

Beware Big Balloons

OPSGROUP Team
15 February, 2023



It started with a balloon. A rather large one, sent by the Chinese for ‘purposes unknown’, and rapidly removed from the skies as soon as it became safe to do so.

However, there has been a spate of further ‘unidentified objects’ wafting about the upper levels of the northern American atmosphere, and they are potentially something of a hazard.

The Balloon

This was spotted over the US, working its way northwards around February 3.

There isn’t much to say on this that hasn’t already been said – **it was big, it came from China** and it was almost definitely not one that had just accidentally drifted of course. Politics and conspiracies aside, this did not post much of a risk for civilian aviation because of the altitude it was operating at.

The (probably a) surveillance balloon operated from around **80,000 to 100,000'** – well above the levels which would impact commercial airliners.

Object Number 2

On February 10, an unidentified object was spotted overflying the **northern coast of Alaska** towards the North Pole region, at around 40,000’, moving at approximately 20-40mph.

It was deemed a “**reasonable threat**” to civilian aviation due to its size and altitude, despite being quite a bit smaller than the Chinese Balloon (very big, these sort of small car sized).

Reports suggest several aircraft were diverted, with one stopping at PANC/Anchorage and another to PAOM/Nome due to airspace closures.



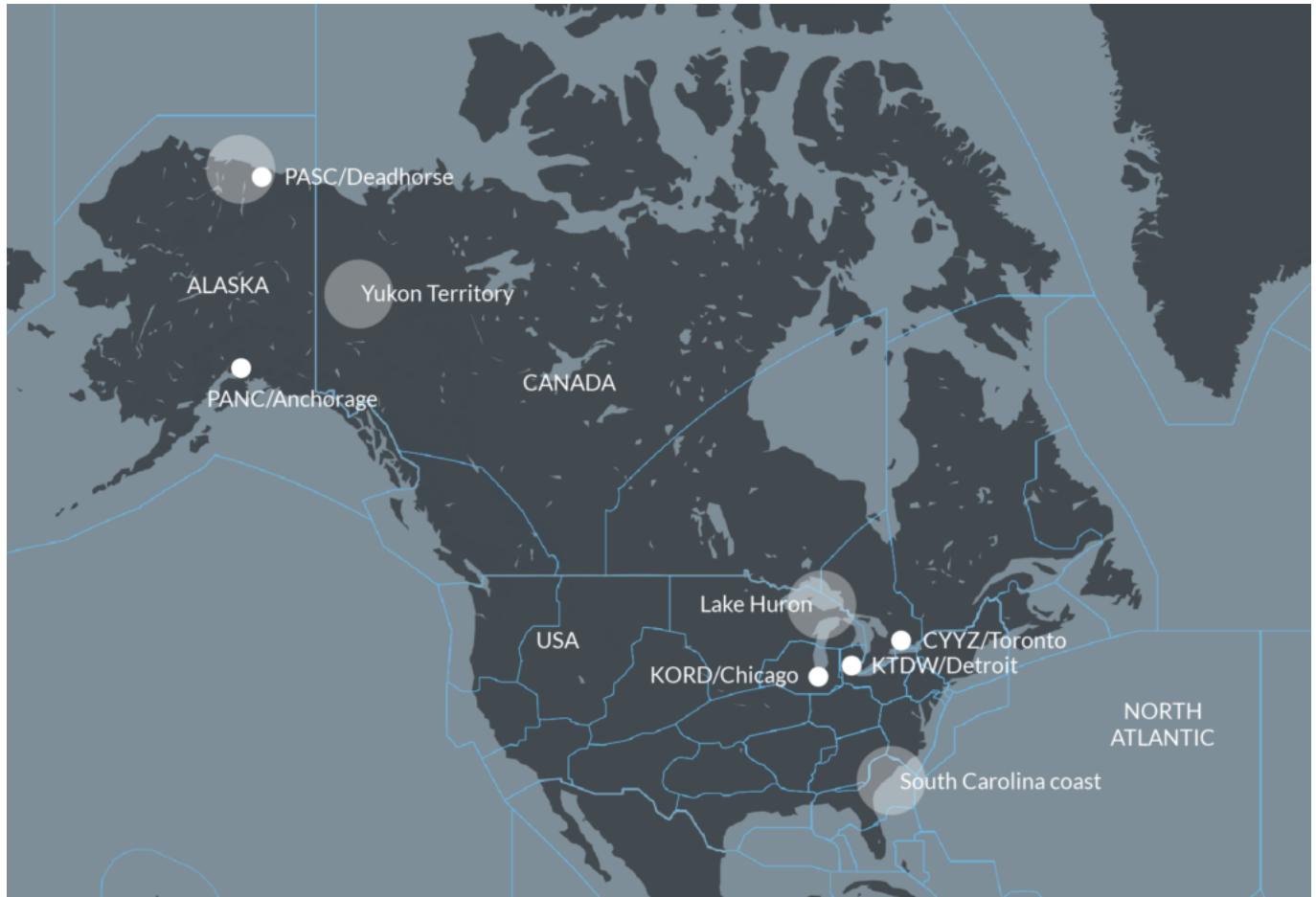
Image from BBC: Getty

Object Number 3

Another object was spotted and shot down on **February 11**. This one was routing over **Canada, approximately 100 miles from the US border**, and at around 40,000'

The airspace over the Great Lakes region was closed while the object was taken down, but a Canadian TFR is still in force in the area.

The Notams and TFRs related to this are labelled 'active air defense operation'.



Object spotting map

Object Number 4

The third of the smaller UFOs (yep, I said it, but just mean unidentified flying object) occurred on **February 13**, near to **Lake Huron** which shares a border with Canada.

There are unverified reports suggesting pilots reported interference from it with their “sensors”.

The FAA temporarily shut down a chunk of airspace over Northern Wisconsin and Northern Michigan to ‘support Department of Defense activities’. Reopened now, but the a smaller TFR remains in place.

FDC 3/4532 ZAN PART 1 OF 3 AK..AIRSPACE DEADHORSE, AK..TEMPORARY FLIGHT RESTRICTIONS. PURSUANT TO 49 USC 40103(B)(3), THE FEDERAL AVIATION ADMINISTRATION (FAA) CLASSIFIES THE AIRSPACE DEFINED IN THIS NOTAM AS 'NTL DEFENSE AIRSPACE'. PILOTS WHO DO NOT ADHERE TO THE FOLLOWING PROC MAY BE INTERCEPTED, DETAINED AND INTERVIEWED BY LAW ENFORCEMENT/ SECURITY PERSONNEL. ANY OF THE FOLLOWING ADDITIONAL ACTIONS MAY ALSO BE TAKEN AGAINST A PILOT WHO DOES NOT COMPLY WITH THE RQMENTS OR ANY SPECIAL INSTRUCTIONS OR PROC ANNOUNCED IN THIS NOTAM: A) THE FAA MAY TAKE ADMINISTRATIVE ACTION, INCLUDING IMPOSING CIVIL PENALTIES AND THE SUSPENSION OR REVOCATION OF AIRMEN CERTIFICATES; OR B) THE UNITED STATES GOVERNMENT MAY PURSUE CRIMINAL CHARGES, INCLUDING CHARGES UNDER 49 USC SECTION 46307; C) THE UNITED STATES GOVERNMENT MAY USE DEADLY FORCE AGAINST THE AIRBORNE ACFT, IF IT IS DETERMINED THAT THE ACFT POSES AN IMMINENT SECURITY THREAT; OR D) UAS OPERATORS WHO DO NOT COMPLY WITH APPLICABLE AIRSPACE RESTRICTIONS ARE WARNED THAT PURSUANT TO 10 U.S.C. SECTION 130I AND 2302101930-PERM END PART 1 OF 3 FDC 3/4532 ZAN PART 2 OF 3 AK..AIRSPACE DEADHORSE, AK..TEMPORARY FLIGHT 6 U.S.C. SECTION 124N, THE DEPARTMENT OF DEFENSE (DOD), THE DEPARTMENT OF HOMELAND SECURITY (DHS) OR THE DEPARTMENT OF JUSTICE (DOJ) MAY TAKE SECURITY ACTION THAT RESULTS IN THE INTERFERENCE, DISRUPTION, SEIZURE, DAMAGING, OR DESTRUCTION OF UNMANNED AIRCRAFT DEEMED TO POSE A CREDIBLE SAFETY OR SECURITY THREAT TO PROTECTED PERSONNEL, FACILITIES, OR ASSETS. PURSUANT TO 14 CFR 99.7, SPECIAL SECURITY INSTRUCTIONS, ALL ACFT FLT OPS ARE PROHIBITED: WI AN AREA DEFINED AS 703557N1463405W TO 702934N1465705W TO 702202N1463751W TO 702821N1461458W TO THE POINT OF ORIGIN. SFC-10,000' MSL EFFECTIVE IMMEDIATELY UNTIL FURTHER NOTICE. EXCEPTIONS: A) NATIONAL SECURITY ACFT OPS UNDER DIRECTION OF DEPARTMENT OF DEFENSE; AND B) LAW ENFORCEMENT, AIR AMBULANCE, AND 2302101930-PERM END PART 2 OF 3 FDC 3/4532 ZAN PART 3 OF 3 AK..AIRSPACE DEADHORSE, AK..TEMPORARY FLIGHT OTHER URGENT GOVERNMENTAL RESPONSE ACFT OPS WITH AUTHORIZATION FROM ATC (ATC MUST SECURE PRE-APPROVAL BY THE ON DUTY NATIONAL TACTICAL SECURITY OPERATIONS AIR TRAFFIC SECURITY COORDINATOR). ALL AIRCRAFT, WHICH ARE ALREADY AIRBORNE WITHIN THE DEFINED AIRSPACE WHEN THIS TFR BECOMES EFFECTIVE, MUST EXIT THE AREA USING THE MOST EXPEDITIOUS ROUTE CONSISTENT WITH SAFETY AND IN COORDINATION WITH ATC AS APPROPRIATE. THE ANR AOC TEL 907-552-6222 IS THE CDN FACILITY. 2302101930-PERM END PART 3 OF 3

Risk for aviation

The objects are generally **cruising at around 40,000'** – well within the altitude range commercial airliners operate at. **They pose a hazard** because of their size and speed.

However, they are 'spotted' easily and early, and both the US and Canada are maintaining a constant watch for further objects.

Crew operating in these areas should be aware of the ongoing possibility for further hazards. **Report sightings to ATC.**

If an object is identified, expect possible re-routes around the surrounding 'Danger' area whilst military traffic operates to deal with it.

It isn't just the US..

Moldova closed the LUUU/Chisinau FIR on Feb 14, reportedly because of a "balloon shaped object". And on Feb 10, they had concerns with a Russian missile reportedly crossing their airspace...

Close Encounters Of The Third Kind

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Back in April, the Pentagon confirmed that **some leaked photos and videos of UFOs were, indeed, legitimate**. Of course, 'UFO' just means "unidentified flying object" – it doesn't necessarily mean extra-terrestrial. In fact, these days the US government generally use the term 'UAP' (unidentified aerial phenomena) which makes us think of old, retired aliens...

Reports of UFO's/UAP's, or whatever you prefer to call them are relatively common though, and over the years there have been **numerous sightings directly from airline pilots**.

So, do we need to be wary of alien spaceships in our airspace? **What sort of risks do the other possible explanations actually mean for aircraft safety?**

What is out there?

First up, let's take a look at what sightings have been reported in the past, including the recently acknowledged ones.

The Metallic Blimp

The videos the Pentagon recently acknowledged were actually taken back in 2004 and 2015, and they show objects moving at mega speed. In one, a pilot is heard exclaiming "Look at that thing, dude! It's rotating!"

But is that a UFO, or is there a more reasonable explanation?

The most obvious answer would be that it is **a military aircraft of some sort**, but given the videos were made by military pilots who were not aware of other military traffic operating in the area, and considering the Pentagon confirmed the videos' authenticity, but not what they were showing, the mystery continues...

The New Mexico Sighting

In February 2021, a radio transmission from an America Airlines crew was picked up by a random blogger who happened to be listening in on a radio scanner. He apparently just 'stumbled across' the transmission.

The aircraft was routing over New Mexico at 37,000ft when they reported seeing an object zooming over them. On querying it with ATC, they were informed that the controllers could see no object on their radarscopes.

The Bright White Light Flight

In 2018, a British Airways crew called in after seeing a 'very bright light that disappeared at very high speed'. The sighting was backed up by a Virgin Airlines pilot who said they also witnessed multiple 'exceedingly bright' objects.

New Age Reporting

The US Government is certainly taking sightings more seriously, and in 2019 announced they would bring in a new 'data driven' approach to reporting and recording them.

You can visit the official US NUFORC site [here](#). NUFORC stands for the **National UFO Reporting Center**, and they have a database of all reports. In fact, the number of reports is quite impressive, as are some of the things written in them.

Here are the Other Theories (and the real risks)

The other possible explanations for many of these sightings actually have some **important risk considerations** to think about if you come across them in your airplane.

First up, **meteor showers** and **falling space debris**. These are pretty common and appear bright and fast-moving for more than a few seconds, particularly if they are entering the atmosphere at a certain angle and are big enough to withstand being immediately incinerated.

The American Meteor Society has a 'Fire Ball Log' which you can check to confirm whether your 'UFO sighting' was spotted by someone else and logged as meteor.

You can also keep an eye on the calendar for the reoccurring meteor showers which light up the skies each year.

The real risk here is fairly minimal. Aside from being a distraction, these are not going to hit an aircraft. Space debris is potentially another matter, and something we talked about here if you want to read up on it. The recent "return" of a Chinese Satellite gave some cause for concern just because of its size, and unguessable re-entry point.

The second theory (well, theories) are more earth-based. **Atmospheric balloons** and **Chinese lanterns** have been mistaken for UFO's in the past - and these are often released without regard for how close they might get to aircraft. In 2018, an airplane narrowly missed a lantern while cruising at 20,000ft and despite being relatively thin these can still cause damage if ingested into engines.

In 1970, Aeroflot 1661 crashed shortly after take-off after colliding with a weather balloon. However,

Radiosonde balloons are generally Notamed given their size and proximity to airports when released, so you should be aware of these in advance.

Rocket Launches. And other launches for that matter. An experimental rocket test in Norway caused concern after atmospheric conditions produced a bizarre illusion in the skies. It was in fact a missile test from Russia which went wrong, resulting in a spectacular (and presumably quite expensive) cloud.

Rocket launches mean prohibited airspace, so when they are going up they shouldn't be an issue to aircraft. The FAA are reporting rocket launch site on charts nowadays, and you can find launch dates published on their Temporary Flight Restrictions page.

Clouds. Yep, weird clouds have confused people into thinking a spaceship is loitering nearby. Lenticular clouds often form over mountains when moist air is pushed up over them. The time to watch out is when you see lines of these sitting beyond the mountain crests because they can mean some pretty serious mountain waves are out there - and this means turbulence.

Other planets, even the Moon, have been mistaken for other flying objects by pilots.

A crew once took evasive action because they mistook Venus for another aircraft. In all fairness, they didn't think it was a UFO so much as a C130 known to be in their near vicinity. This incident boiled down to a loss of SA, and a lot of fatigue.

Then there are **drones, UAVs, UASs**. The FAA have a website dedicated to reports on sightings of these, and it is important to report them because they are a genuine threat to aircraft when they encroach on airspace they should not encroach upon.

So, do we need to keep an eye on the sky?

Regardless of whether you think something is terrestrial or extra, **if there is an unidentified object in your airspace - report it**. It might be a real and immediate hazard to other aircraft, and recognizing what you see out there for what it really is will also help avoid the real threats.

A preliminary US intelligence analysis of unidentified aerial phenomena has concluded that such incidents are at least a threat to flight safety and potentially present a broader hazard. Particularly because they are often physical, and are one more thing inside already cluttered airspace.

Of course, UFOs might really be aliens coming to say hello. Some of the mysteries are still, after all, unsolved...