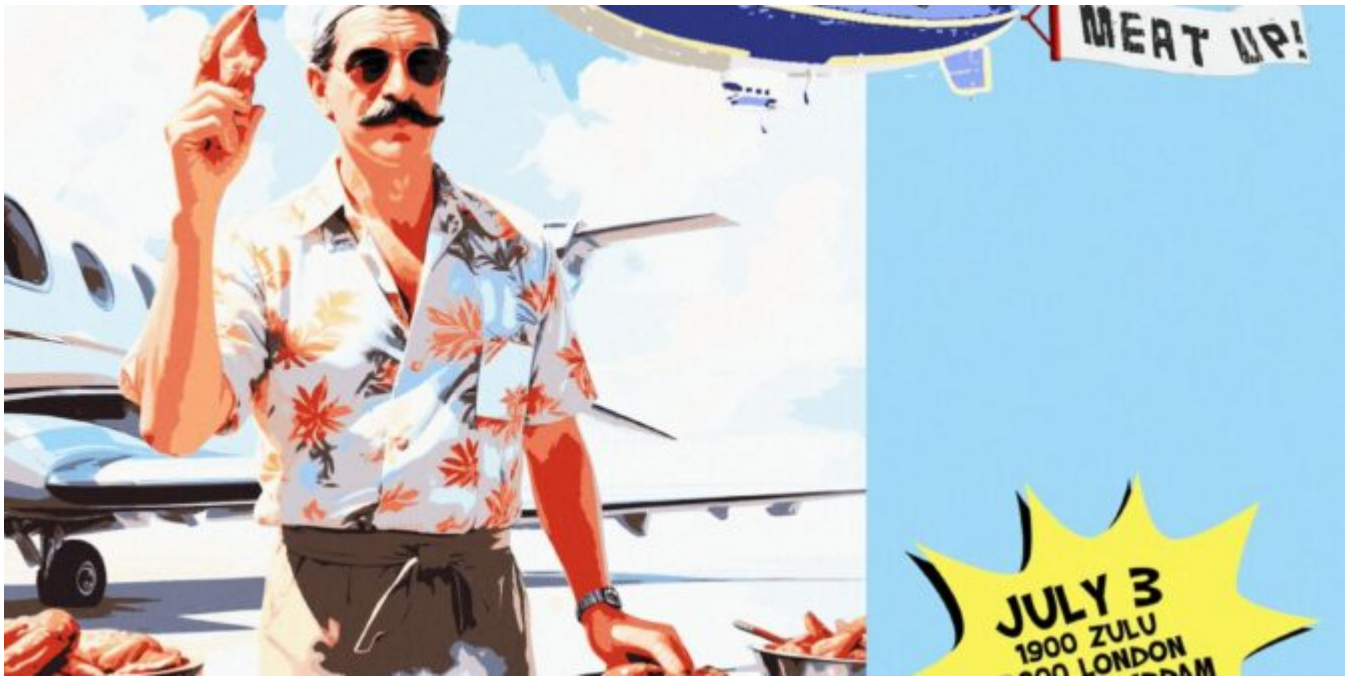
The Hurricane Beryl Situation Report is being updated as airports close, and will have information on reopening.

There has been significant damage to airports in **St. Vincent & the Grenadines** post-Beryl, and all are now focused on relief operations. TVSA/Argyle is open and operating for relief flights, the smaller ones (TVSB/Bequia, TVSC/Canouan, TVSU/Union & TVSM/Mustique) have different degrees of infrastructure damage and are closed other than for specific relief operations.

If you have an **update** to share regarding **Airport Status** for any affected airports, please use the link below or email news@ops.group.

Member Meetup: July 3rd – Agenda

OPSGROUP Team
15 October, 2024



Member Meetup – July 3rd

- **OPSGROUP Meetup** starts at **1900 UTC today**
- New member intros, Ops Topics, Workshop, OPSGROUP Updates
- **Final Agenda** below: highlights are GPS Spoofing, NAT Chat, Euro Summer Ops

Hi all, here is the final agenda for today's **Member Meetup** at 1900 UTC (Wednesday 3rd July)

Abbreviated Agenda

- **Welcome!**
- What's all this about then? Quick intro to Member Meetup
- **New members** – 968 new people so far this year, a round of hello's, intro's, where you are and what you fly or operate
- **OPS Topics** – group discussion and action items
    - **GPS Spoofing** – discussion, locations, OEM updates, IRS/Hybrid infection, plan for Workshop on the issue.
    - **NAT Chat** – discussion of changes in 2024, RCL/OCR, Don't Climb problem, NAT jamming.
    - **Euro Summer** – discussion of major pain points in Europe this summer: parking issues, ATC Strikes, CPDLC logon lists, EU LISA.
- **Workshop Projects** – EVS vs LED lights, Stand Guidance, GPS Spoofing, Euro First time ops, and suggestions for new projects
- **OPSGROUP Update** – Report-A-Thing, Daily Brief changes, Below The Line Workshop, GoCrow/Route Check
- **Danger Club** – conversations about cockpit happenings we normally don't talk about. New series, suggestions for incidents.
- **Meetup Notepad**: shared **Google Doc**

How do I take part?

- Meetup starts at **1900 UTC, Wednesday 3rd July** – that's 1500 New York, 2000 London, 2100 Amsterdam, 2300 Dubai.
- **Register** for the call **here**.
- For full Meetup info, visit the **Meetup page** in your Dashboard.
- If you have any issues registering or accessing the link, just email team @ops.group.

MEMBER MEAT-UP
NEW INTRO'S
WORKSHOP
REPORT-A-THING
BURGERS
INTERNATIONAL OPS
ASK-OPSGROUP-ANYTHING
EURO-SUMMER OPS
JUST STOP VANDALS
NAT CHANGES
BIG IDEAS
DANGER CLUB
CONTRAIL COCKTAILS
GROUP WORK

Ops to Paris for the Olympics

David Mumford
15 October, 2024

Key Points

- **Paris will be busy from July 22 to Aug 11 (Olympics) and Aug 26 to Sep 8 (Paralympics).**
- **LFPB/Paris Le Bourget will likely be the airport you want to go to, but expect quick turns only with reposition elsewhere for parking (options below).**
- **There's a procedure to know about (slots, PPR, no late changes).**
- **Paris will be a no-fly zone on July 26 for the opening ceremony.**

France has published new AIC 13/24 (effective 27 June 2024) with procedures for operators to follow if they want to fly to a Paris airport during the Olympics. *It's essentially a corrected AIC, because the previous one had confusing advice for business aviation!*

Here's what bizav flights have to do

- You must **file a "flight intention" for each flight** (send this to your handler/FBO no later than 2 hours before take-off for flights to LFPB/Paris Le Bourget, or 4 hours for other airports).
- There's **no accreditation** for pilots or operators during the Olympics, and everything will proceed pretty much as normal. The AIC only applies to VFR flights.
- The airport authorities will implement **slots/PPR** from July 12 to Sep 16 (these are obtained by the handler and sent to the operator), so you just need to fill out the FPL with the airport slot

ID in Field 18.

- LFPB/Le Bourget airport authorities will **not allow any updates with two hours prior arrival or departure** – no change of timing, no change of crew or pax. The handler will send this info to the authorities prior to the flight, and if they don't reply then the flight is approved. If there is any issue with the pax or crew, the handler will be notified, and the flight will be refused.
- It's going to be busy, so LFPB/Le Bourget will **only be accepting quick turns** with parking elsewhere.
- **If you get a slot, you best keep it** – if you cancel it there's no guarantee you're going to get another one.
- Check with your handler of choice about their fees cancellation policy, as some of these will be **non-refundable.**

At LFPB/Le Bourget you have a few options for handling:

Astonsky – website
lfpb@astonsky.com

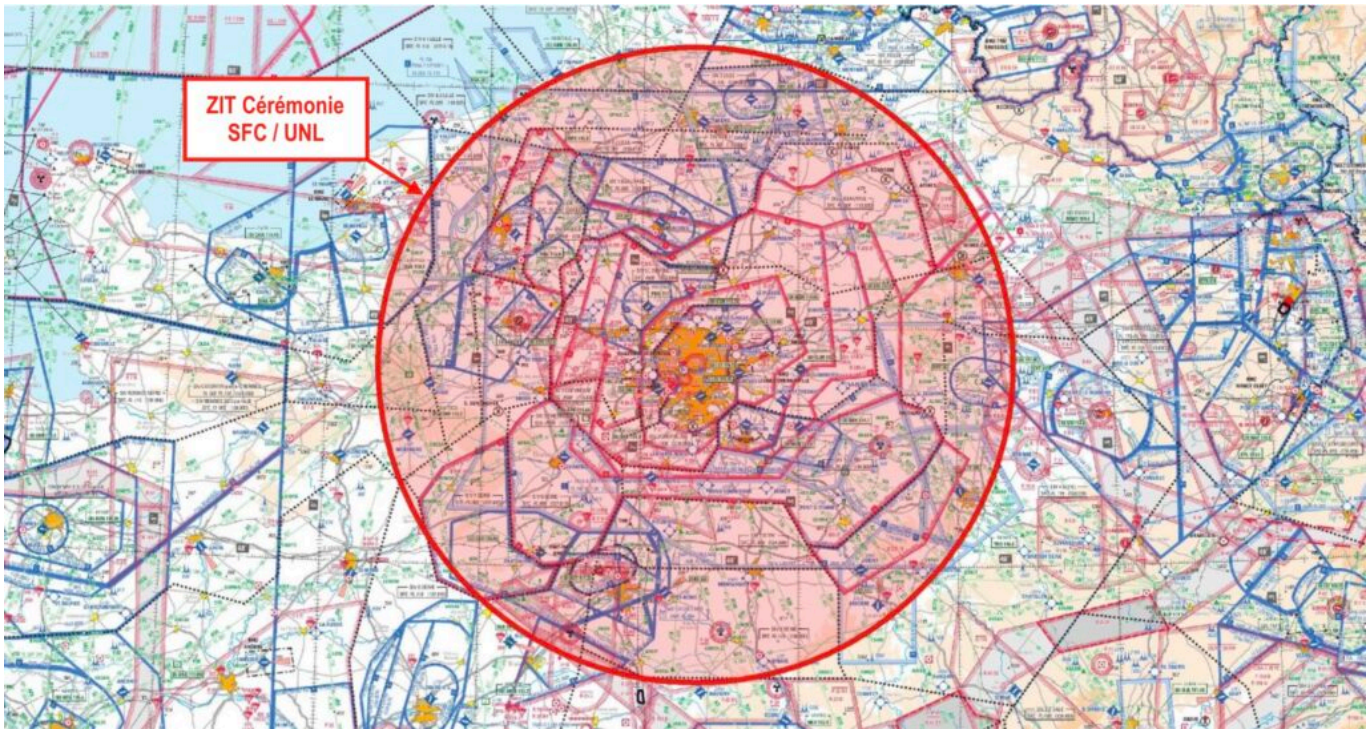
Dassault Falcon Service – website
handling@dassault-falcon.com

Jetex – website
fbo-lbg@jetex.com

Signature – website
lbgt1@signatureflight.fr

The Opening Ceremony

France has published a SUP showing the **closed airspace for the opening ceremony** of the Olympics in Paris on **July 26.**



On that day, between 1630-2200z, **Paris will basically become a no-fly zone** – no flights will be able to enter the airspace or go to/from the airports. Watch out for overflights too – these won't be allowed either!

Flight plans to Paris airports will be rejected starting 1530z. Departures from LFPG/Charles De Gaulle might be allowed starting 2130z with special approval.

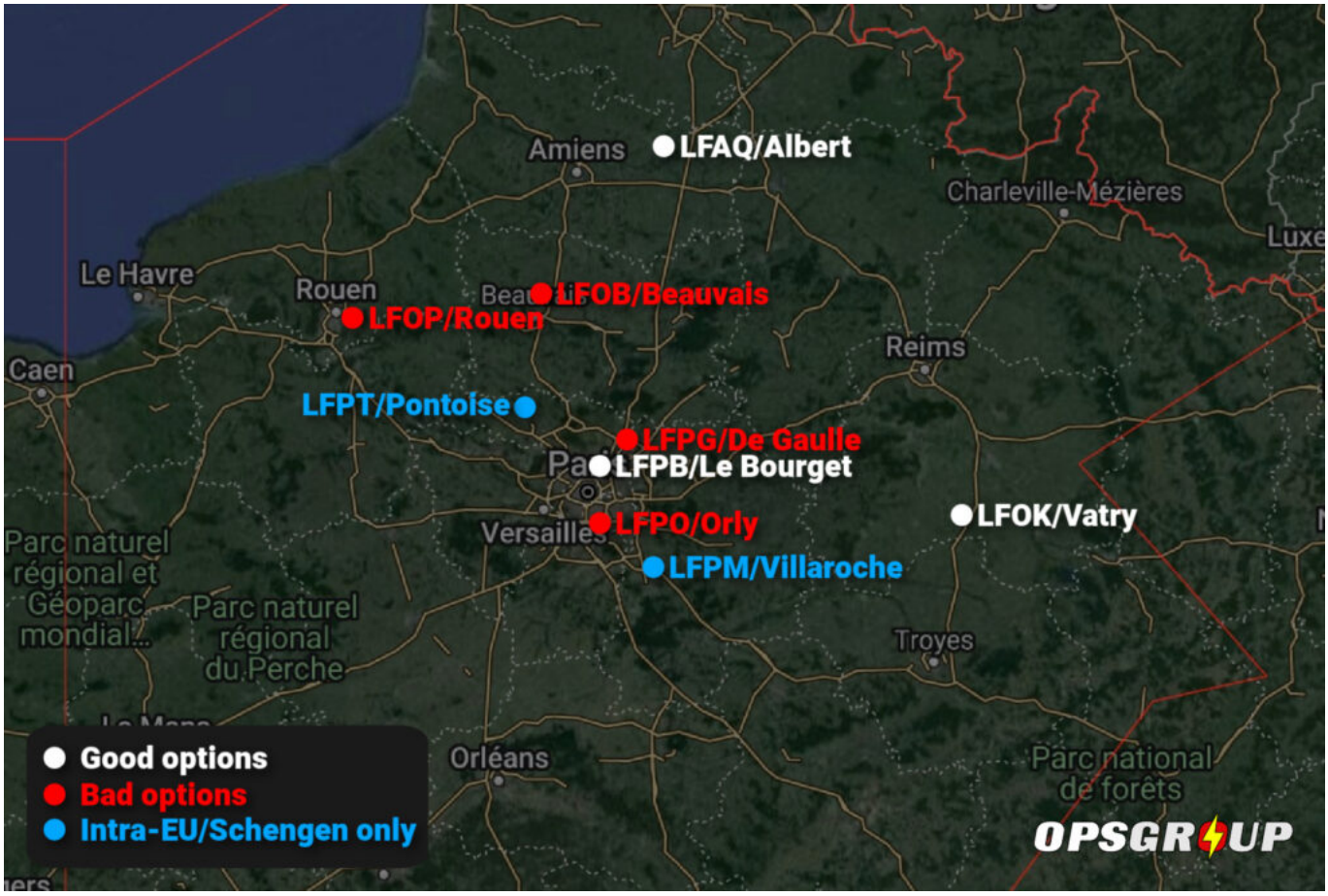
Where to go?

LFPB/Paris Le Bourget, LFAQ/Albert, and LFOK/Vatry seem like the best bets.

LFPT/Pontoise and LFPM/Villaroche might be options too, but there's no customs available here, so these airports are only available for flights between EU/Schengen airports only (i.e. not direct from the likes of the US).

Ones to cross off your list

- **LFPO/Orly and LFPG/Charles De Gaulle** as they are dedicated to airline flights
- **LFOB/Beauvais and LFOP/Rouen** as they have no support for bizav flights.



Most operators are doing one of the following

1. **Drop and go:** Get a slot into LFPB/Le Bourget, fly in, drop off pax and then reposition elsewhere for parking. LFPM/Villaroche and LFPT/Pontoise are good options for this.
2. **Clear customs elsewhere:** Clear customs at some intermediate EU airport (somewhere like LFAT/Le Touquet or LFOP/Rouen), do fast turns for just customs, and then fly to either LFPT/Pontoise or LFPM/Villaroche for parking and pax can access Paris directly. This avoids

the slot situation at LFPB/Le Bourget.

3. **Do everything elsewhere:** Use LFOK/Vatry (2:30 drive into Paris) or LFAQ/Albert (2:10 drive into Paris) directly, where there is customs, and avoid a positioning, but have a very long car journey into Paris.
4. **Avoid!** Just avoid the Olympics altogether. Go somewhere else for your holiday instead.

Tell me more about LFPM/Villaroche

Here's a report from local handler Elyxan Aviation: ops@elyxan-aviation.fr

LFPT/Pontoise does not have a customs facility and neither do we. This is frustrating as we are the two main Paris airports within a reasonable driving distance of the city centre.

LFPM/Villaroche is actually a good option as we have lots of parking and a modern FBO/with VIP lounge. We can offer 24/7 operations, which even LFPB/Le Bourget cannot. That the French authorities don't allow LFPT/Pontoise or LFPM/Villaroche customs and immigration is extremely unfortunate, especially as LFPB/Le Bourget is overloaded even normally in the summer.

LFPM/Villaroche is marginally closer to Paris than LFPT/Pontoise in real world times as we have better and closer motorway connections. We're 45-50 mins from the center and LFPT/Pontoise is 50-55 mins. In reality we are the best for South Paris, and LFPT/Pontoise and LFPB/Le Bourget are better for North.
LFPM/Villaroche and LFPT/Pontoise are about equidistant for the Versailles region in real driving times. As the heliport is on the south side of Paris, we at LFPM/Villaroche are better situated for heli transfer into the city (10-15 mins from LFPM/Villaroche and 20-25 from LFPT/Pontoise).

LFPM/Villaroche is less well known, but a substantial airfield and a longer runway than LFPT/Pontoise. Sadly, the airport is managed by the French State and not the private company ADP that manages LFPB/Le Bourget and LFPT/Pontoise. Hence, the lamentable marketing of our airports capability and absolutely superb position.

You can download the brochure for the Elyxan Aviation FBO at LFPM/Villaroche here.