

Libya Airspace Update March 2022

OPSGROUP Team

29 March, 2022



We haven't mentioned Libya in a while. Our last in-depth look was back in 2019, which is several years and a whole lot of Covid ago. So, what is the current situation and does it look likely that the country will be safe to overfly anytime soon?

Any alerts to know about?

In the first half of 2021, the Libya situation did change somewhat, with signs that security and stability in the country might be improving.

In June 2021, a 'fragile' ceasefire appeared to be holding, despite increased military activity on the western border with Algeria. The ceasefire came after a UN led agreement was put in place and was implemented in April 2021.

Egypt and Libya saw **a resumption of passenger flights**, along with Malta from April 2021. However, there are very limited international operations, the majority being domestic within the country.

What's been happening recently?

The security situation has reportedly deteriorated through the start of 2022, with intermittent fighting and armed clashes occurring regularly between rival militia groups. These groups are backed by competing geopolitical parties and the overall situation is **very volatile and complicated**.

In fact, the UN led elections at the start of 2022 and a new Prime Minister was brought in with the hope of unifying the country, but sadly this does not, so far, seem to have resolved what is described as an *"intensifying political crisis"*.

The fighting has led to **significant damage to infrastructure**, particularly to power supplies across the country, and to road systems. Disruption and security concerns on the ground are common. Civil unrest including protests and strikes occur relatively frequently.

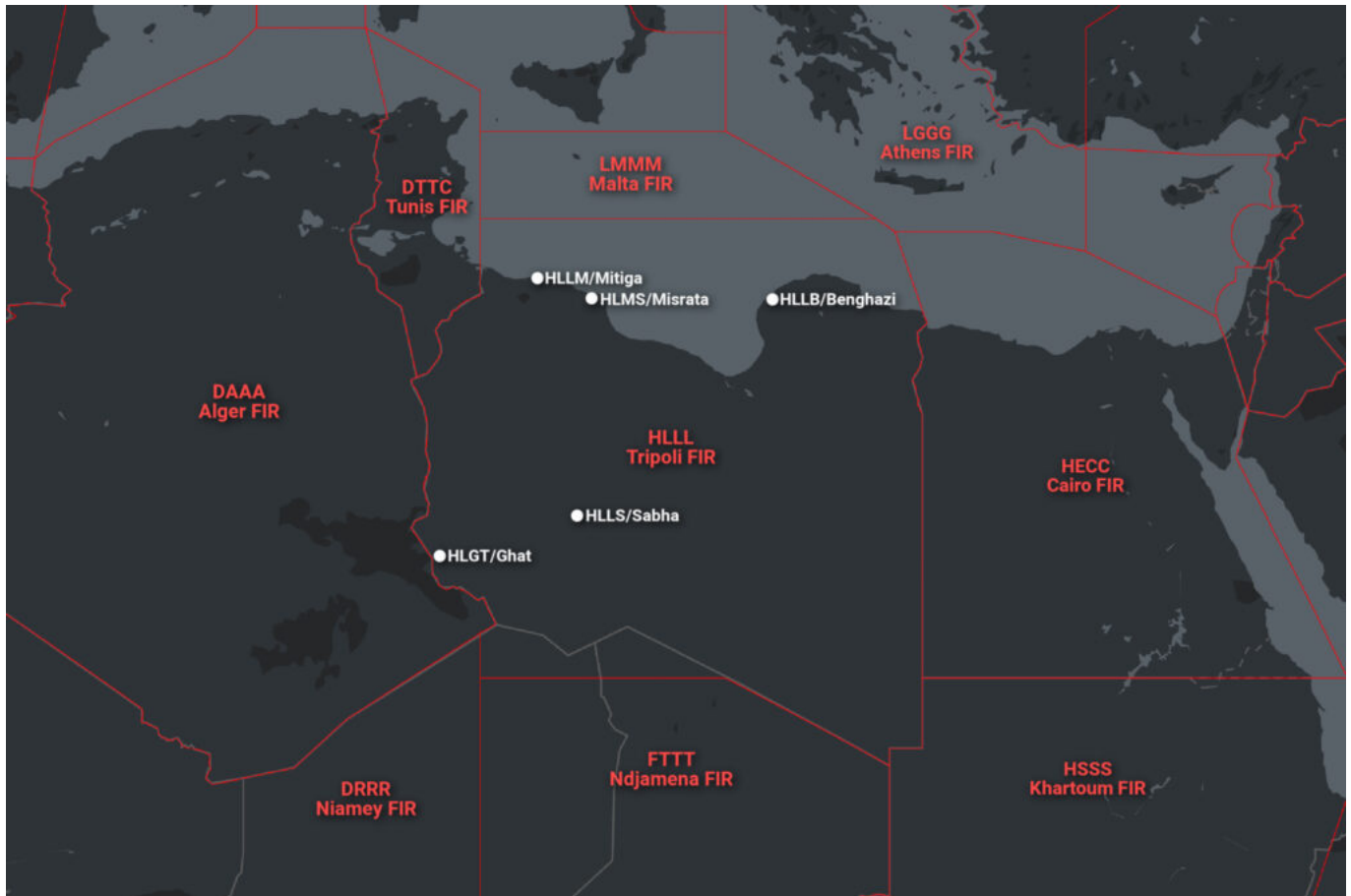
Islamic State militants do conduct operations in the country, although these are primarily restricted to the southern regions. **Attacks on high profile locations**, including international airports, remain likely.

The FAA Prohibition.

The US **extended their airspace warning** in 2021, updating their **SFAR 112** to run until at least March 2023.

You can read all about it in depth here, but the general summary is **don't overfly HLLL/Tripoli FIR except for altitudes at or above FL300 "outside of Libyan territorial airspace"** (the international bit over the southern Mediterranean sea).

Check out Safeairspace for other state warnings and prohibitions as we update this regularly.



Airport Options.

HLLT/Tripoli airport remains closed following significant damage to many of the airport facilities.

HLLM/Mitiga is the main international airport. A major attack in May 2020 resulted in damage to parked aircraft, terminal and runway. Jet fuel tanks were also set on fire. The airport was also closed in January 2020 due to a rocket attack. Prior to this, airstrikes in the area made it critically high risk and dangerous.

HLMS/Misrata and HLLB/Benghazi are also operational for international flights.

HLMS/Misrata has a single runway 11,155' with VOR DME approach only.

HLLB/Benghazi is a much better equipped airport offering minor airframe and engine maintenance facilities, two 11,811' (3600m) runways with an ILS to 33L, and VOR DME or LCTR approaches to the other

runways. However, Al-Qaeda linked militants are reportedly active in this general area.

HLLS/Sabha also has an 11,811' runway with ILS to 13 and VOR DME to 31.

HLGT/Ghat has an 11,811' runway but no precision approach and is relatively lacking in maintenance and support facilities.

The Airspace.

Entering the airspace without prior contact may result in aircraft being **“engaged by air defense systems”**. This message was passed to Malta ATC in April 2020.

Militia stated in 2020 that certain areas around major cities were **no-fly zones**, and there was a very real risk they could attempt to shoot down any aircraft which attempted to fly to HLLM/Mitiga airport in particular.

The northern airspace borders the Mediterranean sea and Maltese airspace, and caution should be taken if routing over this region to not **accidentally detour into Libyan airspace**.

Aircraft operating east/west particularly from Tunisia, Algeria and Morocco, or Egypt and further east, can **fly through Maltese airspace** and this does not pose a significant detour to avoid Libyan airspace.

Suitable alternate airports are available along these routes.

What Libya says.

We occasionally get contacted by **Libyan ATC** to update us on the situation from their perspective, because often what is said (and assessed) via media reports does not match what those in a country experience.

Their most recent feedback (early 2022) was this:

- International airlines are operating into HLLM/Mitiga and HLMS/Misrata without (apparent) incident
- There are passenger flights from Tunisia operating 3 times a week, and several cargo flights per week
- Overflying east/west is considered safe, north/safe requires some more information for a full assessment
- VHF ATC services over international waters are reliable

What Malta says (because they're right next door).

- The situation has improved over the last few months but there is not much transparency as to the real state of affairs in terms of ATM/CNS provision in the HLLL/FIR.
- Libyan airspace is entirely procedural and there must be huge swathes of airspace where the service provision is either limited or unreliable especially in the domain of air-ground communications. We do not know the status of the international / national aerodromes in Libya as their AIP does not seem to be updated regularly (understating it here).
- We are also aware of military activity over the high-seas which is either operating as OAT or not in control with Tripoli ACC / Benghazi ACC including RPAs. We are not aware how RPAs are being integrated in the airspace, if at all. GPS jamming could also be an issue.

- The issue of 5A-registered aircraft which are banned from EU airspace has not been resolved and we still have a lot of restrictions from EU States including Malta banning all flights departing from HL aerodromes from entering EU national airspace due to security issues.
- So whilst the military / conflict situation might have improved on the ground there is not much evidence to support the claim that all is safe and sound.

This was sent in **December 2021, prior to the UN-led elections**. The continued instability following these elections is what led us to pop this update out now.

Our risk assessment.

Libya remains volatile. Safety and security on the ground is not good, and there is a **significant risk to aircraft overflying due to the conflict and weapons available to militia groups**. Despite feedback from local ATC, and reports that some operators do overfly the country, we continue to advise against it.

It remains a Level 1: Do Not Fly region on Safeairspace.

Have you operated in or over?

Share your feedback with us at news@ops.group, or file a report of a recent trip on our Airport Spy page.



Got some intel?

Are you an Airport Spy?

You go to unusual places and see curious things. Your turboprop friends envy you. Now, it's time to give back.

For your next trip, pack a notebook, and file your Spy Report below. You'll get a weekly ops briefing in return.

[File your report](#) >

Russian CAA website taken offline

OPSGROUP Team
29 March, 2022



On March 29, the entire Russian Civil Aviation Authority website went offline. Hackers are saying they managed it, Russian media is saying it is down to restructuring.

Either way the website currently isn't available, so if you need to get in touch it will have to be via good old fashioned postal service or AFTN.

What's offline?

www.favt.ru currently isn't responding. This is the '**Rosaviatsia**' **Federal Agency for Air Transport** site which manages civil aviation across Russia.

www.scaa.ru also doesn't respond.

AvHerald reported that the site has been hacked, and all backup data also erased.

What does this mean?

With few external operators flying in and out of Russia it might not mean much right now. However, if you are trying to fly in or contact them then this may pose issues for you until they get their site back up and running.

Things like **permissions and permits** will undoubtedly take longer to get hold of.

Whether there will be any further indirect impact on other aviation related service within Russia is not yet clear.

The Contact Info.

Contact via post of AFTN are your best bets, but you can try calling as well. It isn't clear if email will be available.

Telephone: +7 499 231 5237

Email: aviapermit.scaa.ru / rusavia@scaa.ru / permit@matfmc.ru

AFTN: UUUKYAYX / UUUKZXTD

SITA: MOWYAYA / MOWICYA

Address: 125993, GSP-47, Moscow, Leningrad Prospekt, 37, building 2

Any local agent contacts?

Aerotrans may be able to assist: +7 495 755 9422 / handling@CPDU.ru

Alternatively you may do best to contact local agents at your airport of operation directly as it may be easier for them to coordinate for you.

Ukraine Relief Missions

OPSGROUP Team
29 March, 2022



If you are an operator who is looking to offer relief aid services as part of the Ukraine conflict, read on.

We have compiled a list of handy contacts, general ops information, and other bits which we hope might help. If you are looking for other support or info then let us know at team@ops.group

If you need support with trip planning you also might want to get in touch with Universal Weather because their Universal Trip Support department are waiving all fees on trip-feasibility assessments, research, and consultation services, as well as ground-handling setup charges for any humanitarian missions.

POLAND

Poland borders the Ukraine, however it also borders Belarus, and caution should be taken if operating into the eastern regions of Polish airspace along the border because of **high levels of military traffic** operating in this area.

Permits

Permits are not required for private flights but you do need to **make a declaration in advance**. Private flight also counts as less than 20 seats. Other flights need to make their landing and overflight permit application 3 days in advance.

The Polish Air Navigation Services Agency can be contacted via email at planning.dept@pansa.pl and at trafficrights@ulc.gov.pl, or by telephone on +48 22 520 7309

EPRZ/Rzeszów

The closest airport to the Ukrainian border, where most relief efforts will be focused, is EPRZ/Rzeszów-Jasionka airport (pronounced "jejov"... kinda).

Here is some data on the airport:

- 10,499' / 3200m x 45m Runway 09/27
- CAT II ILS 27 / RNP or VOR 09
- Restricted H24 operating hours
- RFF 8 (RFF 9 on request)
- PCN 82/R/A/W/T
- Jet A1 available
- Customs available without restriction
- Unknown if any maintenance or other support facilities
- Closest airports for alternates:
 - **EPPK/Kraków** Large international airport 2550m/8366'
 - **EPKT/Katowice** Large international airport 2799m/9183'
 - **EPWA/Warsaw** Major international airport 3690m/12106'
 - **EPLL/Lodz** Medium airport 2445m/8022'

Here is some "heads up" operational info:

- Elevation 693'
- Highest MSA 3400' and a few close in obstacles
- Runway 27 has a significantly displaced threshold
- A lot of VFR traffic operates in the area (on nice weather days) so be cautious. There are dedicated VFR light aircraft runways at the airport as well
- Do not mistake the highway or the runway at EPRJ
- There is no radar vectoring possible due to the high amount of VFR traffic, so expect to follow procedures including procedure turns, and exercise caution with your tracking
- There are speed and altitude restrictions on SIDs and STARs to be aware of.

Some contact info for you:

- Airport contacts:
 - Airport +48 17 852 00 81
 - Admin +48 17 717 86 11
 - Email czesairport@czesowairport.pl
- The Airport Handling agent can assist with basic ground handling, landing charges and pax and crew transport.
 - Telephone: +48 17 717 86 39 / +48 17 852 00 81
 - Email: ops@czesowairport.pl
 - Website: <http://www.czesowairport.pl>
- There are several Handling and Support agents who operate through Poland and neighbouring countries who might be well placed to assist:
 - Excel Handling
 - +48 22 650 3394
 - polandops@excel-handling.com

EPLB/Lublin

EPLB is about mid-way between EPRZ and EPLL/EPWA, and is far less busy but also well equipped to handle larger aircraft.

Here is some data on the airport:

- 8268' / 2520m x 45m Runway 07/25
- CAT II ILS 25 / RNP 97
- Operating hours are only 0400-0100, but extendable with 48 hours notice
- RFF 7
- PCN 50F/B/X
- Jet A1 available
- Customs available without restriction
- Unknown if any maintenance or other support facilities
- Closest airports for alternates:
 - **See above**

Here is some “heads up” operational info:

- Elevation 636'
- No terrain to worry about, but a close in obstacle end of runway 25 - MAPP has early turn to avoid
- Limited taxiways - backtrack required if landing runway 07
- Big temporary restricted area nearby may impact arrivals and departures when active
- No radar

Some contact info for you:

- Airport contacts:
 - Airport +48 81 458 14 44
 - Admin +48 81 458 14 00
 - Email info@portlotniczy.lublin.pl
- The Airport Handling agent can assist with basic ground handling, landing charges and pax and crew transport.
 - Telephone: +48 81 458 13 31 / +48 81 458 13 32
 - Email: dm@airport.lublin.pl
 - Website: <http://www.airport.lublin.pl>
- There are several Handling and Support agents who operate through Poland and neighbouring countries who might be well placed to assist:
 - Excel Handling
 - +48 22 650 3394
 - polandops@excel-handling.com

EPWA/Warsaw

We received a great report from an OPSGROUP member who operated a flight with humanitarian aid to EPWA/Warsaw on March 20.

Airport Spy

Find airport ... **Go**

Warsaw, Poland

★ ★ ★ ★ ☆ Rated 4 from 14 reviews

Large International Airport | Longest Rwy: 3,690 m / 12,103 ft (15/33) | Elev: 362

INTL EPWA

Top 100

Reviews 14 Alerts 1 Articles 1 Documents 1

Ukraine aid flight to Warsaw

Reviewed March 22, 2022
Aircraft: Falcon 8X | Flight type: Private | ID:

We arrived Warsaw in the evening on March 20, 2022. Came in from the Northwest, originally assigned the BIMPA 6N arrival, but shortly after joining the arrival, we were given direct to WA411 for the ILS Y RWY 11. Exited the runway on N1 to M3. Assigned parking spot 41 on Apron 5B. Handler was Executive Aviation Service arranged through Universal. Fueling was delayed because

Permits
Poland

PRIVATE COMMERCIAL

Overfly Land Overfly Land

Closest Airports

EPLL Lodz, Poland ★★★★★ 2
64 nm, 2445m/8022ft Medium

UMBB Brest, Belarus
95 nm, 2620m/8596ft Medium

Here is a copy of their report:

We arrived Warsaw in the evening on March 20, 2022. Came in from the Northwest, originally assigned the BIMPA 6N arrival, but shortly after joining the arrival, we were given direct to WA411 for the ILS Y RWY 11. Exited the runway on N1 to M3. Assigned parking spot 41 on Apron 5B.

Handler was Executive Aviation Service arranged through Universal. Fueling was delayed because local handler did not have a copy of the World Fuel release. Lav service was prompt.

Crew took the opportunity to bring in some items for Ukrainian refugees. Crew sent a message to Universal to ask the local handler for drop off information. The following website was provided:
<https://en.um.warszawa.pl/-/what-and-where-can-you-bring-for-refugees>

This is a Municipal organization which has over 18 drop off locations. The government locations are looking for mostly food, baby products, hygiene products, and first aid products. The crew had mostly brought in clothing items, new socks, new underwear, hard candy, hygiene products, and small children's toys.

These products were not a good match for the requests at the government donation sites.

The crew asked the Handler for another donation center contact that would welcome

the clothing. The following contact was provided:
https://www.tpu.org.pl/en/chcesz_pomoc.html
email sekretariat@tpu.org.pl or by telephone: +48 691-41-41-59.

This donation center is run by professionals who have other careers and are helping with relief. The site says they are only open on Tuesdays. We happened to be in Warsaw on a Tuesday, so it worked perfectly for us. We took an Uber from the Westin (downtown Warsaw) to the donation center. 20 minute drive. \$5 US via Uber.

If you have operated to the region recently, please get in touch so we can share the info with everyone else looking to do similar trips. You can email us at news@ops.group, or file a report of a recent trip on our **Airport Spy** page here.

ROMANIA

Some relief efforts are also being arranged through Romania which borders the Ukraine to the south, as well as Moldova.

International flights may be best operating into LROP/Bucharest, LRCL/Cluj Napoca, LRIA/Iasi, LRTR/Timisoara international airports and then fly internally to LRSV/Suceava which is a domestic airport and not an airport of entry, lying close to the border.

Permits

Permits are not required for private or tech-stop flights, but you still need that advance notification. Commercial flights need at least 2 days notice for permits, and these are required for landing only, not overflights.

The Romanian CAA can be contacted via email at overflight@caa.ro and at dgav@mt.ro, or by telephone on +40 21 319 6209 / +40 21 208 1500

Here is some data on the LRSV/Suceava:

- 8071' / 2460m x 45m Runway 16/34
- CAT II ILS 34 / VOR 16
- The airport control tower is H24, but Admin operates limited hours confirm with handling agent
- RFF 7
- PCN 110/F/C/W/T
- Jet A1 available
- Customs available without restriction
- Unknown if any maintenance or other support facilities
- Closest airports for alternates:
 - **LRIA/Iasi** Medium airport 1780m/5840'
 - **LRCL/Cluj-napoca** Medium airport 1850m/6070'

- **LRSB/Sibiu** Medium airport 2000m//6562'
- **LROP/Bucharest** Large international airport 3500m/11483'

Here is some “heads up” operational info:

- Elevation 1375'
- Highest MSA 5500' with terrain in the southwest
- Runway 34 has displaced threshold
- Limited taxi and apron space
- Backtrack on runway required
- VOR oscillations due terrain are likely
- Very low platform altitude and short final approach
- Higher than usual SID climb gradients due close in structures

Some contact info for you:

- Airport Contacts:
 - Admin +40 230 529 999
 - Operations +40 747 095 716
 - Email: office@aeroportsuceava.ro / briefing@aeroportsuceava.ro
- The Airport Handling agent can assist with basic ground handling, landing charges and pax and crew transport.
 - Telephone: +40 230 529 999
 - Email: briefing@aeroportsuceava.ro
 - Website: <http://www.aeroportsuceava.ro>
- There is a large Handling and Support agent who operates through Romania and neighbouring countries who might be well placed to assist:
 - Euro Jet Interncontinental
 - +420 2 3334 3362
 - ops@eurojet-service.com

How to help

The two agencies we'd encourage people to go check out are Airlink and DirectRelief – these two have already flown in shipments of aid and have more scheduled this month. So those are good places to go

find out exactly what's needed, and how to help.

IFALPA and the European Cockpit Association have also put out a letter for members of the aviation community wanting to **help support the pilot community in Ukraine**. They suggest you reach out to local organizations to help, or donate to larger ones such as Red Cross who are on the ground there. You can read the letter [here](#).

If you need assistance with anything to help prepare for humanitarian flights, please get in touch.

What do we need?

- **Feedback on your operation** if you have carried out a humanitarian mission recently.
- **Any local contacts** you have who can assist others.
- **Any other relevant information** and advice which we can share to other members.

You can email us at news@ops.group, or file a report of a recent trip on our **Airport Spy** page here: ops.group/blog/spyreport



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Chinese maritime drills might impact flights

OPSGROUP Team
29 March, 2022



China has been carrying out a lot of military exercises over the South China Sea of late. Most of these are maritime, but that doesn't mean they won't have some impact on aviation as well.

So here is a look at what is going on and where to watch out for...

The Exclusion Zones.

When China carry out their military drills **they establish exclusion zones**. These definitely apply to maritime traffic, but it is a lot less clear whether they apply to civilian aviation traffic as well. Some of them also lie in **particularly close proximity to the airspace of International airports**.

So best know about them just in case.

The Current Activity (that we know about).

- **Number 1**

The latest one is taking place in the **northern region of the South China Sea**, and will run through to at least 18:00z on April 9. The no-go zone is about 90km or so in size, southwest of Sanya which means traffic in and out of **ZJSY/Sanya Phoenix International** may be disrupted.

There could also be an increase in helicopter traffic, so keep an eye on that TCAS and remember your contingency procedures for Sanya Oceanic, and China in general.

- **Number 2 & 3**

Drills were planned in two areas – one in the **Bohai Sea, and one in the Beibu Gulf** (northern South China Sea). These were due to run through March 27, but have been extended to April 10.

ZYTL/Dalian Zhoushuizi International airport and **ZGBH/Beihai Fucheng** airport maybe impacted by the exclusion zones.

- **Number 4**

This one was announced quite late, and will take place in the **South China Sea, off the coast of Shantou**, Guangdong Province, through March 26. As with all the others, it isn't clear what the impact to flights will be beyond possible disruption if flying into **ZGOW/Shantou Waisha** Airport, and a likely increase in helicopter traffic.

China in general...

China have a huge number of **unmapped military bases**. In fact their entire airspace is basically one giant military zone. This means you might often find yourself **descended early** if heading in, **kept very low** when heading out, or given **big detours** which seem to make no sense.

All of this means a much higher fuel burn (which can be very hard to plan for!)

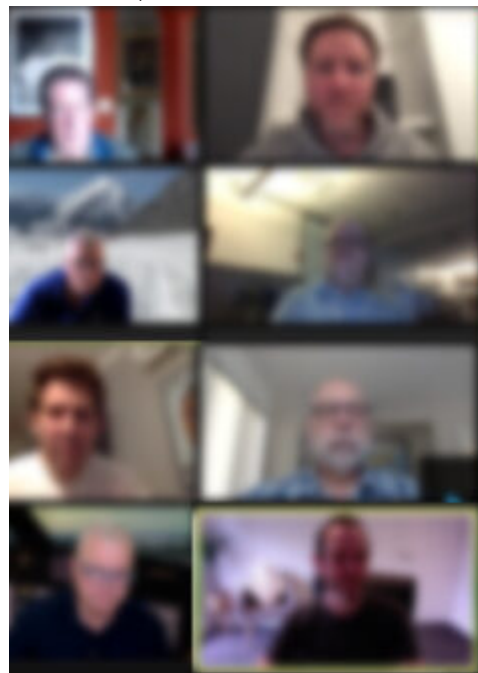
We wrote some stuff on China Ops a while back so take a look her for more info, but this is the bit to really think about:

While the **ZJSA/Sanya FIR** includes an oceanic portion in the South China Sea (a "marginal sea" that is part of the Western Pacific Ocean (marginal meaning: *would just be the ocean only a bunch of islands and archipelagoes sort of divide it off a bit*), the don't apply standard ICAO Oceanic contingencies in it.

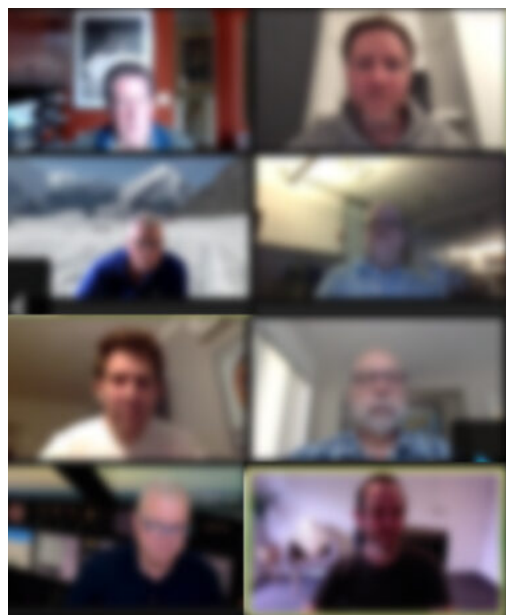
Instead, you'll be expected to turn **90 degrees** right or left, **offset by 25nm** and then climb or descend 500ft. China are pretty strict on deviations and detours. They even use different sized airways in some spots. So **check their AIP and China specific Rules and Regs** before a flight to make sure you get it right.

OPSCHAT Summary 22 MAR

David Mumford
29 March, 2022



OPSCHAT
TUESDAY 22 MAR 2000Z
UKRAINE SPILL-OVER RISK
US AIRSPACE IMPROVEMENT
SAUDI ARABIA AIRSPACE RISK
DANGER CLUB RETURNS



OPSCHAT

TUESDAY 22 MAR 2000Z

UKRAINE SPILL-OVER RISK
US AIRSPACE IMPROVEMENT
SAUDI ARABIA AIRSPACE RISK
DANGER CLUB RETURNS

Hello members,

We had another busy OPSCHAT call this week!

You can catch the full reply on your Member's Dashboard.

Here's a rundown of what we talked about:

- **Airspace Risk in Europe** – We looked at EASA and IFALPA's new safety bulletins. Brief discussion about GPS jamming. Feedback from member operating out of Cyprus who encountered it recently – ATC were advised but seems to be ops normal for them there. We also asked whether there are any other risks or impacts that operators are encountering as a result of the conflict in Ukraine that are not being publicised or reported?
- **Russia latest** – The US has still not been officially banned from Russian airspace via the UUUU notams. Although there are reports of people having difficulties obtaining overflight permits anyway. Brief discussion about Bloc permits, and then Chinese permits (taking 4-5 days, expect short notice changes to be refused, carry additional fuel for unexpected routes/levels).
- **Saudi Arabia airspace risk** – The US FAA has now issued an advisory on Houthi drone incursions. A few key questions put to group:
 - Why has it taken the FAA so long to issue this?
 - What is the actual risk to overflights?

Feedback from group is that ESCAT is likely the biggest impact. Ops into Southern Airports are unusual for western operators.

- **Canada** – Briefly touched on the end of the pre-travel testing mandate from April 1 – only applies to fully vaccinated pax (no booster required). Non-vaccinated pax must still follow existing rules. No impact to crew who are exempt anyway.
- **USA** – Airspace improvement project on East Coast finishing with changes in Nov 3. 55 new Q and Y routes and ultra high sector routes (>FL400). New routes will be published in Sept but unavailable for use until Nov 3. More info here.
- **North Korea** – Several missile launches over the weekend landed in the Yellow Sea. Total of

eleven this year – all without airspace warnings. Likely to be more. Brief discussion on the ZKKP/Pyongyang FIR – seems operators are staying well clear. Discussed the FAA SFAR which does a good job of communicating the risks. More info [here](#).

- **Unsolved mystery:** Reports in media of bizav aircraft being used for relief missions, particularly to Poland. Looking for updates on conditions at airports, traffic congestion and fuel availability. Let us know at news@ops.group
- **Danger Club:** Happening March 24 at 1800z! Read more and register [here](#).

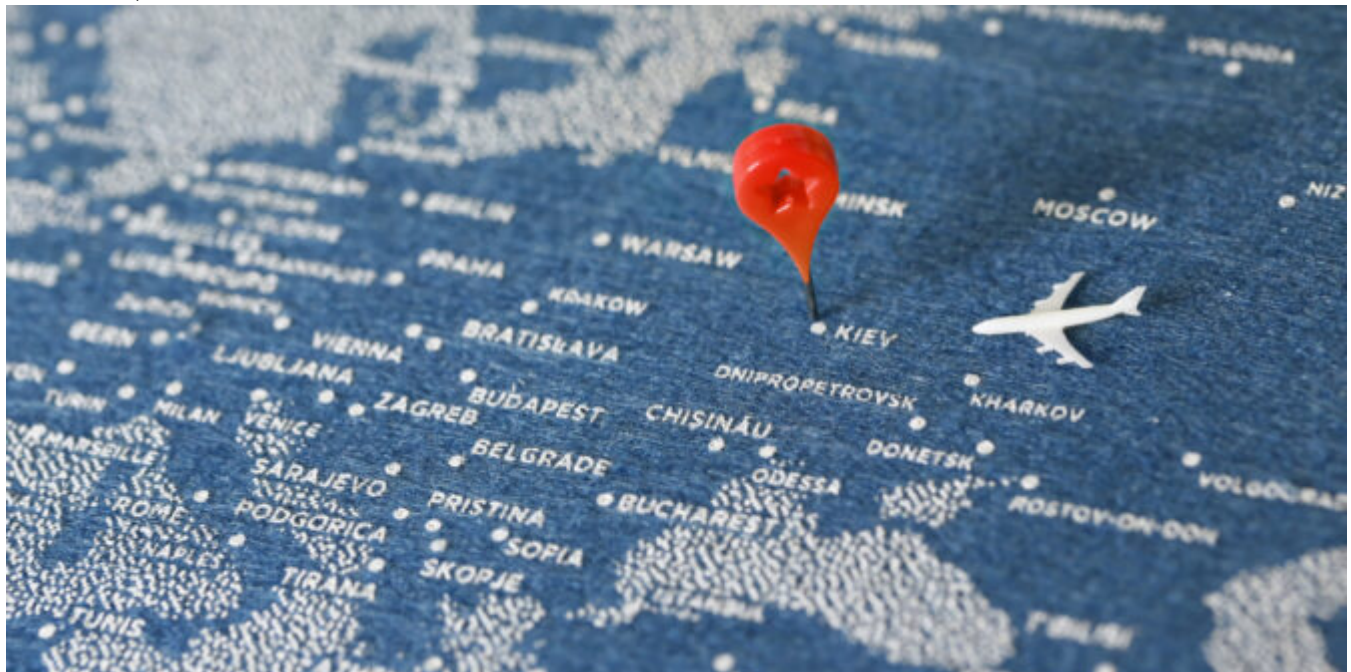
As always, the team is here to help with any operational support, info or questions. You can reach us on news@ops.group, or via the slack channels **#flightops** and **#questions**.

To watch the replay of the OPS CHAT in full, head over to the [dashboard](#).

Spillover Effect: New Airspace Risks in Europe

Chris Shieff

29 March, 2022



As the war in Ukraine continues, the risk to aircraft in European airspace may be changing.

There have been several incidents in recent weeks that highlight that the spillover effects of the conflict have begun **putting aircraft at risk in nearby FIRs**. Or in other words – busy, open airspace with no airspace warnings in effect.

These include **undetected military drone incursions** in NATO member airspace and **extensive GPS interference** for aircraft operating across different regions of Europe.

And it is a new and emerging issue. So concerned are IFALPA and EASA, that they both published new

bulletins last week to both operators and ANSPs regarding these risks.

Here's a break-down of what you need to know.

Drone Incursions

On March 12, a large weaponised military drone malfunctioned and left the Ukrainian conflict zone. It flew undetected through the airspace of Romania and Hungary, before entering Croatia and crash landing on the outskirts of the capital, Zagreb.

This was followed by an incident on March 14, where widespread reports emerged that a surveillance drone had briefly entered Polish airspace before being shot down by Ukrainian military as it re-entered their own.

Around the same time, yet more news surfaced that a Russian surveillance drone had been discovered crashed in a village of Northern Romania – the exact date of the incursion isn't known.

IFALPA responded by issuing a Safety Bulletin on March 16. They report that these incursions are highly likely to re-occur as fighting continues. This may pose a threat to aircraft both on the ground or in the air. The risk comes from the drones themselves, as well as from air defence activities that attempt to destroy them.

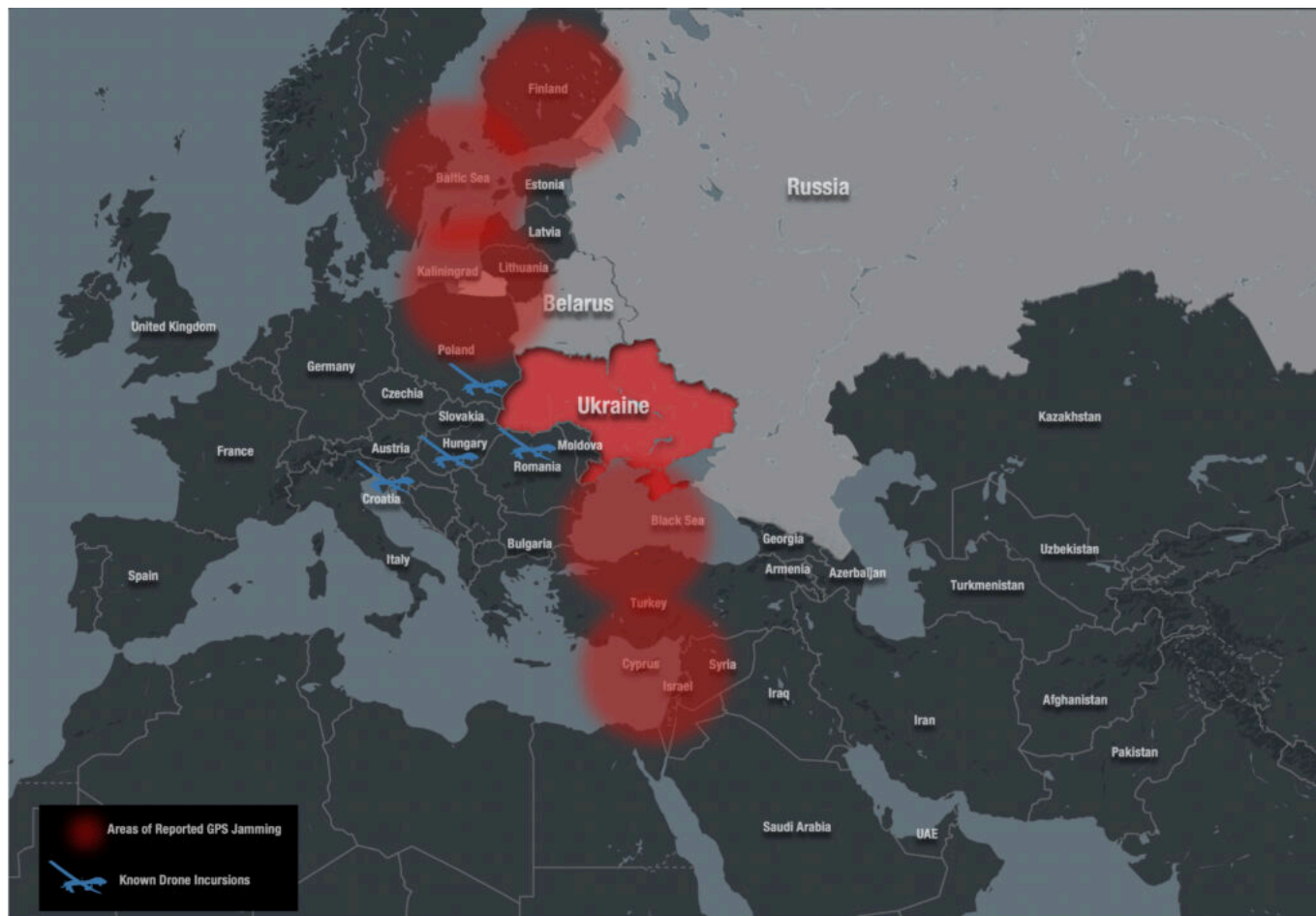
This is all in addition to the political impact of Russian aircraft entering NATO member airspace without clearance. While there has been no indication that these incursions were intentional, it does increase military surveillance of the skies over these countries, including the remote risk that a civilian aircraft may be misidentified and targeted in error.

GPS Interference

Since February **EASA** has identified four regions near Ukraine where GPS interference has significantly increased. This includes instances of jamming and spoofing – if you're unfamiliar with the latter, it means to deliberately introduce errors into the signal so that GPS receivers become inaccurate or erroneous.

The four hotspot regions are:

- Kaliningrad, the Baltic Sea, and neighbouring states.
- Eastern Finland
- The Black Sea (a portion of which is currently part of a major air corridor between the Middle East and Europe).
- The Eastern Mediterranean near Cyprus, Turkey, Lebanon, Syria, and Israel.



Reports have come from various phases of flights and had led to re-routing and even diversions.

For operating aircraft, the effects can be significant. A complete loss of GPS is immediately noticeable and leads to issues navigating, or carrying out ops that require RNP.

More worrying is spoofing, which can be far more insidious. Erroneous GPS signals can lead to false triggering of hard GPWS warnings, inaccurately displayed information, loss of ADS-B, faults with wind shear and terrain warnings, failure of aircraft systems that rely on GNSS for reference and even airspace busts. All nasty stuff.

On March 17, EASA published a Safety Information Bulletin on the issue. It includes a list of things that both operators and ANSPs can do to help mitigate the risks during this time. Absolutely worth a read if you're flying in European airspace right now.

Proximity to the Fight

These events indicate that **risk is present near the conflict zone, not just within it**. And with flight tracking indicating aircraft frequenting open airways near the Ukraine border, but clear of closed airspace, perhaps we need to be collectively paying a bit more attention.

Case-in-point. On March 13, Russia carried out an air strike near the city of Lviv, in Western Ukraine where at least thirty missiles were fired towards various targets. This occurred just 15 miles (25km) from the Polish border, along with open airways that run adjacent to the border (particularly T344 and Z367).

There are currently no active airspace warnings in Poland.

Stay Updated

Both IFALPA and EASA have agreed that **operators need to carry out their own risk assessments**

when operating in the region at the moment. That starts with verified, accurate and timely information. Make sure you keep checking safeairspace.net – our conflict zone and risk database.

And please **report back to us** any new info you come across (be it airspace risk related, or simply sharing your experience of a recent flight) and we can help redistribute that info back out to the group so that all are aware.

You can email us at news@ops.group, or file a report of a recent trip on our **Airport Spy** page here: ops.group/blog/spyreport



Got some intel?

Are you an Airport Spy?

You go to unusual places and see curious things. Your turboprop friends envy you. Now, it's time to give back.

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[File your report](#) >

Middle by Middle East

OPSGROUP Team
29 March, 2022



A lot of people lump 'The Middle East' together into one singular region of "Middle Eastyness", but actually each country is very different, particularly during Ramadan. Each has diverse cultures and rich histories, very different political interests, and of course their own unique operational and environmental challenges

that pilots should know a bit about before heading in.

So, here is your 'In the Middle of the Middle' guide to the 'Middle East' (or at least the parts of it you're likely to need to know about.)

Starting with the 'Need to Know'

The UAE

The UAE only became the UAE fairly recently. Before that it was seven separate emirates and a big port in Jebel Ali which the Brits took an interest in. When they got their independence from Britain, the emirates joined up, led by Abu Dhabi. Dubai is the **most westernized of the all emirates**, and each pretty much has its own international airport.

- **OMAA/Abu Dhabi International** is the capital airport for the UAE. They generally prefer not to be used as an alternate for Dubai bound flights since they are very busy.
- **OMDB/Dubai International** is the main Dubai airport, and the busiest airport by passenger numbers in the world. You have two parallel runways 12/30 left and right with CAT III approaches.
- **OMSJ/Sharjah International** is the next door neighbour to OMDB/Dubai (around 20km north and you fly past it on some Dubai arrivals). **Runway 12/30 is 13,320 ft** long with an ILS either end. Watch out if OMDB is getting foggy though because OMSJ won't be far behind given it is also close to the sea, and it will fill up fast with diversions if it isn't.
- **OMDW/Dubai World** is the **slightly smaller international Dubai airport** just next door. Mainly used for cargo flights, it offers a good alternate to OMDB. There is limited parking and fuel trucks though so if you divert here on a day a lot are diverting then expect long delays. **Runway 12/30 has CAT 3 ILS** both ends and is 14,764 ft long
- **OMRK/Ras Al Khaimah** is a decent airport to **consider as an alternate** with an ILS on 34, an RNAV on 16 and 12,336 ft of tarmac between the two ends. Watch out for terrain here though.
- **OMAL/Al Ain** has a 13,140 ft runway with ILS/RNAV approaches. Another UAE **option for an alternate**.
- **OMAD/Al Bateen** is a small but quite busy executive airport near OMAA/Abu Dhabi, which **just caters for private jet ops**. This airport will be completely closing from **May 11 to July 20**.

We put together a little regional brief on this with some handy contacts for you.

Saudi Arabia

Saudi Arabia is the largest country in the Middle East.

They are a major world economy, the third biggest producer of oil (behind the USA and Russia) and the largest exporter. It is also at the heart of the Islamic religion and you need to bear their customs and laws in mind if heading in there. **Women are expected to dress modestly and cover their heads**, and alcohol, swearing, gambling etc is forbidden. This will be much more strictly enforced during Ramadan.

- **OEJN/Jeddah** - long taxis possible. Keep an eye on those brake temperatures. This airport can

accommodate the most number of aircraft in the world so... it's big! There are no less than three runway 16/34s here. The longest is 13,123 ft and all of them have an ILS approach. Jeddah has recently been targeted by drone attacks and the southern Jeddah FIR (close to Yemen border) should be avoided).

- **OERK/Riyadh** – high elevation airport with steeper than normal GS on some approaches. You have two runways to choose from, although they tend to stick to one for takeoff and one for landing. 15R/33L is the longer of the two, offering 13,797 ft (a whole 2 ft more than 15L/33R)
- **OEDF/Damman** – Often keep you high or use track shortening. 34L/16 R and 34R/16L are both 13,123 ft long with an ILS approach.

Because of the ongoing conflicts with neighbors, Saudi have a procedure called ESCAT (used to be called SCATANA) which is basically an emergency procedure when the airspace is under threat. If they announce it, be prepared to follow whatever instructions given – probably either to leave the airspace, or to land where they tell you.

- Consider what your alternative routing options or alternates will be in advance. **ESCAT** has been activated more frequently of late, and this may mean long holding at the boundary of their airspace.
- **Egypt** is available to the west, but **Israel** may not accept you if you haven't advised them in advance. The process for landing and overflying Israel is still quite lengthy and dependant on where you come from, are registered, who you carry etc.
- **Jordan** is available, but **Syria** is a no go country, and landing in **Iraq** is less advisable.
- **Yemen** to the south is a no fly area.

Full info on ESCAT is found in their AIP. We wrote a bit about the Yemen conflict threat here.

Oman

Oman is a funny shaped country with a bit above the UAE and most of it below, bordering Yemen. They generally aren't too political and get on with everyone.

- **OOMS/Muscat** is the main airport. 08L/26R is currently the only operational runway. It offers an ILS either end and 13,123 ft. **Muscat is a decent fuel and tech stop** if routing from the Far East.

Iran

US operators are not allowed to overfly Iran, and there are overflight warnings associated with the country. If you do overfly and need to divert in the country, be aware that if you are coming from other countries, or have some nationalities onboard, this might cause some problems for you on the ground.

If you operate in with female crew, expect them to be asked to cover their heads leaving the airplane at some airports. There are also potential issues with lack of female security staff and crew have reported female pilots being asked to let their male co-pilot carry out walk-arounds to avoid difficulties with male security staff escorting a female.

The main airport OIIE/Tehran is a pretty decent one to go into though, although it is in the middle of some high terrain.

- **OIMM/Mashad** – Another high altitude, high terrain airport with two decent length parallel runways (longest being 12,861 ft). Only 31R has an ILS approach (VOR DME on the rest) and you can likely expect a procedural to the ILS. Watch out on the GA because there is a large Holy Shrine which you are not allowed to fly over below 6000’
- **OISS/Shiraz** – Right in the middle of a load of terrain. Not easy approaches to fly. The longest runway here is 14,200 ft and only 29L has an ILS. The GA on this is another one to watch – a lot of turns to keep you away from high ground.
- **OITT/Tabriz** – Ok, all airport in Iran have high terrain around them. Tabriz is no exception. A little easier since it is only on three sides. Like the others, it has two decent length runways, but limited taxiways. There is an ILS approach onto 30 L and R but if you want to land onto either runway 12 you will need to circle...
- **Most smaller airports are not always well maintained.** A quick Notam search shows up no less than 16 holes in poor runway 30 at OIIP/Payam International, and OIII/Tehran International (the other one), OIBB/Bushehr, OIHH/Hamadan, OINZ, OITL, OIMS... also come up

Jet Business Solutions, based in the UAE, can assist with support and handling in Iran – ops@jbs.aero

Qatar

- **OTHH/Doha Hamad** is the main airport here. Doha is one of the most modern airports in the world and fantastic for passengers. The longest runway is a whopping **15,912 ft** and there is a CATIII approach onto all four. The airport and ground operations here tend to be very efficient.

It is nice to operate into because it is built out on its own little bit of land. The city is quite futuristic looking and its a nice view on approach. There is high terrain close by so watch out for GPWS warnings if you mess up your tracking or speeds. The buildings also lead to wind shear and turbulence on approach.

While fairly westernised like Dubai, Qatari customs and laws can be stricter and should be carefully observed during Ramadan.

Kuwait

- **OKBK/Kuwait** – pretty restricted airspace close into the airport so be careful if deviating. Get those calls for weather in early. This is another big airport with long but efficient taxis. Kuwait is more prone to big sand storms than some of the other areas. The **longest runway is 11,483 ft** and there is a CATII approach onto all four. Watch out if you’re operating on the 15s though – the taxi can be long and brake temperatures can heat up fast.

Bahrain

- **OBBI/Bahrain** – This airport gets a lot of thermal activity in the summer to watch out for turbulence on short finals. The runways 30L and R have been known to confuse folk in the past as well. 30R is the long one in case you’re not sure (13,305 ft vs 8,301 ft so the difference should be quite obvious).

Iraq

- **US operators are permitted** to overfly the ORBB/Baghdad FIR above FL320, but landing there would be unadvisable due to conflict, security and safety concerns.
- **ORER/Erbil, ORBI/Baghdad, ORMM/Basra, ORNI/Al Najaf** international airports are all fairly well equipped.

Safeairspace

Conflict is common across the region. Currently several countries are no fly areas, with cautions applied to others. Visit Safeairspace for full information on the current status.

- Syria is a no fly country
- Yemen is a no fly country
- The southern Jeddah FIR (Saudi Arabia) and OEJN/Jeddah airport have cautions due attacks from Yemen
- Iraq can be overflown, but with certain restrictions
- Iran is off limits to US operators
- Israel has political tensions with neighbouring countries. Overflying and landing is possible but requires pre-planning
- Lebanon has some risk due to proximity to other conflict nations.

Why fly to the Middle East?

It is very central and provides a connection between the west and the Far East and Asia. **The main airports offer good tech and fuel stop options.**

It is also an interesting region. There is great golf in Dubai, World Heritage sites in Saudi and Iran. And then of course there are the Finance and Oil Industries so corporate companies might find themselves flying business folk over. So, if you are ever operating in make the most of the layover, there are some cool sites to see and interesting things to see and do.

And ending with some 'Good to Know'.

Some history of the region if you want to read some more. And a little mention is necessary because conflicts and Safeairspace aside, actually the political goings-on of the region are fairly important to our airplane goings-on.

For example, until the end of 2020 **Israel was out of bounds**. You could not fly across it if you were routing from a big old bunch of places. It was BIG news at the end of 2020 when the likes of **Saudi Arabia and the UAE rebuilt their relationship with Israel** and agreed to flights between the nations. Neighbors followed suit, and Jordan now also allow flights passing over Israel to utilize their airspace. Being able to fly across Israel **significantly shortens the flight time for aircraft** routing from the Middle East and Europe.

A second big political/ aviation newsworthy event was the ending of the Qatar blockade by Saudi, the UAE, Egypt and Bahrain. Obviously, this primarily helped Doha bound flights, but for all operators in the region it means **easier airspace and radio work**, and the opportunity to once again **use OTHH/Doha as an**

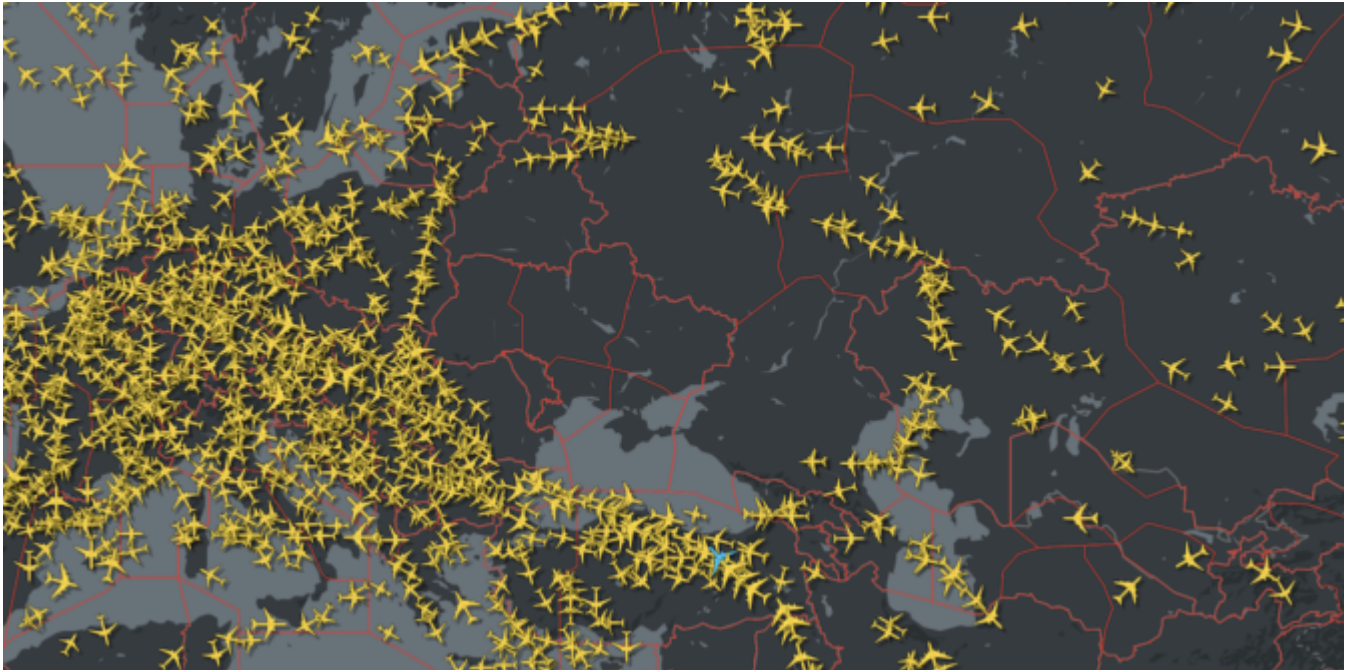
alternate.

The politics of Iran and Iraq mean if you are routing through one airspace, you probably should not divert into the other. Iran is the bigger worry here because they have an **ADIZ** and **need you to check in prior to entering** their airspace. One of the main southbound routes through **Iraq (UM688)** brings you close to the Tehran FIR border, and if you meet a big thunderstorm along the way and deviate in the wrong direction, you might just find yourself accidentally edging over the border. The same goes for routing along the **M677 in Kuwait**. If you are heading to Dubai, the **VUTEB hold** sits close to the border and again, weather can push you close to the FIR boundary.

The tensions with Iran and much of the rest of the Middle East are constantly simmering. One big no-no on your routings here is to refer to the Arabian Gulf as the Persian Gulf. At least to the wrong controller.

Ukraine/Russia Update: Airspace closures, Flight bans, Sanctions, Routing considerations

David Mumford
29 March, 2022



Here's everything we know right now about the Ukraine/Russia situation with regards to **the impact to international flight ops**. We'll edit and add to this post as more information becomes available.

The main topics:

1. Ukraine, Moldova, Russia and Belarus **airspace closures**.
2. Which countries have banned Russian aircraft and operators, and **which countries has Russia banned** in response?

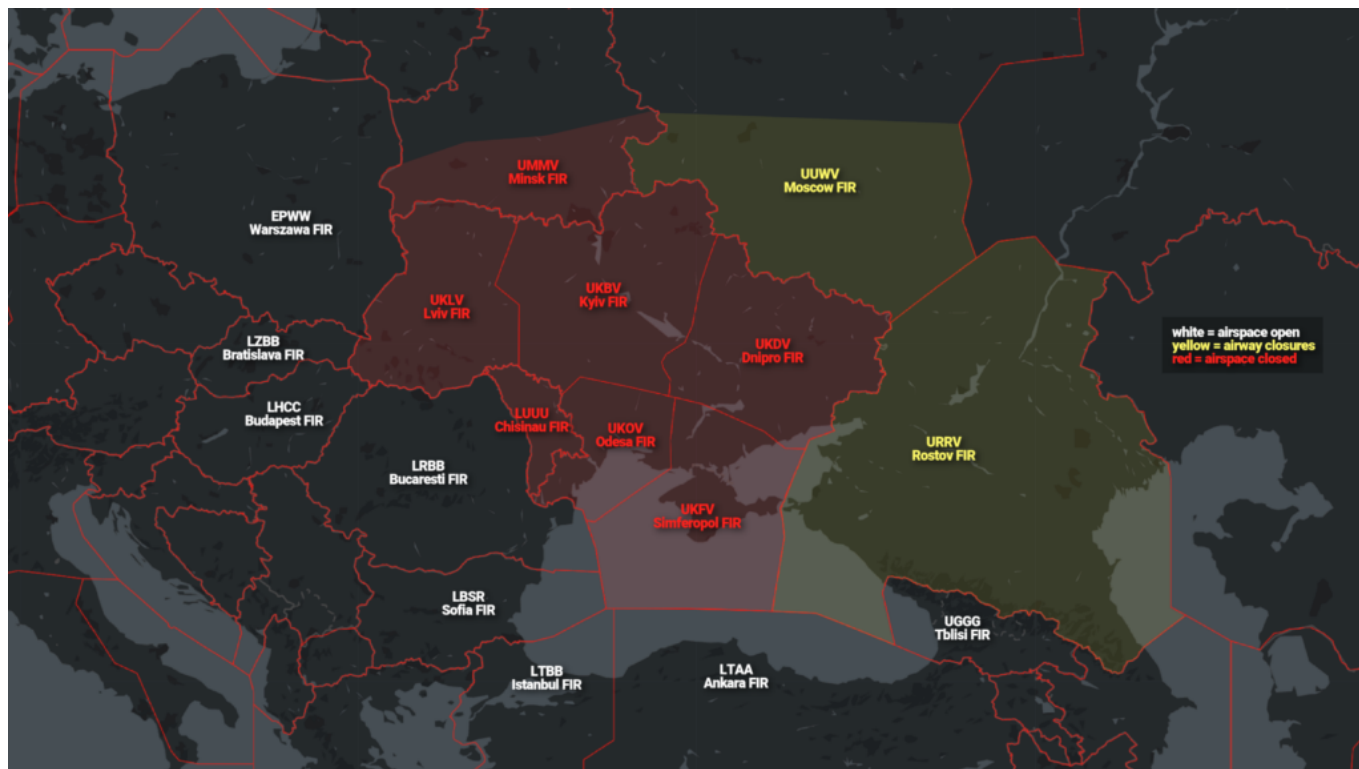
3. The differences between the **sanctions imposed on Russia** by the US, the UK, and the EU, and the nuances of how these sanctions may impact your flight.
4. Considerations for operators now looking to **route around Russian airspace**.
5. Information on **Humanitarian relief missions**.

Airspace closures

These are pretty well known by most of us at this stage, but just to reiterate:

- The entire airspace of **Ukraine** remains closed to all civil flights.
- The airspace of **Moldova** is also closed, but they have been accepting flights to LUKK/Chisinau Airport on a case by case basis (we've seen several cargo flights go in there in the past week). But you have to apply to the Ministry of Defence and sign a declaration accepting "the risks that may arise as a result of operating in conflict areas". So that's a pretty stark warning of the risk of operating in here at the moment.
- **Belarus** has closed the southern half of its airspace along the FIR boundary with Ukraine.
- **Russia** has closed most airways in the URRV/Rostov FIR and in the southern part of the UUWV/Moscow FIR.

Here's what all that looks like:



Reciprocal bans on aircraft/operators

Several countries have now **banned Russian aircraft and operators** from their airspace – The European Union along with some non-EU countries, the US, Canada, the UK, along with some Caribbean states – Anguilla, Aruba, Bermuda, British Virgin Islands, Cayman Islands, Turks and Caicos.

In response, **Russia has banned aircraft and operators from most of these countries** from Russian airspace, announcing the bans via Notams under the UUUU code. The notable exception, so far, is the US.

However, several local agents in Russia have reported that that they are not able to provide Russian landing and overflight permits to US registered aircraft and operators, and we've had similar reports from some locally based OPSGROUP members. With all US airlines **avoiding Russian airspace**, that is sensible action to follow given the uncertainty.

To keep updated on which countries have issued bans for Russian aircraft/operators, and which countries Russia has banned in response, Makgas are keeping an updated list [here](#).

UK/US/EU sanctions

The EU, the UK and the US have each taken different approaches with their sanctions in terms of how they impact jet travel.

The US – For aircraft not registered in Russia – there's now a list online, published by the International Trade Administration, and if your aircraft is "owned, chartered, leased, operated or controlled by, for, or for the benefit" of someone on that list, you can't operate "to, from, within, or through" US territorial airspace. For more info on this, check our dedicated article [here](#).

The UK bans aircraft owned, operated or chartered by anyone connected with Russia or designated individuals or entities – but unlike the US they haven't published a list of who those individuals or entities might be. You can see the most recent UK announcement on this [here](#).

The EU rules are the least specific – essentially the ban in Europe applies to Russian passport holders, even dual citizens. So Russian citizens can still travel as passengers, but they can't charter the plane (and

EU companies/people can't charter it on their behalf either). You can read the EU's official announcement [here](#).

There have been a couple of incidents over the past couple of weeks where certain operators have fallen foul of the rules pertaining to sanctions.

- **Canada:** a Falcon 900 registered in the Cayman Islands was **detained at CYZF/Yellowknife airport**, along with its crew and passengers, after landing from Geneva. The aircraft was released and flew back to Europe later that week, but the Russian charter customer was fined \$3,000, as was the jet's pilot. And the aircraft's owner was fined \$15,000.
- **The UK:** a Global 6500 registered in Luxembourg was **detained at EGLF/Farnborough airport** because the authorities suspected it was linked to a Russian oil tycoon. The aircraft will only be allowed to leave Farnborough if the inquiry they've set up shows it is not a Russian-owned or controlled jet.

The bottom line – **don't charter a sanctioned aircraft**, and make sure that you **don't charter your aircraft** to a banned individual or entity. The potential impact to getting this wrong could range from having your payments frozen, to fines, to potentially having your aircraft impounded somewhere.

Routing around Russian airspace

"Is it safe to overfly?" and *"Is it safe to land?"* are in many ways **the same question** – because if you've elected to fly over a certain bit of airspace, and something goes wrong, the chances are you're going to be landing there. Most operators are now avoiding Russian airspace, either because they're banned from it, or because they've decided **the risks of having to divert to Russia are too high**.

Europe focus:

European carriers are generally having to change more routes than the US airlines... but higher fuel costs of having to route around Russia are offset against the fact that they're now saving thousands on **not having to pay Russia overflight nav fees**.

Options to overfly Europe have become increasingly complicated – especially for aircraft transiting between Western Europe and the Middle East and Asia. Major carriers in the region now appear to be following **two major air corridors** – one that extends from the Persian Gulf to Romania, the other from China to the Black Sea. Here's what that looks like.



These routes take aircraft in close proximity to **several danger spots**, including Iraq, Iran, and Syria. For more info on this, check out the article we wrote [here](#).

US focus:

A lot of US airline flights won't be too badly impacted from their current levels – flights to the likes of China, Hong Kong, Japan, South Korea – just because they weren't doing that many flights here anyway because of Covid restrictions.

From a routing point of view, there's not a lot of impact to flights from the US to Europe, even the US to the Middle East – heading East is not an issue because there's really only Russia's Kaliningrad FIR to watch out for.

But for US flights heading West, avoiding Russian airspace does have an impact – routing via the NOPAC routes, down to Japan and China. There's a 1700nm stretch of airspace here between PADK/Adak in the Aleutian Islands and RJCC/Sapporo in Japan where your options are extremely limited except for airports in Russia (mainly UHPP/Petropavlovsk, but also UHSS/Sakalin Island just before you get to Japan).



The considerations for general/business aviation are different to the airlines here – it's more a question of **do you have the aircraft range to safely operate this section of airspace over water?** And do you have decent divert alternates available in case you need them, to ensure that you don't find yourself 3 hours away from a non-Russian airport in a 1LE scenario?

Ukraine Relief Missions

Humanitarian flights for Ukraine are taking place into Poland, Romania and other neighbouring countries. We have compiled a list of handy contacts, general ops information, and other bits which we hope might help – you can read the article [here](#).

The two agencies we'd encourage people to go check out are Airlink and DirectRelief – these two have already flown in shipments of aid and have more scheduled this month. So those are good places to go find out exactly what's needed, and how to help.

IFALPA and the European Cockpit Association have also put out a letter for members of the aviation community wanting to **help support the pilot community in Ukraine**. They suggest you reach out to local organizations to help, or donate to larger ones such as Red Cross who are on the ground there. You can read the letter [here](#).

If you need assistance with anything to help prepare for humanitarian flights, please get in touch. Similarly, if you have already operated similar missions, please get in touch to share your contacts, feedback and experience so we can support others in their operations as well.

CofA's revoked!

A final word on this. We put it right down here at the bottom because although it's fairly big news and worth knowing about, it probably won't impact *your* operation very much.

Aviation authorities in **Bermuda** and **Ireland** have now revoked airworthiness certificates for leased aircraft detained in Russia – mainly because they're no longer able to check these aircraft to see if they are still airworthy. They've done this ahead of the March 28th deadline set by the EU to terminate leases and recover planes from Russian airlines.

From most reports, it seems there are around 500 aircraft owned by foreign leasing companies which are rented to Russian operators.

The response from Russia has been to create a new law which basically **allows Russian carriers to re-register these aircraft**, and continue operating them domestically – despite the termination of the leases. And reports suggest something like 200 of these aircraft have already been re-registered in the past week.

Added to that, all the major manufacturers are now **no longer supplying spare parts to Russia**. Airlines and operators using these aircraft in Russia will therefore almost immediately have the issue how to keep them functioning and airworthy, but the point worth noting for all the rest of us is this – do you want to risk potentially having to divert somewhere where your aircraft might get stuck on the ground with a tech issue that can't be fixed?

Ultimately, we're now approaching a situation in Russia very similar to the Soviet Union days. **Russia is essentially now in the same basket as Iran and North Korea** in terms of being shut off from the rest of the aviation world, and operators need to plan accordingly.

Danger Club is Back!

OPSGROUP Team
29 March, 2022



At the end of 2021, we ran 6 Danger Club meetings. The idea behind them? To start a new conversation on safety **danger**.

We wanted to get people **talking about the humans in human factors** - to bring the discussion back to our own operations, to share insights and experiences, **to learn what we can be doing better**.

Because we are all just fallible humans figuring out where our faults may lie.

The Story so Far

We don't want to talk about all the usual cases - The Tenerife disasters, the Kegworths. They were huge learning opportunities, but even after learning from them (at nearly every CRM session), **incidents are still happening, and we want to ask why?**

So we took a look at less known incidents and accidents, ones where the stuff that happened is stuff that could happen to any of us.

Join us for the next Danger Club

DANGER CLUB!

Nothing technical, just

human.

An autopilot disconnected too early and an approach not stabilised, a too steep cockpit gradient, or that day flying with your buddy where it is way too casual... Times where one small error became two, and then became three, and suddenly wasn't so small because the crew just didn't 'get their head back in the game'.

Now We're Bringing it Back.

After a bit of delay due to many goings on at the start of 2022, we are now bringing Danger Club back. Our first meeting of 2022 will take place at **1800 UTC on Thursday March 24th**, and wherever you are in the world, come join us!

11am LA, 2pm New York, 6pm UK, 7pm Berlin, 10pm Dubai, 7am (Wednesday) New Zealand...

What are we going to talk about?

We want to stick with the 'theme' of looking at **non-fatal incidents and accidents**, and talking about the 'What ifs' that could potentially happen to us.

The first one is an interesting one because the main question we thought as we read to the end was simply "How?"

“How did it get that far?”

How did a crew of a 737 end up having to carry out 7 approaches before finally managing to land? **Was there a point during their decision making process where this could have been avoided?** What was running through their heads as this progressed, and more importantly how can we all avoid making the same mistakes?

So put it in your diary!

March 24th, 2022 at 1800 UTC

Danger Club #7: Thursday, Mar 24: 1400 ET / 1800 UTC

11am LA, 2pm New York, 6pm UK, 7pm Berlin, 10pm Dubai, 7am (Wednesday) New Zealand...

Incident: Jet Always B737: Lucky Number Seven

And if you've not been to one before?

Just come along and take part. We are all students in this and we all ask is you switch your camera on during the session, but how much you input is entirely up to you.

**Chris
Shieff**

**Mark
Zee**

**Bec
Lougheed**

**Approach
Number**

SEVEN

|||||

Decision Making

Leadership

Teamwork

Communication

Knowledge

Workload Management

Situational Awareness

'A nerve-jangling thriller with a gut wrenching climax'

In movie theatres MARCH 24

11am LA, 2pm New York, 6pm London, 7pm Berlin, 7am Auckland

OPSCHAT Summary 15 MAR

Chris Shieff
29 March, 2022



Hello members,

We had another busy OPSCHAT call this week.

You can catch the full reply on your Member's Dashboard.

Here's a rundown of what we talked about.

- **Russia** – The FAA has issued a new Notam which clarifies the ban on aircraft operated for Russian interests in US airspace. We also discussed that leased aircraft are being held in

Russia, re-registered and operated domestically despite the termination of lease agreements. This raises concerns about future business, along with safety.

- **Iraq** – An Iranian missile attack occurred in Northern Iraq on March 13, likely targeting US interests there. This may escalate tensions in the region. We discuss whether overflights are actually safe (especially for US operators), along with emergency considerations if you plan to enter the ORBB/Baghdad FIR.
- **GPS Interference** – We took a brief look at military interference testing in the US this month in California, South Carolina and Alaska. There may be no signal within 400nm of each test site for extended periods. The impact for dispatch may be low, but pilots need to continue reporting any cases of jamming or signal loss to ATC and the FAA. If there's an emergency, they *can* stop it.
- **Unusual happenings in Europe** – Widespread reports this week that a large military drone malfunctioned and flew undetected through the airspace of Hungary and Romania, before crashing in Croatia. It likely came from the conflict zone in Ukraine. We discussed the risk to civil aviation in neighbouring countries as a result of the conflict, and where there are no airspace warnings. We also touched upon the ongoing issue of GPS jamming in Turkey.
- **Danger Club** – It's back! We're running a special session for the Teterboro Users Group's meeting at 10am EST on March 16, and all are welcome to join – visit teterborousersgroup.org for details. OPSGROUP specific sessions will resume on March 24, with all new scenarios.

As always, the team is here to help with any operational support, info or questions. You can reach us on team@ops.group, or via the slack channels **#flightops** and **#questions**.

To watch the replay of the OPS CHAT in full, head over to the dashboard.

Where has Nigeria's fuel gone?

OPSGROUP Team
29 March, 2022



There have been growing reports of jet fuel shortages across Nigeria, and since mid-February several domestic airlines have been slowly but surely cancelling flights because of it.

So, what is the situation and what can you expect if you are operating to Nigeria?

From disruptions to cancellations.

Since December, **jet fuel prices have almost doubled**, and this has seen several of the smaller domestic airlines begin to reduce the frequency of some of their internal flights as they try to manage rising costs.

Lately the situation has grown more serious with some airlines stating they have only 3 days of fuel left, and national flag carrier Air Peace also seeing international flights being cancelled.

The fuel scarcity isn't just at smaller, domestic airports. **It is a nationwide problem**, and it seems to be worsening.

Rising costs.

Fuel prices have risen from 190 naira a litre at the end of 2021, to **670 naira (\$1.61) a litre** in March 2022.

Domestic airlines require around 200 Naira a litre for their operations to remain viable.

So where has all the fuel gone?

Nigeria is Africa's **largest crude oil producer**, but they don't refine it themselves, instead importing almost 90% of motor and jet fuel.

It all began back in February when a batch of **100 million litres of imported gasoline was rejected** because it contained unacceptable levels of methanol. This led to a rise in general fuel prices, which led to a spiralling situation of high costs, leading to less available cash, leading to less dollars for buying in more fuel...

The government is not looking like it will extend subsidies to the aviation industry, and so the supply companies just don't have the cash to bring more fuel in, **despite demand**.

What about international flights?

The main problem is that no-one is really clear on **just how scarce jet fuel is**. So if you're flying in and expecting some for your departure, you might be in for a nasty surprise. Whilst confirming at your destination might be possible, in the event of unplanned diversions it may be more of an issue.

But you can check the Notams? Right?

No, of course not. That would be helpful, but so far there don't seem to be any, at least for the major airports that we checked.

We did ask several handling agents who help arrange fuel at the bigger airports, and they advised that there is indeed a problem and that they **cannot currently guarantee fuel**. This was confirmed for **DNMM/Lagos and DNAA/Abuja**.

Can you tanker?

Tankering is an option dependent on your range and uplift capacity. A better option might be a **fuel tech stop** though.

However, security across this region of Africa is somewhat patchy, so the **airports available** to you for fuel stops may be limited. Here are some suggestions (direct fuel contacts only):

- **DGAA/Accra**, Ghana
 - Vivo Energy are one of the main fuel suppliers in Ghana: +233 30 2664 636
 - AEG Fuel are also a large supplier: +1 305 913 5253 / dispatch@aegfuels.com
- **DIAP/Abidjan**, Cote d'Ivoire
 - Corlay are the primary local fuel supplier: +225 2 121 1515
- **GOOY/Dakar**, Senegal (west coast)
 - AIBD are the main local FBO here: +221 77 569 35 57
- **DRRN/Niamey**, Niger
 - Air Total supply fuel at Niamey: +33 1 47 44 45 46
 - AEG are also a supplier
- **GVAC/Sal Island**, Cape Verde
 - OMNI are the main local FBO: +238 241 26 00 / caboverde@omnihandling.com
- **GUCY/Conakry**, Republic of Guinea
 - Try AEG Fuel: +1 305 913 5253 / dispatch@aegfuels.com

◦ Total might also be able to help +224 628 68 68 92 / mathias.nathan@total.com

- **FKKD/Douala, Cameroon**

- Check in with Airport Admin: +237 2 33 42 87 62
- Corlay Cameroun are one of the local fuel suppliers: +237 33 42 30 28

Signal Jam: US GPS Interference Testing This Month

Chris Shieff

29 March, 2022



For the remainder of March, the US military are carrying out GPS interference testing in three locations around the US for extended periods of time. During these periods, aircraft within 350nm of the tests may lose GPS signal completely – including **WAAS** and **ADS-B**.

Here's a quick summary of what's happening, and when.

Wait. It ain't broken - why do they have to interfere with it in the first place?

Simply put, because the military need to be prepared if GPS signals are lost due to enemy jamming. That way it allows service personnel to train in an environment where it is not available.

In the event of a large-scale conflict, it is likely that the constellation of GPS satellites may be targeted or interfered with to erode the other's side's ability to navigate, deploy weapons accurately or even operate surveillance drones or other unmanned vehicles.

We've written about GPS jamming before – take a look at our article if you'd like to know a little more.

Unfortunately, aviation is forced to make way for these exercises. Despite being heavily dependent on GPS, the exercises simply have to happen. And in fact, they are happening more often than ever before. They are four times as frequent as they were just ten years ago.

Back to what's happening this month.

There are **three tests** to be aware of (the range of outages increases with flight level).

Southeastern US

A Carrier Strike Group will be carrying out tests off the coast of South Carolina. Three days are affected:

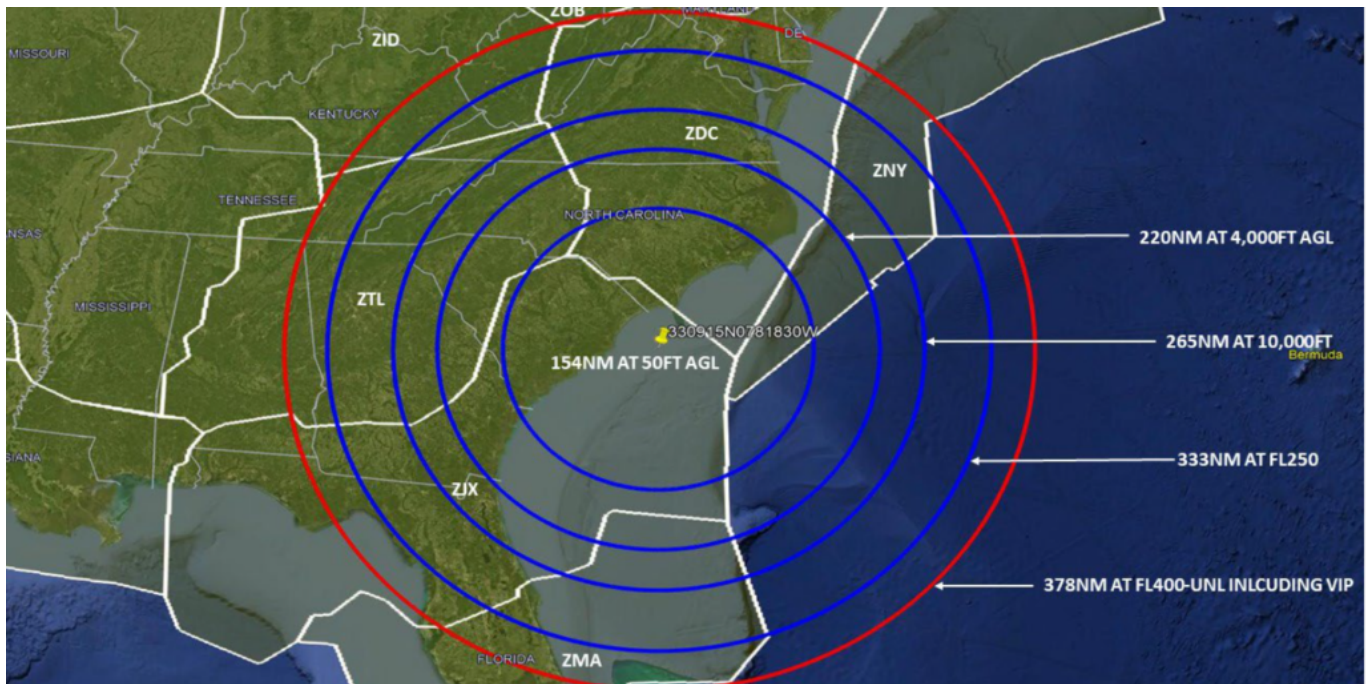
15 March 1900z – 2130z

17 March 1200z – 1630z

28 March 1200z – 1630z

.....(Local time GMT-4)

Here is a map of the affected area:



South Carolina Courtesy: FAA

More testing is happening over at Fort Irwin, California. The test days are much more frequent than the other side of the country:

16 March 0700z – 1259z

18 March 0700z – 1259z

19 March 0700z – 1259z 1830z – 2200z

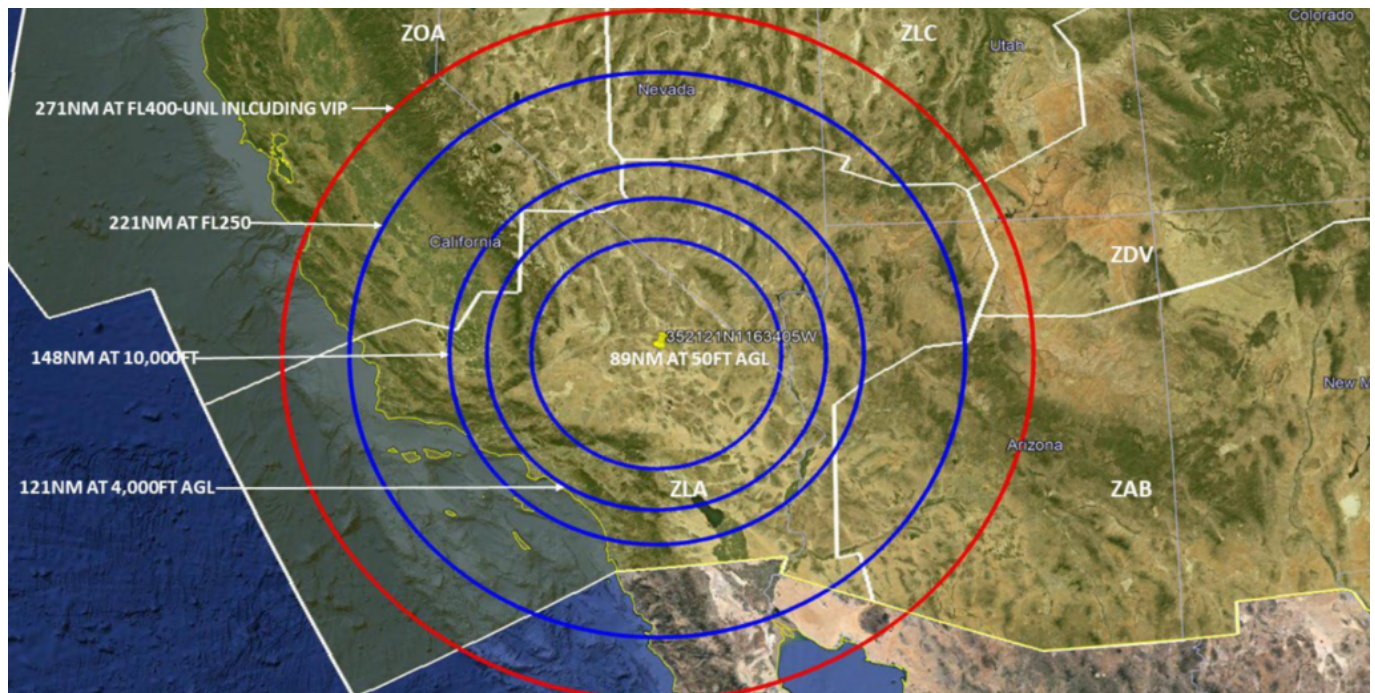
20 March 1830z – 2200z

21 March 0700z – 1259z 1830z – 2200z

22 March 1830z - 2200z

.....(Local time GMT-7)

Here's a map of the affected area:



California Courtesy: FAA

Testing will also be carried out up North at Ft. Greely in South-eastern Alaska across multiple days:

15 March 0001z - 0300z 0900z - 1200z

16 March 0001z - 0600z 1700z - 2000z

17 March 1800z - 2300z

18 March 2200z - 2359z

19 March 1800z - 2300z

20 March 2200z - 2359z

21 March 1800z - 2300z

22 March 1000z - 1700z

23 March 2200z - 2359z

24 March 1800z - 2300z

25 March 2200z - 2359z

.....(Local time GMT-8)

Here's a map of the affected area:

Don't forget to report any outages.

It is important that any GPS interference is reported to the FAA – even though the interference is deliberate. There's a proper process to follow for that which you can find in the Aeronautical Information Manual (AIM).

The relevant bits are paragraphs 1-1-13 and 5-3-3. Here's a link to that document.

But in a nutshell, aircraft should notify ATC, use a different source of navigation and if necessary, request an amended clearance. It would also be a good time to grab a pen and write down as many details as you can as they'll want a whole bunch of information in your report to the FAA. This will need to be submitted when you're back on good ol' terra firma. Click the link to see just how much information they're after.

Why should we bother reporting?

Because GPS jamming tests are an ongoing issue for civil aviation and it is important to keep tabs on just how much of a problem it is. They are having a growing impact on the US NAS which is becoming more and more dependent on GPS always being fully operational. Work is ongoing to safely accommodate these tests alongside aviation and the more info the industry has, the better.

Sanctions-hit Mali bans flights from neighbouring countries

OPSGROUP Team
29 March, 2022



Update March 10:

ECOWAS (14 of Mali's neighbour countries) has extended their sanctions against Mali, and in response, Mali's land and air borders are still closed to traffic routing direct from an airport in ECOWAS to Mali.

Although international flights can operate into Mali, and overfly ECOWAS and Mali, permits for Mali are problematic as must be approved by the military and then the CAA. Mali is relatively high risk due to internal conflict and instability.

Story from Jan 20:

Mali underwent a military coup in 2020, and authorities have reneged on an agreement to hold elections in February 2022, delaying them instead to December 2025.

The result is a series of escalating sanctions from Mali's neighbouring countries which are now impacting aviation in Mali.

What measures have been taken?

The Economic Community of West African States (ECOWAS) – a 15 state regional bloc – have condemned the Malian authority's actions as an act of *"taking the Malian people hostage."*

The result is the suspension of Mali's membership in ECOWAS and sanctions including the freezing of assets and suspension of non-essential financial transactions. Fuel supplies are still being permitted via regional borders at this time.

Neighbouring countries have **closed both road and air borders with Mali**. These closures are so far limited to preventing Mali registered aircraft movements and trade.

Then on Jan 10, **Mali closed its own borders in protest**. Several airlines have since cancelled flights, citing "security risks", but have not provided further detail.

There is no indication international flights overflying Mali airspace are impacted, and **GABS/Bamako airport remains open** for flights to/from non-ECOWAS countries.

What might these risks be?

Security and safety in the capital, Bamako, is a high cause for concern and authorities warn against **all but essential travel** here.

Large scale protests which may escalate to armed conflict are likely in Bamako as political volatility increases. **Heightened security and transport disruptions** are likely. Safety may be impacted if protests and riots become violent.

What risk warnings are currently in place?

Current warnings in place relate only to the ongoing threat from terrorist and militant activity. We wrote this piece in 2017 which discusses various risks including that posed by ground weapons. These risks remain and full details can also be found on the Safeairspace page.

Several countries have warnings in place advising **caution if overflying or operating in Mali airspace below FL260** due to 'ongoing fighting and extremist/militant activity'. Militants often target UN or Malian forces bases, however these are often based in close proximity to Malian civil airports and so attacks might indiscriminately impact civilian operations as well.

GABS/Bamako operations

Bamako International airport is a relatively important one due its position on the continent. It is a **major**

alternate for western and southwestern coast airports such as GOOY/Dakar, Senegal. The interior of Africa provides few diversion options so Bamako also serves as a good en-route option.

The Risk to Aviation

The current airspace risk remains the same. The risk to safety and security on the ground may be deteriorating as political and civil conflict escalates, and armed protests and riots occur. Sanctions against the country by the region will likely also lead to more volatility.

Contact information if operating to Mali

Permits are required for any flight looking to overfly or to land in Mali. These can be obtained from the aviation authority ANAC – +223 20 20 55 24 / +223 20 20 29 05 / survol@anac-mali.org

For more info on what services are available at GABS/Bamako airport, get in touch with local FBO Aurora Aviation: +971 4 523 5888 / ops@aurora-aviation.aero

Impact of Russia Sanctions on Corporate Aviation

Chris Shieff

29 March, 2022



As the conflict in Ukraine continues, the world has been responding with sanctions against Russia. This includes the US, Canada, the UK and EU.

The problem is that these sanctions are having far-reaching impacts on aviation – especially for charter operators who may not even be aware that they are breaking the rules. And it's important to stay on the right side of the law, as the penalties can be severe – even if the lines are blurry.

Here is a rundown of what we know for **US operators**, and things to be aware of.

First up, what actually is a sanction?

Simply put, commercial and financial penalties that are applied by one or more countries against another state or group.

They are a tool that falls short of military force for punishing or deterring some form of action. In this case – Russia's ongoing military offensive in Ukraine. Sanctions mean that our ways of doing business, or interacting financially, are restricted by law – including the payment for, and delivery of, services for those restricted by the sanction. This is where things start to become complicated for aviation. Perhaps more than you may realise.

So, what can't we do?

US operators can find that information in **KFDC Notam 2/2415** below:



IFDC 2/2415 (KFDC A0049/22) SECURITY...SPECIAL SECURITY INSTRUCTIONS (SSI)

PROHIBITION ON RUSSIAN FLIGHT OPERATIONS IN THE TERRITORIAL AIRSPACE OF THE U.S.

THIS NOTAM REPLACES FDC 2/9510 (KFDC A0048/22) FOR THE PURPOSE OF CLARIFYING APPLICABILITY.

PURSUANT TO 49 USC SECTIONS 40103 AND 40113(A), ALL RUSSIAN AIR CARRIERS AND COMMERCIAL OPERATORS, REGARDLESS OF THE STATE OF REGISTRY OF THE AIRCRAFT; ALL AIRCRAFT REGISTERED IN THE RUSSIAN FEDERATION; ALL RUSSIAN STATE AIRCRAFT, REGARDLESS OF THE STATE OF REGISTRY OF THE AIRCRAFT; AND ALL AIRCRAFT, REGARDLESS OF THE STATE OF REGISTRY, OWNED, CHARTERED, LEASED, OPERATED OR CONTROLLED BY, FOR, OR FOR THE BENEFIT OF, A RUSSIAN PERSON OR ENTITY IDENTIFIED BY THE INTERNATIONAL TRADE ADMINISTRATION'S CONSOLIDATED SCREENING LIST ([HTTPS://WWW.TRADE.GOV/CONSOLIDATED-SCREENING-LIST](https://www.trade.gov/consolidated-screening-list)) ARE PROHIBITED FROM OPERATING TO, FROM, WITHIN, OR THROUGH U.S. TERRITORIAL AIRSPACE, EXCEPT FOR AIRCRAFT ENGAGED IN HUMANITARIAN OR SAR OPERATIONS SPECIFICALLY AUTHORIZED BY THE FAA, STATE AIRCRAFT OPERATIONS GRANTED A DIPLOMATIC CLEARANCE BY THE U.S. DEPARTMENT OF STATE AND AIRCRAFT EXPERIENCING IN-FLIGHT EMERGENCIES.

ALL EXCEPTED AIRCRAFT OPERATIONS UNDER THIS NOTAM MUST RECEIVE APPROPRIATE ECONOMIC AUTHORIZATION FROM THE U.S. DEPARTMENT OF TRANSPORTATION PRIOR TO CONDUCTING FLIGHT OPERATIONS TO, FROM, WITHIN, OR THROUGH U.S. TERRITORIAL AIRSPACE. AIRCRAFT OPERATORS SUBJECT TO THIS NOTAM WHO DO NOT COMPLY WITH THESE INSTRUCTIONS MAY BE INTERCEPTED, AND THEIR PILOTS AND OTHER CREWMEMBERS DETAINED AND INTERVIEWED BY LAW ENFORCEMENT OR SECURITY PERSONNEL, AS APPROPRIATE. ALL PREVIOUSLY OBTAINED FAA AUTHORIZATIONS FOR AIRCRAFT AND OPERATIONS SUBJECT TO THIS NOTAM TO OPERATE IN U.S. TERRITORIAL AIRSPACE ARE REVOKED.

OPERATORS SUBJECT TO THIS NOTAM WISHING TO OBTAIN AN FAA AUTHORIZATION TO OPERATE IN U.S. TERRITORIAL AIRSPACE MUST SUBMIT A REQUEST TO THE FAA SYSTEM OPERATIONS SUPPORT CENTER (SOSC) AT 1-202-267-8276 OR EMAIL 9-ATOR-HQ-SOSC@FAA.GOV. REQUESTS FOR DOT ECONOMIC AUTHORIZATION MUST BE SUBMITTED TO THE U.S. DEPARTMENT OF TRANSPORTATION OFFICE OF INTERNATIONAL AVIATION AT SCHEDULEFILING@DOT.GOV. SFC-UNL

Effective: 2203100500Z-2205252359Z

So, regardless of where an aircraft is registered – if it is *owned, chartered, leased, operated or controlled* by or for the benefit of a Russian person or entity on a specific list (www.trade.gov/consolidated-screening-list), it cannot be operated in US airspace. This includes overflights. Exemptions are available but only with special diplomatic approval.

The issue is that the italicised words above are open to interpretation which can lead commercial

operators, especially charter providers up the garden path. And as the Notam eludes to, rule breakers can be detained or even face prison time. It may be tempting to try and sneak under the radar but be careful. The US Government has established a task force known as 'KleptoCapture' to actively enforce the sanctions. They have the ability to arrest, prosecute and even seize the assets of anyone breaking the rules.

Let's take a closer look at what you need to be careful of.

Who owns the bird?

Fractional ownership of private jets can be complicated. There can be numerous owners of a single tail number. It may have a N-Reg, but that doesn't mean part of that tail isn't owned by Russian interests. Even if it's only a small part. Which means just flying it will put you on the wrong side of the law. The reality right now is that ownership share may need to be re-allocated.

Things can become more complicated too – it may not be an individual that owns a share, but a company. And what if that company is, or has since been purchased, by those with interests in Russia? This can also be buried deep in the legalities of business.

I need a ride - the charter conundrum.

As they stand, current sanctions *do* allow you to carry Russian passengers. **But, they can't be the ones who have specifically chartered your aircraft.** Or in other words, Russian nationals and companies can't be the ones to thumb the ride – but they can take a seat if someone else is picking up the tab.

There is also the issue of dual citizenship, or dual passports. Where does the duty of care for operators lie, and how would they know? It is a question to which we are still looking for answers.

Buying new airplanes.

Purchasing an aircraft is also currently problematic – particularly if it is currently owned by Russian interests. That is also no-buono. If you're in the market for a new ride, **make sure you understand exactly who you are buying it from** – in terms of legal and beneficial owners, along with the broker you are using and how you plan on financing and insuring your purchase.

Stuck on the ground.

The effect of sanctions and airspace restrictions means that **moving expensive aviation assets out of Russia right now is a risk.** Put it this way – there are currently somewhere in the vicinity of five hundred leased jets effectively grounded there. That's literally billions of dollars' worth of aviation assets waiting to be recovered, with no obvious solution in sight.

And even if you get airborne, are you allowed to be operating in their airspace? Russia has been reciprocating western airspace bans with bans of their own – check out the **UUUU Notams** for the lengthy list of those.

Then there is the issue of what happens if your airplane breaks. You will struggle to secure the supply of parts, services and other support for aviation assets in Russia as you would effectively be in breach of sanctions. Be aware that even if you can operate an aircraft into Russia right now, **you may find yourself stuck** when it is time to leave again.

Fuel.

Sanctions are also having an impact on operating costs around the world. Restrictions on the importation of Russian oil has seen oil prices, and the cost of jet fuel, sky rocket in recent weeks. **It has increased by**

thirty percent in the last week alone, and has effectively doubled compared to this time last year. That's rampant inflation.

Add to that that the majority of the world's traffic are having to bypass over six million square miles of airspace to and from Western Europe and you can quickly begin to get your head around the combined costs of these issues to our industry.

And in Russia there is also an emerging problem of availability. Earlier this week we reported to OPSGROUP members that at least one major carrier had **cancelled flights to Moscow due to being unable to uplift fuel**. It is important to gauge availability ahead of time.

Getting an exemption.

So you have a pressing reason to break the rules of the sanctions? You may still be able to fly, but it's vital you get diplomatic approval first – **even if only operating domestically in US airspace**. There are two things you'll need. First is an economic approval from the US Department of Transport Office via schedulefiling@dot.gov. You'll also need to submit a request to the FAA System Operations Support Centre (SOSC). You can reach them on 1-202-267-8276 or via the email 9-ator-hq-sosc@faa.gov.

Permission is most likely to be granted to flights engaged in **humanitarian, SAR or other essential work**.

Where else to look for help.

If in doubt, it is better to seek clarification on the rules *before* you fly. This may mean seeking legal advice. The OPSGROUP team may also be able to help – you can reach us on team@ops.group and we'll do our best to give you a hand.

OPSCHAT Summary 08 MAR

Chris Shieff

29 March, 2022





Hello members,

We had another busy OPSCHAT call this week!

The full replay is available in your Member's Dashboard.

Here is an outline of what we discussed.

- **Russian sanctions** – Western operators may be breaking the rules without realising it. They apply to aircraft owned, registered, benefitting or controlled by Russian interests. The rules remain open to interpretation – especially the terms 'benefit' and 'controlled.' We discussed this in detail, along with examples of operators who have found themselves on the wrong side of the rules.
- **Jet fuel shortage at Russian airports** – Reports that major operators have been cancelling flights to Moscow due to being unable to uplift fuel.
- **Leased aircraft** – There may be difficulty moving aircraft on lease by foreign lessors out of Russia.
- **EU-LISA** – From Sep 2022, carriers bringing passengers to most countries in Europe will need to be registered with the EU's new Entry/Exit System (EES) for passenger screening. We chatted about who or what 'Lisa' actually is, what an 'air carrier' actually means and what the requirements will be for both commercial and private flights. We've also written a new article with everything that we know about it.
- **OPSGROUP Danger Club** – It's back, starting with a presentation for the Teterboro User's Group (TUG) on March 16. Chris and Bec will be presenting the first one for the year. All are welcome to register and watch – visit teterborousersgroup.org for details. OPSGROUP specific sessions will resume on March 24, with all new scenarios.
- **ETOPS for Part 91 Ops** – It's not required by the US FAA regs, but are operators still applying limits on their ETPs for diversions? How about MELs that restrict aircraft from operating on 'extended range' routes? We took a brief look at this conundrum, along with EASA differences in Europe.
- **One engine, de-pressurised.** The question was asked, how do you know how long crew oxygen will last for? For remote diversions and no passengers on board (e.g. ferry flights), it is

possible you may not want to immediately descend to FL100. We briefly discuss.

- **OPSGROUP assistance** – Offer from Team to assist where possible with any operational support, information, questions – as well as **#flightops** or **#questions** in the OPSGROUP Slack channels.

To watch the replay of the OPS CHAT in full, head over to the Dashboard.

Russia Reroutes: Alaskan Airport Options

OPSGROUP Team
29 March, 2022



With Russian airports and airspace now off limits for many operators, what airports across Alaska (and also Asia) are available, suitable, and useable for things like ETOPS alternates, fuel stops, and tech stops?

To be honest, very few! Once you cross into the Bering Sea you are extremely limited in the westerly direction, and probably looking at a far more southerly route initially because of the awkward “extra chunk” of Russia that sticks out the bottom.

Why is Russia off limits?

As part of a range of political sanctions imposed on Russia, several countries have now banned Russian aircraft and operators from their airspace – The European Union along with some non-EU countries, the US and Canada. In response, Russia has banned aircraft and operators of many of these countries from Russian airspace.

The exception, at present, is the US – Russia has still not officially banned US aircraft/operators from its airspace. However, some local agents are saying that they are not able to provide Russian landing and overflight permits to US registered aircraft/operators, and we’ve had similar reports from some locally based OPSGROUP members. **Major US carriers are already avoiding Russian airspace, which is**

sensible action to follow given the uncertainty.

This is affecting a lot of operators at present, who are now having to route around Russian airspace.

The Alaskan Options

A report on a recent routing from Anchorage to India considered the following airports as possible options.

• PASY/Eareckson Air Station

- 10,004' / 3050m x 45m
- ILS 28 / RNAV 10
- Fuel and maintenance support unknown
- More an emergency option than a fuel or tech stop option
- Talk to them on +1 907-552-3443 / +1 907-392-3361
- ARFF Cat 7
- PCN 132/F/A/W/T

• PADK/Adak

- 7790' / 2374m x 60m
- ILS 23 only
- Some pretty mean terrain around and windshear warnings
- Fuel available, maintenance support unknown
- Talk to them on +1 907-269-0751 / +1 907-592-8026
- ARFF Cat 01
- PCN 49/R/B/X/T

• PACD/Cold Bay

- 10,179' / 3102m x 45m
- ILS 15 / RNAV 33
- High terrain to the south
- Gets some serious fog!
- Fuel available, efficient services here
- Talk to them on +1 907-532-5000 / +1 907-465-1788
- ARFF Cat 06
- PCN unknown

- **PAVD/Valdez** (if routing from further east and you don't fancy Anchorage)
 - 6500' / 1981m x 45m
 - There are no straight in approaches of 05/23 because there is some serious mountainous terrain here. You need to have trained for this spot before you try it!
 - Talk to them on +1 907-451-5217 / +1 907-835-5658
 - Fuel and minor maintenance
 - ARFF Cat 01
 - PCN 54/F/B/X/T

The major international airports of Alaska lie further east and aren't so useful range-wise if routing westbound.

PANC/Anchorage to PADK/Adak is approximately 3:15 hours flying time, or 1900km. PASJ/Eareckson Air Station lies further east.

The Asia Options

With Russian airspace now off limits for many operators, aircraft attempting to route westbound from the US (via Alaska) are most likely going to have to take a more southeasterly route initially, bringing them over Japan before routing further into Asia. Past Japan, another southern dogleg (albeit it smaller) is needed to **avoid North Korean airspace** as well.

The following airport has been recommended by other operators:

- **RJCC/New Chitose (Sapporo)**
 - Multiple runways 9843' / 3000m x 60m
 - ILS CAT II/III available
 - Major international airport with all the facilities
 - RFF Cat 9
 - Talk to any of the many agent and handler options

The direct distance between PADK/Adak and RJCC/New Chitose is approximately 3,300km

For the pilots and planners

Range, suitability and availability are all going to be a bit of a problem with routes heading this direction. Considerations on **weather** conditions are probably one of the major things to think about. Your only real option if you need fuel or tech support is Adak airport and then onto Sapporo, depending on aircraft range.

There are **limited options available** to you if you have an emergency. Plan, prepare and monitor.

Where else?

The full list of airports we've heard suggested are as follows:

- PANC/Anchorage
- PACD/Cold Bay
- PASY/Eareckson
- PAFA/Fairbanks
- RJCC/Chitose
- RJAA/Tokyo
- PADK/Adak
- PABE/Bethel
- PAKN/King Salomon
- RJSM/Misawa
- PAOM/Nome
- PASN/St. Paul Island

If you are operating westbound and have been impacted by the Russian airspace bans, let us know what airports you considered at team@ops.group

Europe CPDLC: The Mandate We Missed

OPSGROUP Team
29 March, 2022



A brief little refresher on the datalink mandate in Europe, because some of the temporary exemptions have now ended.

What actually happened?

The EU had a datalink mandate which came into force from February 2020. It applied to all aircraft operating **above FL285 throughout Europe**.

But, there were exemptions. Two sets in fact – one of a fairly permanent sort, and another that was only temporary. **It is the temporary exemptions which have now ended.**

When did this happen?

5th February 2022. And no, they haven't extended it.

What were the exemptions?

There are two articles (you can read all this 'officially' here if you would like).

Basically, if you fit under Article 1 then you can get a **permanent exemption**. If you fit under Article 2 then you probably had (but don't have anymore) the **temporary exemption**.

Article 1 covers all aircraft listed in Annex I, and any in Annex II whose **first certificate of Airworthiness was issued prior to Feb 5 2020**. Article 2 is any aircraft listed in Annex II with an airworthiness certificate issued on or after Feb 5th 2020, and any aircraft specified in Annex III.

Give it to me straight!

Ok, ok, here are the aircraft which are permanently exempt, and those which had the temporary exemption until 5 Feb 2022 to do the avionics retrofit...

Aircraft permanently exempt:

- Aircraft in Annex I
- Aircraft in Annex II with a CofA issued before 5 Feb 2020

Aircraft which had up to 5 Feb 2022 to do the avionics retrofit:

- Aircraft in Annex II with a CofA issued after 5 Feb 2020
- Aircraft in Annex III

There are a lot of aircraft listed in these annexes, but Annex II in particular contains a fair few Bizav aircraft, so we've whacked that in below for you to see. We mentioned how GA/BA aircraft might be exempted here, before.

So does this affect you?

See above. It depends on those criteria.

Basically, most BizAv aircraft probably do meet the requirements of **Article 3(3)(d)** as well, which covers aircraft with a certified maximum seating capacity of 19 passengers or less and a **maximum certified take-off mass of 45 359 Kg (100 000 lbs) or less** and with a first individual certificate of airworthiness issued before 5 February 2020. **If they do, they are exempted permanently.**

This is all really a “reminder” of what’s already happened because if you don’t already know about this, it’s too late now anyway!

Tell us more about the mandate.

Actually, rather than do that, just head here to read what we’ve written before. This covers all the info you (hopefully) need on white list logons and all that jazz.

The entire consolidated version of Commission Regulation (EC) No 29/2009 is available here for your perusal, while the EC Implementing Decision 2019/2012 is here if needed.

The FAQs

EASA have published some (fairly) useful **FAQs** on all things datalink and CPDLC which you can read here on their ‘Airspace Usage requirements – DLS/CPDLC’ page.

One we see a lot, is do you have to register on the ‘White List’. The answer is **no, it’s not a regulatory requirement.**

One final exemption.

If your equipment is **temporarily inoperative** you can still continue to operate within the applicable airspace if your MEL allows, and if you tell them about it in your flight plan. You do this with a **“Z” in item 10 and the indicator “DAT/CPDLCX” in item 18** of your flight plan.

A final final one – you are also exempt if it is a **delivery flight.**

What EASA said when we asked for clarification.

Basically what we’ve put above, but to make it extra clear, here is a quote from their response –

“The EC Implementing Decision 2019/2012 in Article 2 refers to the 5 February 2022 date. Depending on the specific aircraft type/model and the first CofA date, the aircraft were either exempted or only temporarily exempted until 5 February 2022. There is no extension to this date and no change to this Decision since it has been adopted.

*On the other hand, it should be noted that most business aircraft may meet the requirements of Article 3(3)(d) of the Commission Regulation (EC) No 29/2009 referring to aircraft which have a certified maximum seating capacity of 19 passengers or less and a maximum certified take-off mass of 45 359 Kg (100 000 lbs) or less and with a first individual certificate of airworthiness issued before 5 February 2020. **If this is the case, the operator’s aircraft is exempted.**”*

So if you were exempted under the earlier Article you are still exempted. If you weren’t but fulfil the criteria in Annex I of the new article then you are permanently exempted. If you fall in the list in the new Annex of only exempted until Feb 5th, then you are no longer exempted.

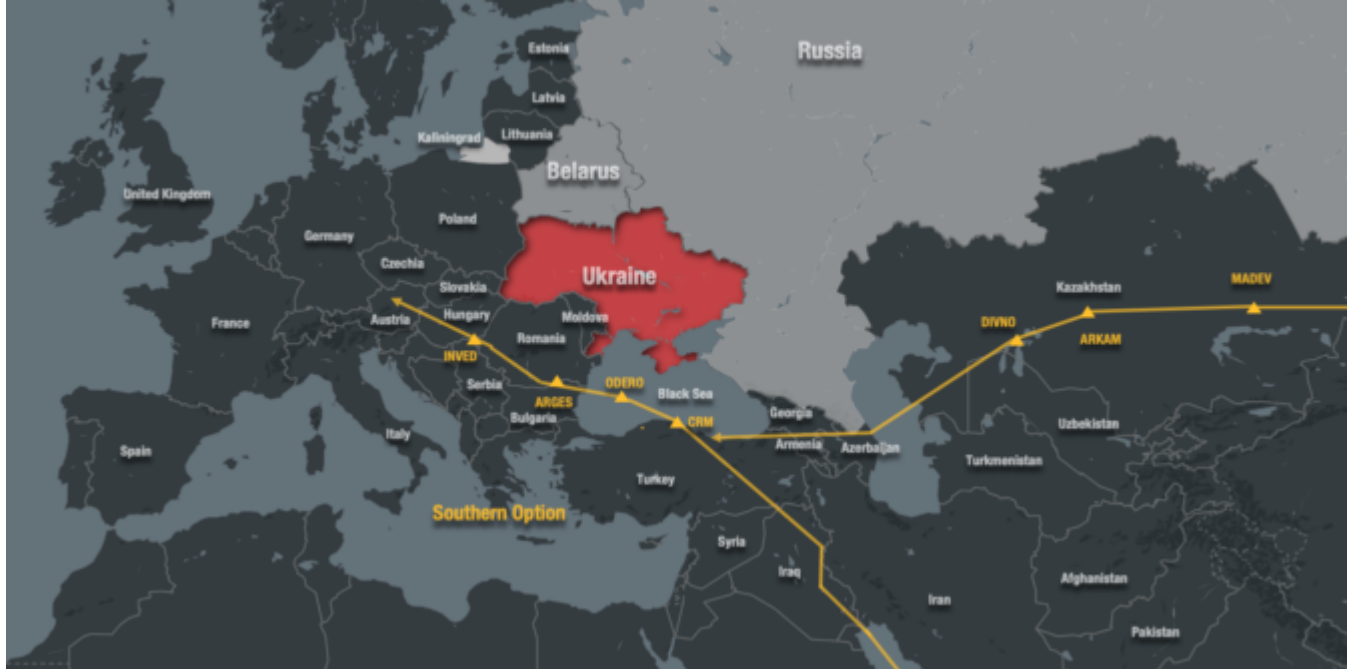
Any other questions?

You can read SIB 03 2020 here. If you have any other questions, you can **ask EASA directly** on atm@easa.europa.eu. We asked them some things a while ago and they took a week or two to respond but were super helpful when they did.

Dodging Airspace: The Bendy Road to Western Europe

Chris Shieff

29 March, 2022



Update Mar 4, 2100z:

Some local agents are now saying that they are **not able to provide Russian landing and overflight permits to US registered aircraft and operators**. We've had similar reports from some locally based OPSGROUP members. Russian authorities still haven't published a UUUU Notam for this yet, but for most operators planning trips in the region ensure you **avoid Russian airspace entirely** for the time being.

Original story from Mar 2:

In just a short week the skies over Europe have dramatically changed.

In response to the conflict in Ukraine, the EU, the US, Canada, along with several other countries have now introduced **blanket bans on Russian aircraft and operators** from their airspace. Russia has responded by banning many of these countries' aircraft and operators **from Russian airspace** – *we're still waiting for Russia to ban those from the US, but we expect it to be issued soon.*

In addition to the **complete closure of Ukrainian, Moldovan and portions of Russian and Belarusian airspace**, options to overfly Europe have become increasingly complicated – especially for aircraft transiting between Western Europe and the Middle East, Asia and Australasia.

Major carriers now appear to be following **two major air corridors** – one that extends from the Persian Gulf to Romania, the other from China to the Black Sea. Here's what that looks like:

The routes take aircraft in close proximity to several danger spots, and so here is a guide to what you need to know...

The Middle East

The southerly route begins over the Persian Gulf through both the **OBBB/Bahrain** and **OKAC/Kuwait FIRs** which are considered safe.

It is, however, a narrow corridor that takes aircraft close to **Iranian airspace** to the east that should be avoided entirely. Following the shoot down of a Boeing 737 there in January 2020, several countries have active airspace warnings in place for the **OIIX/Tehran FIR** – including the FAA's outright ban on US operators. The risk there is from the use of advanced anti-aircraft weaponry at levels.

See the official airspace warnings for Iran [here](#).

Beyond the Persian Gulf, this route continues through **Iraqi airspace**. Iraq itself remains an active conflict zone so the airways and levels used should be considered carefully.

But is it *safe*? The general consensus is on eastern airways UL602, UM860 and UM688 at or above FL320, yes. Elsewhere, no. Although the US FAA recently re-allowed Iraqi overflights throughout the **ORBB/Baghdad FIR**, it is not advisable. Canada, the UK and France also recommend against flights at lower levels where aircraft are at risk of being intentionally targeted by terrorist groups.

See the official airspace warnings for Iraq [here](#).

To the West lies Syria – the **OSTT/Damascus FIR** should be considered extremely dangerous. There is a high risk to aircraft here at all levels due to active fighting, and the potential to be misidentified by Syrian air defence systems. Give it a wide berth.

See the official airspace warnings for Syria [here](#).

Europe

The flight path then threads North through Turkish airspace where there are some risks to be aware of, despite being considered safe.

The first is mistaken identity – there are militia active in the country who infrequently target Turkish military aircraft with anti-aircraft weaponry at lower levels. The second is due to GPS jamming. There are reports of widespread signal interference in the **LTAA/Ankara FIR** especially on the border between the ORBB/Baghdad and OIIX/Tehran FIRs.

More on the risks in Turkish airspace, [here](#).

Further north the route being flown heads over the Black Sea before a westerly turn towards Romania. The further north you route, the higher the risk. Most operators appear to be heading no further than the waypoint **ODERO**.

Beyond that you will approach the **active conflict zone in Ukraine**. While all Ukrainian airspace is closed, there is likely ongoing military activity in the **Black Sea** – including naval and air force operations with little regard for civilian traffic. The consensus of OPSGROUP members is to avoid the area as much as possible.

The route then continues through **Romania** and **Hungary**. There are no airspace warnings for these countries which are considered safe and reliable. It is worth remembering though that they **share a border with Ukraine**. If flight planning further north be careful of your proximity to it – risks may be present on *either* side of the border.

The more northerly route - China and the 'Stans.'

Aircraft crossing Europe from the Far East, such as **Japan** and **China**, may also follow routes through China's airspace. Airways in mountainous regions such as the **Himalayas** require extra planning – especially with regards to escape routes in event of engine failure or depressurisation.

As such, OPSGROUP members report that Chinese authorities have been reluctant to allow foreign operators to use routes such as **L888** (also known as the 'Silk Road') without meeting special requirements – you can read more about this here, and if you're heading this way make sure you download our **Himalayan Routing Guide** here.

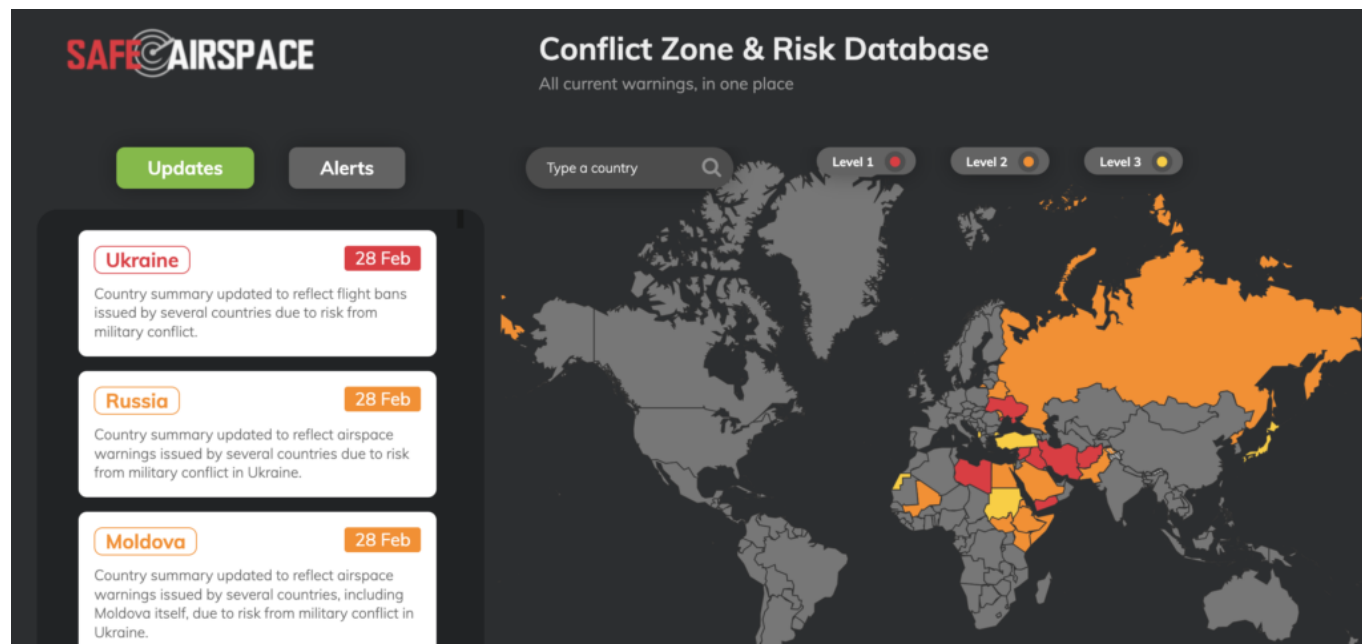
Flights over **Afghanistan** should be avoided. The OAKX/Kabul FIR is still uncontrolled following the Taliban's offensive late last year. There are also serious threats to aircraft at low level from anti-aircraft fire, in addition to serious security issues for crew on the ground. You can find more info on these risks here.

There are also active airspace warnings for **Pakistan**, although it is generally considered safe for overflights. Care should be taken in the disputed northeastern part of the country (the Kashmir region). The general consensus is that higher is better in the OPLR/Lahore and OPKR/Karachi FIRs. For more on these warnings, click here.

Assessing the Risk

With such dramatic changes to the risk picture of Europe's airspace it can be challenging to wrap your head around just how much risk is acceptable, and how much is not. It is also important to remember that **you shouldn't enter airspace unless you are able and willing to land there.**

There's a few ways that OPSGROUP can help. The first is with safeairspace.net, our **Conflict Zone & Risk Database** which we update with official state warnings and our own analysis around the clock. We've also written an article about **how to assess risk** which you can read here.



Help and support from others in OPSGROUP

Every Tuesday at 2000z we hop online to talk about these things in our regular **OPS CHAT**. You can read about these here.



This week our members discussed **the situation in Ukraine** and its impact on international flight ops.

Here's the link to the replay of yesterday's OPS CHAT, plus a text summary of all the main topics discussed: *Russian operator ban, Russia reroutes, areas of concern in Polish airspace, aircraft getting stuck in Russia, and how OPSGROUP might be able to help with operational support and information.*

Or reach out to the team with your question - we're always around at team@ops.group, and we'd love to hear from you.

OPSCHAT Summary 01 MAR

OPSGROUP Team
29 March, 2022



Hello members,

We had a rather busy OPSCHAT call this afternoon; here is an outline of the topics discussed.

- The full call is available to replay in your Members Dashboard: OPSCHAT 01MAR Recording.
- The full text summary of the discussion points, with useful links and FAQ, is here: OPSCHAT Call Summary 01MAR.

Topics discussed:

- **Russian operator ban** - We clarified some of the rules regarding who specifically is affected. EU definition, impact on operators, impact on Russian passport holders, how this is already working in practice. FAQ on sanctions also uploaded.
- **Russia Reroutes** - Many operators looking at new routes and unfamiliar airports. Caution especially Himalayan routes if these are unfamiliar - high terrain, challenging airports. OPSGROUP preparing some specific guidance to assist
- **Polish Airspace** - Area of concern in south east portion of Warsaw FIR. High level of military

activity. Short notice airspace closures are happening in Poland, be prepared – especially in the northern part of Polish airspace.

- **Aircraft stuck in Russia** – Discussion regarding leased aircraft and other foreign aircraft potentially being held in Russia.
- **OPSGROUP assistance** – Offer from Team to assist where possible with any operational support, information, questions – as well as **#flightops** or **#questions** in the OPSGROUP Slack channels.

Please see the full text summary and recording in the Dashboard for full details.

Russian airspace closures escalate, aircraft diverting to exit

OPSGROUP Team
29 March, 2022

ALERT

Russia

A **closing of Russian airspace** to EU operators appears extremely likely in the coming hours.

In the last 24 hours, eight countries have denied Russian aircraft entry (UK, Poland, etc.). Each received a direct response by Russian NOTAM banning them in retaliation. Reports tonight from Germany indicate that the EU will close its airspace entirely as a block decision. Russia will respond.

Major carriers (KLM, DLH) have this evening turned aircraft around in flight to exit Russian airspace in anticipation. KLM confirms no operations into Russian airspace for at least 1 week.

Closures so far have been specific to scheduled operators but impact likely

OPS ALERT - UZZZ/RUSSIA

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Closures so far have been specific to scheduled operators but impact likely to spread. So far no closures directly targeting US operators, but avoiding Russian airspace is sensible given the uncertainty.

UKRAINE: FLIGHT OPS CHANNEL ACTIVE

More on this in the Flight Ops channel

For the latest on this, head to the **#Flight Ops** channel on OPSGROUP Slack. We've just posted a copy of this alert there, and you can discuss and share updates on this specific topic with other members. The team will also post updates and further info there as we get news.

If you know more about this situation, **please share** an update in the channel, or email the team. Thank you!

Canada to reopen more airports to international flights

David Mumford
29 March, 2022



On Feb 28, Canada will reopen more airports to international passenger flights. Currently these flights can only arrive at one of 18 airports, but the government has confirmed this restriction will end on Feb 28.

CYQX/Gander is one of those airports not currently on the list – although they have been able to handle tech-stops all through the pandemic, international pax have not been able to disembark here for over a year.

So until Feb 28, here are the airports allowed to receive international passenger flights:

- CYUL/Montreal
- CYQB/Quebec
- CYYC/Calgary
- CYEG/Edmonton
- CYXE/Saskatoon
- CYQR/Regina
- CYWG/Winnipeg
- CYYZ/Toronto Pearson
- CYTZ/Toronto Billy Bishop
- CYHM/Hamilton
- CYKF/Waterloo
- CYOW/Ottawa
- CYVR/Vancouver
- CYYJ/Victoria
- CYLW/Kelowna
- CYXX/Abbotsford
- CYHZ/Halifax
- CYYT/St Johns

And here's the Notam in question, which will expire on Feb 28:

H3740/21 (Issued for CZUL CZQX CZQM) COVID-19: FLIGHT RESTRICTIONS
 UNTIL FURTHER NOTICE, WITH THE INTENT TO PREVENT THE SPREAD OF
 COVID-19 THROUGHOUT CANADA, ALL COMMERCIAL AIR SVC, PRIVATE OPR
 (CAR SUBPART 604) AND FOREIGN BUSINESS AVIATION, THAT ARE
 TRANSPORTING PASSENGERS TO CANADA MUST COMPLY WITH THE PROVISIONS
 OF THE INTERIM ORDER RESPECTING CERTAIN REQUIREMENTS FOR CIVIL
 AVIATION DUE TO COVID-19, ISSUED BY THE MINISTER OF TRANSPORT AND
 CURRENTLY IN FORCE. THIS INCLUDES A REQUIREMENT PASSENGERS TO
 WEAR FACE MASKS AND PROVIDE EVIDENCE OF A NEGATIVE RESULT FOR A
 COVID-19 MOLECULAR TEST PRIOR TO BOARDING.

IN ADDITION TO ABV, AND PURSUANT TO SECTION 5.1 OF THE
 AERONAUTICS ACT, ALL COMMERCIAL AIR SVC, PRIVATE OPR
 (CAR SUBPART 604) AND FOREIGN BUSINESS AVIATION, THAT ARE
 TRANSPORTING PASSENGERS TO CANADA MUST, FOR THE PURPOSE OF
 DISEMBARKING PASSENGERS, LAND AT ONE OF THE FOLLOWING AP:

- AEROPORT INTL DE MONTREAL-TRUDEAU (CYUL)
- AEROPORT DE QUEBEC-JEAN LESAGE (CYQB)
- CALGARY INTL AIRPORT (CYYC)
- SASKATOON INTL AIRPORT (CYXE)
- REGINA INTL AIRPORT (CYQR)
- WINNIPEG INTL AIRPORT- JAMES ARMSTRONG (CYWG)

- TORONTO-PEARSON INTL AIRPORT (CYYZ)
- TORONTO-BILLY BISHOP TORONTO CITY (CYTZ)
- HAMILTON INTL AIRPORT (CYHM)
- WATERLOO INTL AIRPORT (CYKF)
- OTTAWA INTL AIRPORT (CYOW)
- VANCOUVER INTL AIRPORT (CYVR)
- VICTORIA INTL AIRPORT (CYYJ)
- KELOWNA INTL AIRPORT (CYLW)
- ABBOTSFORD INTL AIRPORT (CYXX)
- HALIFAX INTL AIRPORT-STANDFIELD (CYHZ)
- ST. JOHN'S INTL AIRPORT (CYYT)

□THIS RESTRICTION DOES NOT APPLY TO ACFT OPERATED IN THE FLW CIRCUMSTANCES:

- DIRECT FLT FM SAINT-PIERRE-ET-MIQUELON
- MEDEVAC FLT
- FERRY AND CREW REPATRIATION FLT
- CARGO FLIGHTS CARRYING ONLY AIRCREW OR AIRLINE EMPLOYEES
- TECHNICAL STOPS WHERE PASSENGERS DO NOT DISEMBARK
- AT ALTERNATE AP IDENTIFIED IN A FLT PLAN TO ADDRESS WX
- ACFT SAFETY SITUATIONS, OR
- IN THE CASE WHERE SPECIAL

AUTH HAS BEEN GRANTED BY TRANSPORT CANADA: 1-888-857-4003.

SFC - UNL, 30 NOV 05:01 2021 UNTIL 28 FEB 21:00 2022.

CREATED: 23 NOV 14:27 2021

Also effective Feb 28, testing rules will be eased for vaccinated passengers. Essentially, the change here is that **travellers will now have the option of using a rapid antigen test** (taken the day prior to their flight) instead of a PCR test (taken no more than 72 hours before their flight) if they wish. However, the rapid antigen test still needs to be administered in a health care facility, so although it might be slightly cheaper than getting a PCR test, it's not really any less onerous.

There's no impact on crew, who are exempt from testing. However, since 15 Jan 2022, **all foreign crew need to be vaccinated to enter Canada**. The same rule applies to all passengers aged 12 and older. Crew who are Canadian citizens/residents do not need to be vaccinated, along with several other exempted categories which you can read more about here.

Ultimately, if you're unsure about Canada's entry rules, the best thing to do is use their official online tool to quickly work these out depending on your circumstances.

Go For Launch: Lift Off in California

Chris Shieff

29 March, 2022



On February 25, Space X is planning to launch its Falcon 9 rocket from Vandenberg Space Force Base – 100nm (ish) north of Los Angeles.

It will carry no less than fifty satellites (yes fifty) into Earth's lower orbit. As a result, **three aircraft hazard areas** will be established which may affect oceanic traffic in the **Eastern Pacific**, along with some of the **Pacific Organised Track System (PACOTS)**. Here's a brief rundown of the potential impact.

Primary and Back Up Launch Days

Lift-off is planned for Feb 25. However, the period of Feb 26 – Mar 1 is also designated as a back-up.

While the launch itself will be short-lived, the window for each attempt is quite long – almost five hours. The exact timings vary each day, but will extend from early morning until early afternoon (Pacific Standard Time).

Here's a rundown of the airspace to look out for.

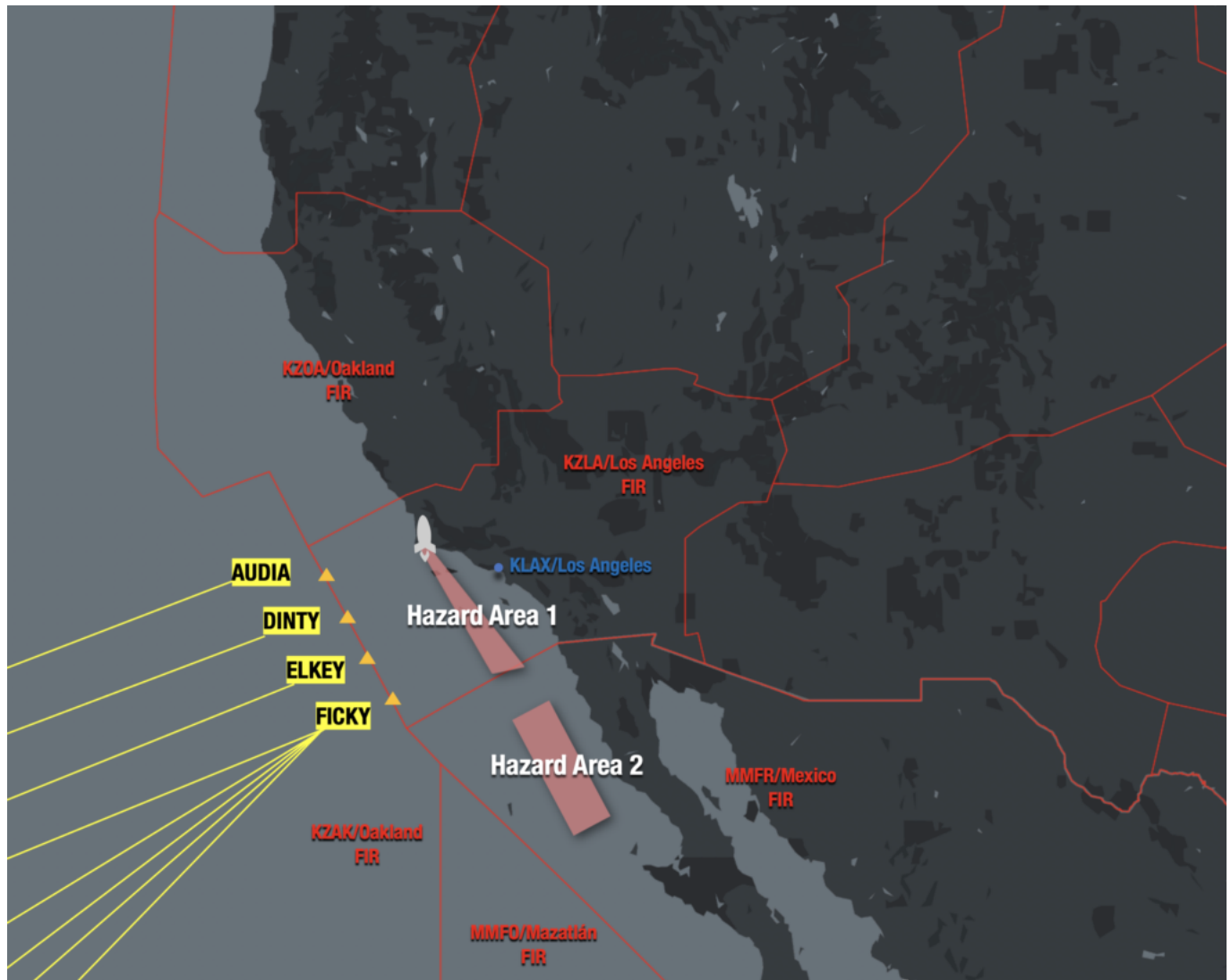
Los Angeles FIR

A small hazard area will exist from the launch site to approximately 125nm south, off the Californian coastline. Aircraft transiting via oceanic transitions FICKY, ELKEY, DINTY and AUDIA may all be impacted. This includes several airways linking Hawaii to the US mainland.

The Mexico FIR

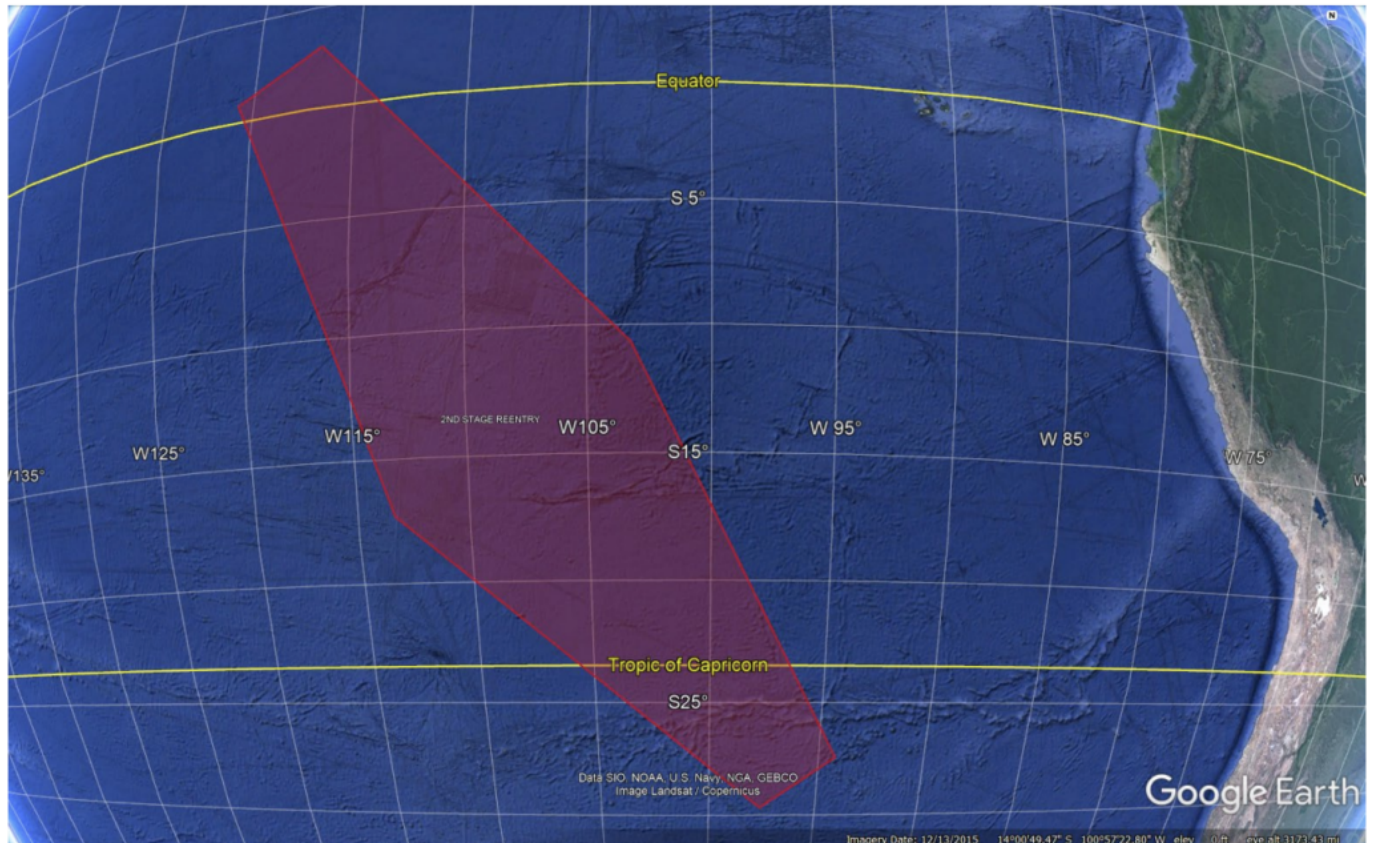
A second hazard area will exist further south, off the Baja California Peninsula and is unlikely to cause any significant impact.

Here's a picture of both:



South of the Equator

A large and remote section of airspace in the South-Eastern Pacific will be affected - 1300nm off the coast of South America. It occupies both part of the NO FIR zone (XX01) and the SCIZ/Isla de Pascua FIR. This is because the second stage (or piece) of the rocket will splash down in this area.



The Impact

Essentially, delays. But the good news is that they're **expected to be only minor**. ATC may reroute aircraft to protect the hazard areas, or apply mile-in-trail restrictions. In all cases they don't expect to hold aircraft up by more than a few minutes.

However, be on the lookout for unusual or unexpected changes to your clearance – if you're wondering why, the launch is likely the reason.

Commercial Aviation vs Space Flight

The impact of commercial space operations on the world's airspace is becoming a problematic issue. And in one way or another both the aviation and space industries will need to find better, or more efficient ways to share. This launch shows we're not there just yet. If you'd like to read more about this particular conundrum – check out our recent article [here](#).

What's Happening at O'Hare?

OPSGROUP Team
29 March, 2022



If you're familiar with KORD/Chicago O'Hare Airport then you probably know that there are a lot of runways there. 8 if you're just counting strips of tarmac, 16 to be really specific.

You might also know that it has had some works done on its runways recently, so here is a look at *what's happened*, *what's coming next* and most importantly, *what to expect* if you're thinking of heading in there.

The One that got Built

Runway 9C/27C opened on November 5th, 2020.

This is the last runway to be built as part of their modernisation program, and there is a very handy video on how it is being used, which you can check out here on the FAA's main 'Great Lakes (AGL) O'Hare Modernization Program (OMP) page.

The One that got Extended

Runway 9R/27L has been extended, and it re-opened for operations on December 2, 2021.

Which runway can you expect?

Arrival operations on 9R/27R are currently limited, and will remain so through at least the first half of 2022 while they get their ILS system fully setup and tested.

So, right now, they have the following operations planned for their daytime ops, which it might be worth familiarising yourself with if you're heading in, just so you know what to plan for.

When its a Westerly Flow:

Landing: 27R, 27C, 28C

Departing: 22L, 27L, 28R

When its a Easterly Flow:

Landing: They only use 3 runways at a time, but have multiple combinations:

9L, 10C, 10R (the top choice)

9C, 10C, 10R (the other top choice)

9L, 9C, 10C

9L, 9C, 10R

Departing: 9R, 10L

Some non-operational (but interesting) facts:

The O'Hare 21 plan is hoping to create the *"most efficient and accessible gateway in the world."* A good plan given the airport hit a (pre-pandemic) record in 2019, with around 84.6 million passengers travelling through.

There are **193 gates available**, which sounds a lot, but bear in mind the majority of these are already leased by the big hub carriers. Which leads us to the next point...

Let's talk about the other options

KORD/O'Hare is a massive hub airport utilised by the major carriers. It is busy. The airspace is busy. To be honest, you probably don't fly in here unless you have a good reason to, like being a scheduled commercial carrier, if you like really busy complex airspace and taxiing.

The 'Chicago Square Mile' is the arguably the busiest bit of airspace in the world of arrivals and departures, but luckily there are some other airports in the area which you might want to look into, namely KMDW/Midway and KGYY/Gary.

KMDW/Midway

The smaller, but by no means small KMDW/Midway airport is right next door. They have 43 gates and are **far more equipped for catering to General Aviation folk.**

The airport has **4 runways** laid out in a big cross (and one tiny fifth runway). One of the big threats here is the fact they cross and you need to keep a good look and listen out for traffic and avoiding runway hotspot incursions.

The **longest runway is 6522 foot** (1988m), and they have ILS CAT I available on three runways, and RNAV on pretty much everything else.

KGYY/Gary

And then there is Gary.

KGYY/Gary is also an **International airport** and a great one for corporate and "weekend" flyers heading to Chicago. It has an **8,859 foot runway** and is a *'full service'* airport. There are major airframe and engine maintenance facilities available, and ILS approach for runway 30, or RNAV for the others.

Gary is also **one of the newest CBP facilities** in northwest Indiana and the Chicago metropolitan region.

You will need to give them 24 hours notice, and can call them on **773-948-6330**. Customs is also limited to a total of 20 people per aircraft (that's crew and passengers).

Send us your spies

Send us your Airport Spy reports for all these airports so we can share the gotchas, the things to know, contacts to contact and anything else useful.



Got some intel?

Are you an Airport Spy?

You go to unusual places and see curious things. Your turboprop friends envy you. Now, it's time to give back.

For your next trip, pack a notebook, and file your Spy Report below. You'll get a weekly ops briefing in return.

[File your report](#) >

Russian Incursions into UK Airspace

OPSGROUP Team
29 March, 2022



Russia have sent four TU-95 "Bear" bomber aircraft towards UK airspace two days in a row, resulting in "Quick Reaction Alert" missions by RAF Typhoon fighters to intercept and prevent any incursions.

They were of course escorted away without further incident, but these are not a one-off occurrences. Aside from the obvious posturing, do these events pose any actual threat or hazard to civilian operations?

What is a Quick Reaction Alert?

Countries sometimes like to send aircraft *towards* airspace they should not head towards. They generally do so without contact with ATC, and without squawks. These aren't "aggressive" incursions but more **tests of NATO response times**.

When "unidentified" aircraft are spotted, the RAF scrambles fighters, usually from **EGQS/RAF Lossiemouth** and often back up by a taker from Brize Norton to go tell 'em off and to "*preserve the security of Alliance airspace*".

QRAs are not uncommon, and with mounting tensions in eastern Europe the frequency of these seems to be increasing.

Which areas of the UK are affected?

The Russian aircraft **do not actually enter UK sovereign airspace** – that's the bit above the country which **extends 12nm** out across their territorial waters. They do incur on airspace that falls under the 'UK area of interest' though – areas controlled by the UK ATC – particularly the **EGGX/Shanwick and EGPX/Scottish FIRs**.

The airspace where these incursions take place are **not generally utilised much by civilian traffic**, but is of security and political interest because it is the airspace between countries such as Russia and the UK.

When else has it happened?

At the same time as the first UK incursion in Feb 2022, Russian aircraft had also breached the **airspace of Estonia**, where a large number of British troops are currently based.

A similar incursion took place last November when Russia sent two TU-160 bombers towards the UK. There have been **several hundred such events** into UK and Irish airspace over the decades where tensions with Russia have been heightened.

In March 2021, NATO saw a **peak of incursions**, at one point aircraft scrambled 10 times in a 6 hour period across several regions including the **UK, Norwegian coast and over the Black Sea**.

The US Air Force suggested over 60 intercepts took place in 2020, with many more monitored but not intercepted, around the **Alaskan ADIZ region**.

A threat to safety, or just Putin on a show?

There appears to be no intent from the Russian side to do anything more than provoke a reaction, and to test the reaction from NATO defences.

The threats and risks to civilian aircraft are therefore more along the following lines (with some mitigation strategies to help):

- **Unidentified aircraft** in international airspace –
 - The aircraft are not on ATC frequencies and do not squawk
 - They do generally remain over areas with limited civilian traffic
 - Monitor TCAS carefully
 - Follow ATC instructions closely to avoid conflict with UK military QRA traffic.

- **Sudden activation** of military zones –
 - Temporary danger areas and prohibited areas should be checked via notams
 - Avoid accidental detours due weather or other reasons into these.
- **Failure to check in with ATC** may be treated with more seriousness due current tensions –
 - Maintain a good listening watch on frequency and on 121.5
 - Ensure you are familiar with Loss of Comms and Interception procedures
 - We wrote about Interceptions here, but consult the AIP for countries you are operating in.

What are the “laws” on flying into other airspace?

“Cujus est solum ejus est usque ad coelum et ad inferos”

Which means, for aviation purposes, that “Airspace is now generally accepted as an appurtenance of the subjacent territory and shares the latter’s legal status”.

Which has a lot of tongue twisting words and basically means “the air over your land and up to space is yours.”

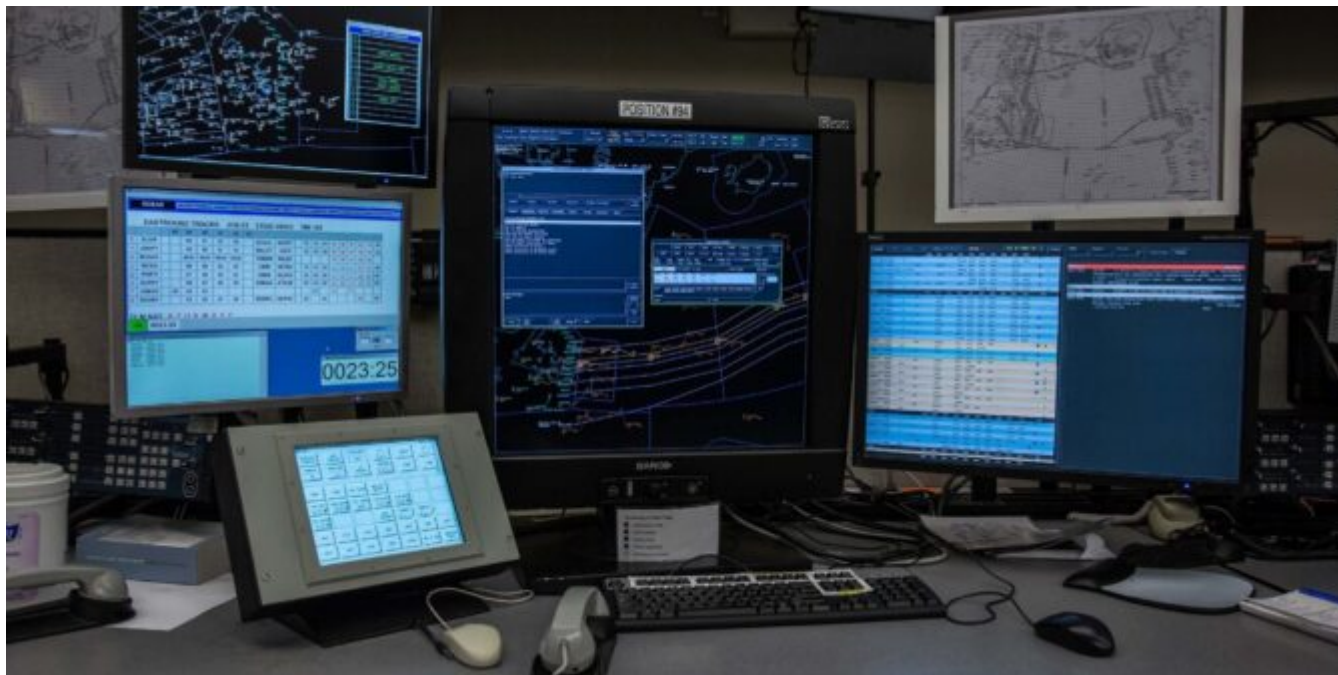
This is written in the **1944 Chicago Convention**, with the 1958 Geneva Convention going into a bit more detail about what that means. The Chicago Convention also contains the **5 ‘Freedoms of the Air’** which apply to scheduled air service and what have you.

All this is a little less applicable to military aircraft though for obvious reasons.

Fly a military aircraft into Sovereign Airspace and that is going to be seen as an **act of aggression**. Fly it into airspace controlled by, but not sovereign to a country, and it might not quite be an act of aggression but it is definitely a **breach of procedures** – in this case, because they failed to adhere to ATC and squawk regulations amongst other things.

No more NAT tracks at FL330 and below

OPSGROUP Team
29 March, 2022



Big news from the NAT. From March 1, 2022, FL330 and below will no longer be part of the NAT Organised Track Structure (OTS).

What does this mean?

It means operators will have the flexibility to **file random routes at FL330 and below** when flying between Europe and North America.

Particularly for operators unable to file routes across OTS tracks with active flight levels, this means much greater flexibility in choosing their own trajectory.

Why is this helpful?

NATS quoted a study which suggested every extra minute over the ocean equates to about £51, or \$70. It might not be the most radical change, but it is a step towards further improving the efficiency for operators, and ultimately to **reducing fuel burn**.

Why now?

It comes down to the **introduction of ADS-B**. This allows controllers to receive updates every 7-8 seconds instead of every 840 seconds (14 minutes).

What about the rest of the tracks?

This change forms part of **NATS 2030 NAT vision**, and more improvements can be expected. Unfortunately, it isn't a direct result of their NAT tracks NIL experiment and abolishment of all the OTS isn't on the cards anytime soon.

However, studies from the 'OTS Nil' trial are being reviewed and there are plans to simulate further OTS Nil on busier traffic days to see if viable, useful, doable...



What do you need?

If you want to fly at FL330 or below (down to FL285) then remember **you are still in the NAT HLA**, just not on the OTS, so the same HF, long range nav and comms requirements apply, as do datalink mandates.

Anything else?

Unfortunately no, that's the news for now. Any questions on this feel free to direct them to us at team@ops.group

If you want to read the "official" NATS notice then you can do so here. We don't yet have a reference for the official NAT Docs.