It’s raining space junk over Europe

OPSGROUP Team
29 July, 2022

Update July 31: *Space debris from a rocket launch in China last week splashed down harmlessly in the Indian Ocean on July 30. It made headlines for a few reasons – it was very large, was on an uncontrolled trajectory, and could have landed in Western Europe. Future launches may carry the same risks – the next one is planned for October.*

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Something big this way falls.

A large bit of space junk is due to re-enter, and so far they aren’t exactly sure where.

The Space Junk.

It is part of the **Long March CZ-5B** – the core stage of the rocket launched July 24 to send models of the Chinese Space Station up into space.

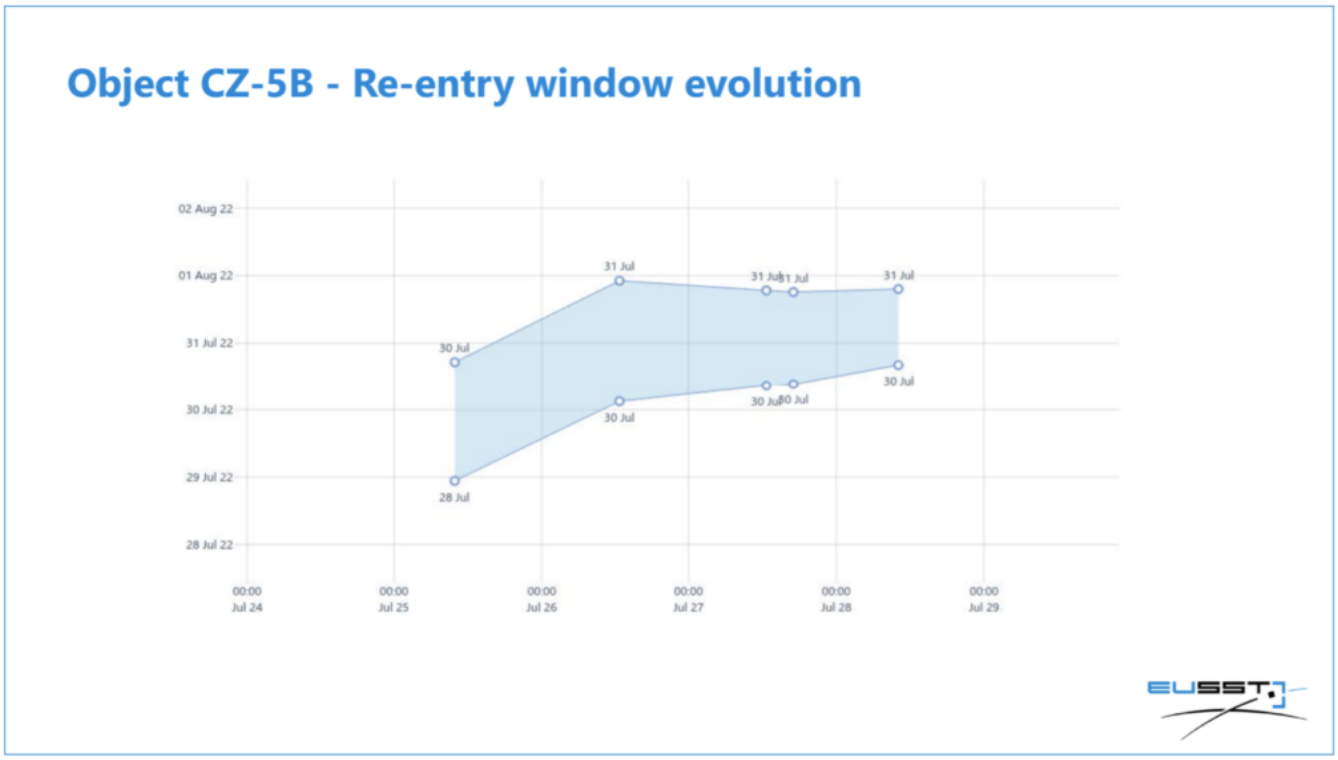
This hefty lump of junk is actually one of the **biggest bits to ever re-enter,** weighing in at an impressive 17 to 23 tonnes and measuring 53 meters. That’s after bits have burnt off…

The Re-Entry.

It is due to fall back around **July 30 or July 31.**

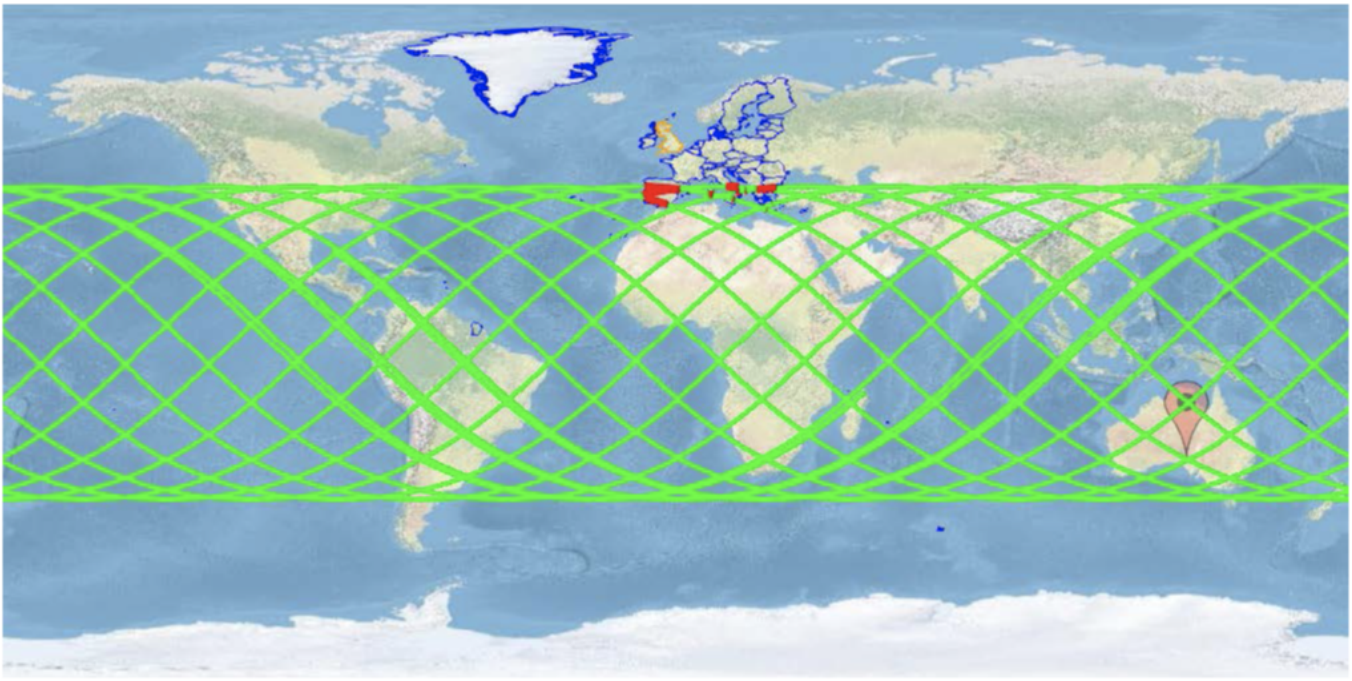
It is being tracked by the **EUSST (EU Space Surveillance and Tracking) agency** which you can visit here.

Here is the **current re-entry window.** The latest is saying Sunday July 31 at **1107z** (but with a +/- 29 hour uncertainty window which is about 38 orbits).



The wide window should narrow as it gets closer

And here is the **current re-entry track…**



Anywhere on the green line… but probably on the red bits.

It is predicted to most likely effect parts of Southern Europe – **Bulgaria, France, Greece, Italy, Malta**, **Portugal, Spain** being the most likely “fall” areas. Again, as it falls closer, this will be narrowed down.

Are we worried?

Not really. They're tracking it and as it gets closer and a clear idea of where it will fall is available, **Notams on airspace closures** will be issued.

Here is the EASA SIB with all their information and advice to date on it.

And here are a few other Space related things to read while you wait for CZ-5B to make its blazing appearance in our skies.

Rocket Debris in Bodø

OPSGROUP Team
29 July, 2022

On November 16 the Arianespace Vega rocket, otherwise known as VV20, will be launched from French Guiana.

The rocket will carry some Ceres satellites for the French military into space.

Will the launch affect aviation?

The Guiana Space Centre, also known as Europe Spaceport is a French (and rest of Europe) launch site.

It is here –

So if you are flying into **SOCA/Cayenne** or **SMJO/Paramaribo** airports (or any of the smaller domestic ones around there) on that day you might want to watch out for some **prohibited airspace around the Space Center.**

You can read more about the space centre, and this upcoming mission, on the Space Center website, and if you are in the area go check it out or even watch the launch.

But in general, the actual going-up-of-the-rocket is not the issue. It is the bits that come down again that are.

Where are the bits going to come down?

The launch has a **northbound trajectory** and as the third stage detaches, debris from this is expected to fall somewhere in the **ENOB/Bodø or the BIRD/Reykjavik Oceanic FIRs** – both of which are of course part of the **North Atlantic region** where a fair amount of of traffic often tends to be.

The latitude is from around **70°50N to 74°10N** so is unlikely to impact the NAT HLA organised track system, but **may impact some random route or polar flights.**

So there will be a restricted bit of airspace, and by restricted we mean traffic **totally forbidden**.

Here is a picture of it –

And to put that into better context, here it is superimposed on a larger area of map.

When will it happen?

The **primary launch window is on November 16**, which means debris could be expected between the **very specific times of 09:32 – 11:49 UTC.** If this doesn't go ahead for whatever reason then the **secondary launch window is on November 26**, with debris fall hazards between the same times again.

The timings of the airspace restriction will be confirmed in Notam via the Norwegian NOTAM office. For now, **ENOB Notam A4648/21 has the info.**

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A4648/21 - TEMPO DANGER AREA 'ZC/VV20-Z9 FALLING AREA' ACTIVATED WITHIN
LIMITS OF BODOE OCEANIC (ENOB) FIR. FALLING AREA FOR SCIENTIFIC
ROCKET FROM FRENCH GUIANA SPACE CENTER. DANGEROUS ZONE BOUNDARIES
ARE PSN 713431N 0000000E - 741000N 0265100E - 732700N 0270400E -
705000N 0000000E - (713431N 0000000E). GND - UNL, DAILY 0932-1149, 16 NOV
09:32
2021 UNTIL 26 NOV 11:49 2021. CREATED: 08 NOV 11:21 2021
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What is the overall operational impact likely to be?

It is likely to be low. It is a short window and a narrow area of airspace that is expected to be impacted, but caution should be applied if you are operating in that region during those times.

Fancy reading some more on space stuff?

Here's an article we wrote before looking at the impact of space travel on ground based aviation.