



Baltic GNSS: harm without an incident

Satellite navigation interference persistent enough to suspend an international air route for a month - and no single incident anywhere to investigate.

INCIDENT DETAILS • 5WH

Who Attribution - Estonia, Finland and Germany point to Russia, naming areas near St Petersburg, Kaliningrad and Pskov. Estonia said proof existed but did not publish it.

What Persistent jamming and spoofing of satellite navigation signals, degrading civil aviation, shipping and anything relying on satellite positioning or timing.

Where The Baltic and neighbouring states; also the Black Sea and eastern Mediterranean.

When Escalating from 2022, sharply worse through 2024. Finnair suspended Helsinki-Tartu 29 Apr to 31 May 2024.

Why Not established publicly. The effect falls on civil aviation and shipping across a region regardless of intent.

How Jamming drowns the signal; spoofing supplies a false one. Airports whose approaches depend on it have no fallback.

SEQUENCE OF EVENTS

A No incident - no crater, no vessel, no arrest; the harm is an environment, not an event

B No casualty - flights divert and routes suspend, so no threshold compels a response

C No border - a transmitter in one state degrades navigation across several others

1 13 Mar 2024: RAF aircraft with the Defence Secretary affected

2 25-26 Apr: two Finnair flights abandon approach to Tartu

3 29 Apr: Finnair suspends the route for a month

4 600+ pilot reports logged in Estonia in April alone

5 2 Jun: service resumes once a ground-based approach is installed

IMPACT

- Safety: two Finnair flights abandoned their approach to Tartu and returned to Helsinki.
- Economic: an international route to Estonia's second city suspended for over a month.
- Political: an RAF aircraft carrying the UK Defence Secretary was affected near Kaliningrad on 13 Mar 2024.
- Adversary gain: continuous deniable degradation, with no incident to investigate and no casualty to prosecute.

ASSESSMENT, LESSONS, AND RECOMMENDATIONS

- Attribution is asserted by the affected states, not independently established.
- The vulnerability is dependence - positioning and timing sit under aviation, shipping and the grid.
- Redundancy is what resolved it - the route reopened by no longer needing the signal.
- It is almost certain the interference continues, and unlikely it ends by attribution rather than by engineering out the dependency.