

OPEN-SOURCE INVESTIGATION

Still Flying: How Iran Kept Its Air Links Alive as Washington Moved to Ground Them

Six weeks of open flight-tracking data show Iranian airlines leaning on Istanbul, China and a few Gulf hubs to stay connected, while their flights to Georgia and Oman stopped as the 23 September US sanctions deadline arrived.

Data window: 13 August – 23 September 2026 (UTC). Flightradar24 checks and background reporting to 25 September 2026.

ABOUT THIS INVESTIGATION

We used only historical flight data that aircraft broadcast publicly. No private individuals are identified. Because the war is ongoing, military flights appear only as weekly totals, with no bases, airports, patrol areas or timings. Every figure in this story can be checked against the full data set in the Data section, or downloaded as an Excel workbook. This is journalism, not legal or sanctions-compliance advice.

In brief

Across 42 days of open ADS-B data we identified **2,970 candidate international flights to or from Iran**. Of these, 2,574 had Confirmed, route-data or Probable links, about 61 a day; the other 396 were weaker 'Possible' cases, some of which may be overflights. On top of that we logged 454 flights by Iranian operators seen abroad on routes we could not resolve, and 10 Iranian government flights. Iran's international air bridge was almost entirely in Iranian hands (99%) and ran through a narrow set of hubs. **Turkey was the foreign end of 54%** of the flights whose foreign airport could be identified, with Istanbul Airport alone at about 50%, followed by the UAE, China, Oman and the South Caucasus. Around the 23 September sanctions deadline, **no Iranian flights were observed to Georgia after 20 September, or to Oman on 23 September**. Service to Turkey and the UAE carried on, and flights to China increased. Meanwhile Iranian airspace became a busier transit corridor for UAE-based and Russian airlines. Receiver coverage inside Iran is almost nil, so every count here is a lower bound and many Iranian endpoints are inferred.

Key findings

#	Confidence	Finding
1	High	Iran's international air links in the period were carried almost entirely by Iranian airlines (99% of flights with a firm Iran link) through a handful of hubs. Turkey was the foreign endpoint for 54% of flights with an identified foreign airport (Istanbul Airport alone about 50%), followed by the UAE (11%), China (11%), Oman (10%), Georgia (6%) and Armenia (4%). Western airlines were absent.
2	Moderate	Access to third countries was eroding at the edges before the 23 September deadline. No Iranian flights were observed to Georgia after 20 September (there had been 4–6 a day earlier in the month), and none to Oman on 23 September (5–7 a day before). Turkey (36 flights on 23 September against about 32 a day) and the UAE (8 against about 7) had not cut service by the end of the period.
3	Moderate	China was Iran's most important long-haul market. Mahan Air averaged about 6–7 widebody flights a day (both directions) to Guangzhou, Shanghai and Beijing, with the Beijing and Shanghai services routed over Central Asia and Guangzhou over South Asia, rising to 12 on 23 September. Flightradar24 shows Mahan still flying Tehran–Bangkok on 24 September, after the deadline.
4	Moderate	Air links between Iran, Russia and Belarus are small in volume but include cargo movements worth watching. A Boeing 747 freighter of an IRGC-linked carrier (Fars Air Qeshm) flew Tehran–Minsk–Moscow rotations, and a US-sanctioned Russian Il-76 operator (Aviacon Zitotrans) flew from Siberia and the Urals into Bushehr province on 1 and 8–9 September (visible on Flightradar24, not captured by adsb.lol).
5	Moderate	Iranian airlines are keeping going with old aircraft (the airframes we checked on Flightradar24 were 25–36 years old), an apparently wet-leased Gambia-registered A320 (132 observed flights, 93 of them international Iran flights) and at least one newly added Boeing 777 (in service from 24 August), consistent with reported sanctions-evasion purchasing channels. A 7700 emergency diversion on 25 August shows the reliability risk.
6	High (movements) / Low (purpose)	Iranian government aircraft made a notable string of trips in September: Delhi (11–13 September), Riyadh and Jeddah (15–18 September), Doha (20 September) and New York via Algiers (22 September, the week of the UN General Assembly). An Omani royal Gulfstream made a same-day round trip to Iran on 25 August, consistent with Oman's role as a mediator.
7	Moderate	Observed transit through Iranian airspace grew, from about 33 overflights a day in the week of 17 August to 57 in the week of 14 September, after only about 12 a day on 13–16 August. UAE-registered airliners made up 84%, above all on UAE–Russia routes, despite EU and US advisories against flying there. The abrupt jump in mid-August may partly reflect a change in receiver coverage.
8	Low	The data show no Iranian flights to Syria or Lebanon; an apparent Mashhad–Beirut service turned out, on checking, to be Tehran–Ankara. Iranian routes to Iraq and Afghanistan appear in schedules but fall outside the receiver network, so ADS-B alone cannot settle the question of a 'proxy corridor', meaning an air route to Iran's allied armed groups in the region.
9	Moderate (aggregate)	Military aircraft broadcasting ADS-B across the wider region flew about 190–230 flights a day after the first, partial week. Tanker activity was steady (37–46 a day), airlift peaked in the week of 17 August, and slightly more surveillance and early-warning types appeared from late August. Because most combat and surveillance aircraft do not broadcast, their activity is not represented. Reported in aggregate only.

How to read the confidence levels: **High** means well supported by several independent observations; **Moderate** means credibly sourced and plausible, but with coverage gaps or single-source elements; **Low** means fragmentary data and significant uncertainty.

1. Background

- **The war.** US and Israeli strikes on Iran began on 28 February 2026. A US–Iran ceasefire agreed on 28 June collapsed on 8 July after Iranian attacks on shipping in the Strait of Hormuz. Fighting, including on the Hezbollah–Israel front, continued throughout the period.
- **Airspace.** The Tehran flight information region closed completely in March. Its eastern part reopened to overflights in June, while the west stayed shut. The EU Aviation Safety Agency (EASA bulletin CZIB 2026-04-R1, valid 8 July to 30 September) and national notices from France, Italy and Germany tell their airlines not to enter Iranian airspace; US operators are barred under SFAR 117.

- **Sanctions.** The US announced 'Operation Economic Outcast' on 24 August. On 8 September the Treasury's Office of Foreign Assets Control (OFAC) designated 27 Iranian airlines and 36 supporting targets, allowing a wind-down period to 23 September. On 21 September the Treasury Secretary said Iranian airline operations worldwide would stop from 23 September and warned service providers of secondary sanctions. Press reports on 23 September said Oman, Azerbaijan and Georgia had stopped servicing Iranian airlines and that several foreign carriers had suspended flights to Iran.

2. Sources and method

- **Primary data.** adsb.lol's daily *globe_history* archives (the readsb 'prod' and 'MLAT-only' feeds): 84 files, about 150 GB, covering 4.94 million aircraft-day traces worldwide (3.25 million in the main feed). We kept 24,867 aircraft-days relevant to Iran (35.6 million positions): any aircraft that entered Iran, Iranian-registered aircraft anywhere, callsigns whose listed route includes an Iranian airport, low-altitude traffic within about 100 km of Iran, and military aircraft in the wider Middle East.
- **Processing.** The traces were split into 66,262 flights. Take-offs and landings were matched to airports from the track itself (on the ground, at low altitude, or climbing and descending near an airport). Where the track could not settle it, we used the crowd-sourced Virtual Radar Server route database, but only when it agreed with the track. Each flight carries its evidence basis and a rating of how firmly it is linked to Iran (Confirmed, Route DB, Probable, Possible).
- **Verification.** We ran 12 manual Flightradar24 checks on key aircraft and flights. They confirmed most leads and **corrected five**: a stale route-database entry, two wrong low-confidence airport inferences, an Omani military flight wrongly attributed to Iran, and a Russian Il-76 flight that turned out to be an overflight. The corrections are applied throughout the data and listed in Annex B.
- **The data.** Every civil flight record, with its evidence, is in the Data section and in the downloadable Excel workbook, along with daily and weekly summaries.

3. What the data cannot show (read before using the numbers)

- adsb.lol has almost no receivers inside Iran, Iraq, the inner Caucasus or the Caspian. Most Iran flights are seen only at the foreign end (Turkey, the Gulf states, Oman, the Levant, Europe, Russia, China, South Asia), so the Iranian end is rarely observed: 2,418 of the 2,970 international records have at least one end seen directly in the track (usually the foreign one), but only 21 have both. Iranian airports mostly come from route data or inference.
- All counts are **lower bounds**. Istanbul, the Gulf and Oman are well covered; Iraq, inland Syria, Afghanistan and Central Asia are not. Routes to Najaf, Baghdad, Erbil, Sulaimaniyah, Kabul and Kandahar appear in schedules but not in this data.
- Most military aircraft do not broadcast ADS-B. The military picture covers only the transports, tankers, trainers, helicopters and some surveillance aircraft that did.
- Satellite-navigation (GNSS) jamming and spoofing are widespread: 1,833 flights showed three or more impossible position jumps, most of them around the UAE, Israel, the Persian Gulf, Jordan and the Gulf of Oman. Tracks that 'entered' Iran only through such jumps were discounted.

4. The big picture: Iran's air bridge to the world

FIGURE 1

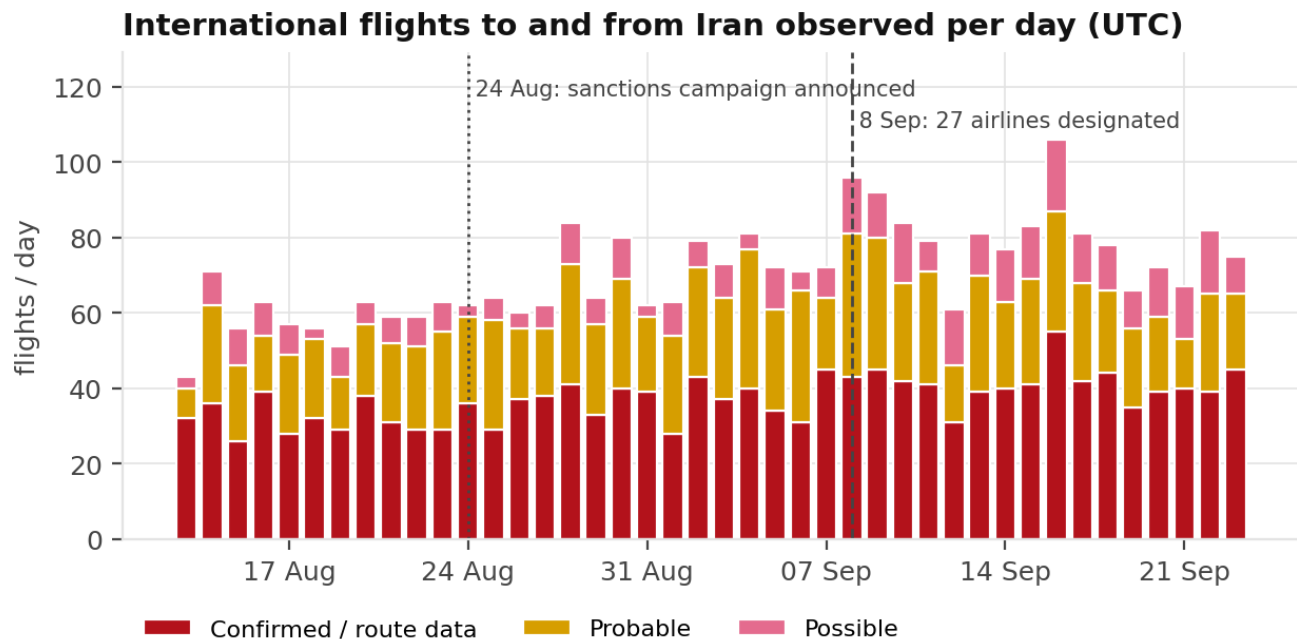


Figure 1. International Iran flights per day, by strength of evidence (all levels). Weekly averages rose from about 58 a day in mid-August to about 80 in mid-September. The last three days (21–23 September) averaged about 75; there was no sharp drop at the deadline.

Observed volumes grew over the period instead of falling after the sanctions announcements. Coverage at Istanbul is stable (flights between Istanbul Airport and Iran averaged 29 a day, ranging from 16 to 40, with 34 on 23 September), so the steadiness of that route is a real signal. We saw no pre-deadline wind-down by Iranian airlines at their main hubs; the effects visible by 23 September were at the margins (Section 6).

FIGURE 2

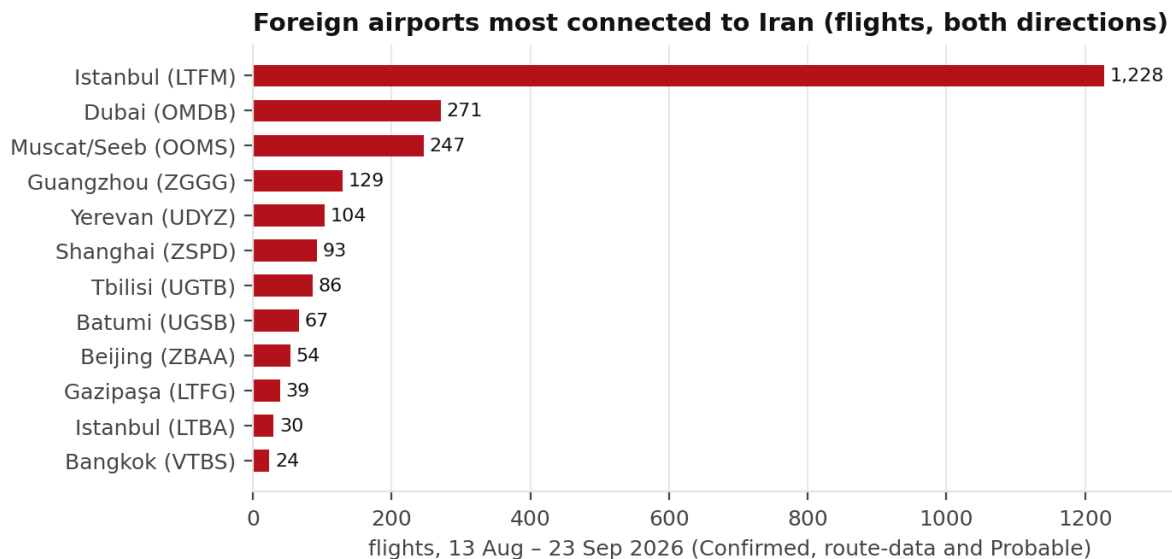


Figure 2. Foreign airports by number of Iran flights (flights with an identified foreign end: 2,473). Istanbul Airport dominates, followed by Dubai and Muscat, then Mahan's three Chinese gateways and the Caucasus.

FIGURE 3

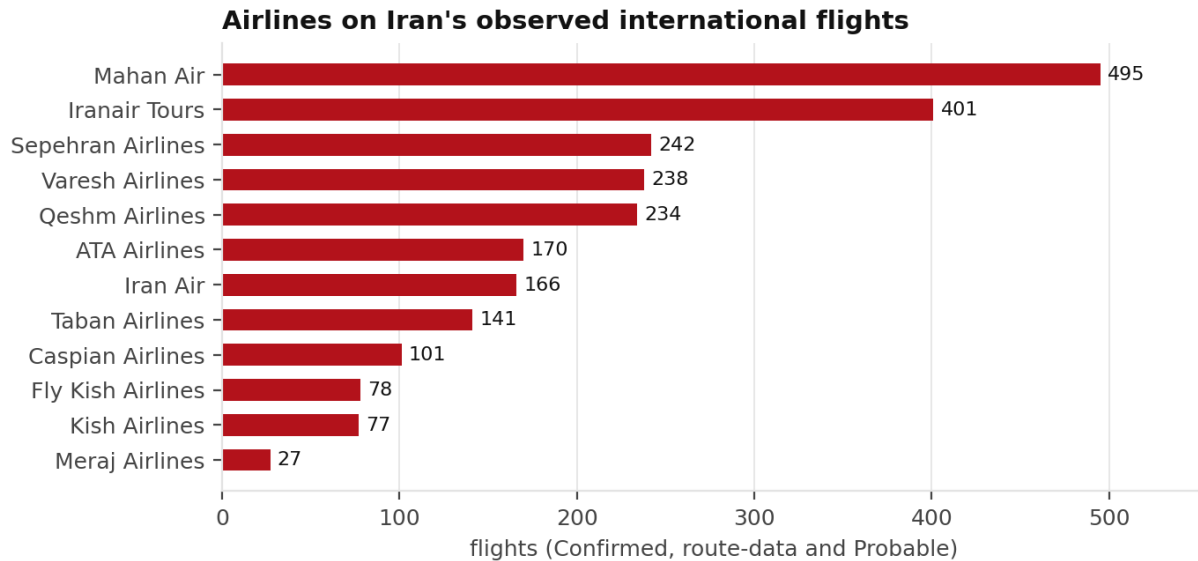


Figure 3. Airlines. Mahan Air, Iran Airtour, Sepehran, Vareshe, Qeshm Air, ATA and Iran Air carry most of the traffic. Only 1% of firmly linked flights were by foreign airlines (flydubai, Jazeera, Air Arabia, Turkish, Qatar); flydubai and Air Arabia appear mostly as transit traffic (Section 8).

5. Iran, Russia, Belarus and China

China

In this data China is Iran's main long-haul market: 278 flights (6.6 a day), all by Mahan Air A340s and Boeing 777-200ERs, mainly to Guangzhou (129), Shanghai Pudong (93) and Beijing (54). Beijing and Shanghai flights were observed over Kazakhstan (the Central Asian routing, 41% of China flights), while Guangzhou flights were seen over India and Bangladesh (the southern routing). Daily China flights rose from about 5 in mid-August to about 7 in early September, nearly 8 in mid-September and 12 on 23 September, the opposite of the contraction seen elsewhere. Flightradar24 shows Mahan's newly added 777, EP-MTA, flying Tehran–Bangkok on 24 September, after the deadline, consistent with press reports that Iranian flights continued to China and Thailand.

FIGURE 4

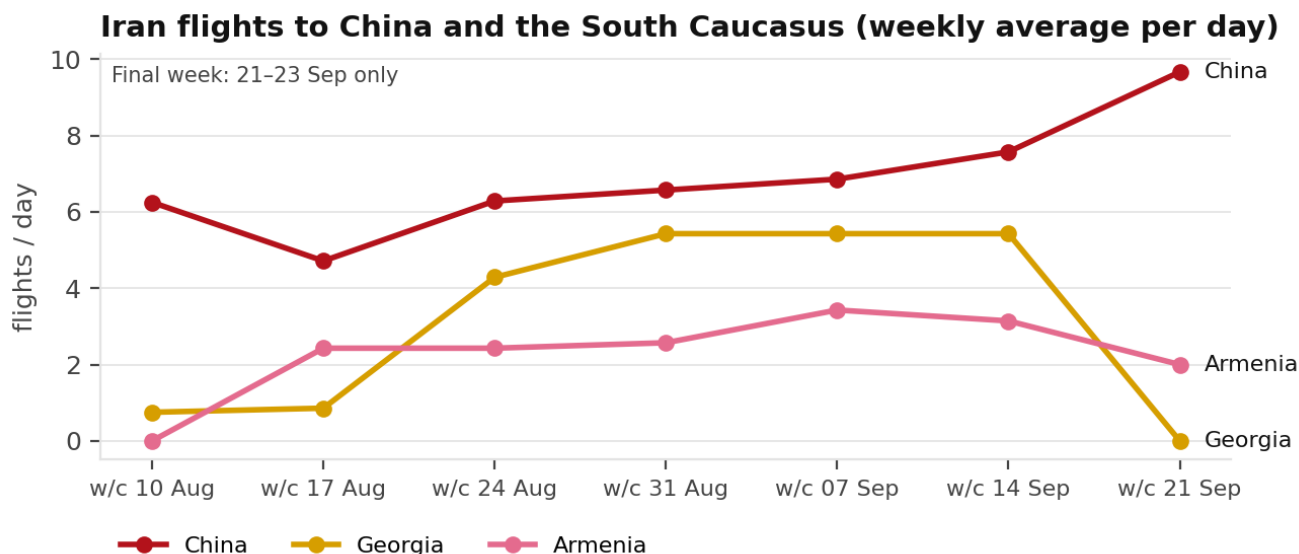


Figure 4. Iran flights to China, Georgia and Armenia (weekly average per day; the final week covers 21–23 September only). China rises; Georgia drops to zero after 20 September.

Russia and Belarus

- **Passenger flights.** Mahan Air 777s fly to Moscow Sheremetyevo (about weekly in the data), and Atlas Air (an Iranian airline, code IRH) runs a **weekly Sunday MD-87 service between Tehran and Minsk** (9, 16, 23 and 30 August and 6 September, verified on Flightradar24). Russian and Belarusian airlines' own Iran services are rare in the data; Aeroflot and Belavia show up mostly as overflights.
- **Cargo: Fars Air Qeshm.** Boeing 747-281F EP-FAB (built 1991; the airline was sanctioned by the US Treasury in January 2019 for ferrying weapons to Syria) flew Tehran–Minsk on 26 August and 8 September, returned via Moscow on 9 September, and has flown roughly monthly Tehran–Moscow rotations since January. On 27 August it made an unexplained flight of about five hours that began and ended in Minsk, with no destination shown. *Our assessment:* a regular Iran–Belarus–Russia cargo shuttle. What it carries cannot be determined from flight data.
- **Cargo: Aviacon Zitotrans.** Il-76TD RA-76834 (its operator is under US Treasury sanctions) flew Yekaterinburg–Bushehr on 1 September and Novosibirsk–Bahregan (Bushehr province) on 8 September, leaving Bushehr for Novosibirsk on 9 September. These legs are visible only on Flightradar24 (adsb.lol has no coverage there); the cargo and purpose are unknown.
- **Transit.** Russia is the most common endpoint of flights crossing Iranian airspace (721 UAE–Russia overflights): Iran works as the air corridor between Russia and the Gulf (Section 8).

6. Sanctions pressure: the deadline and the fleet

TABLE 1

Foreign country	14–20 Aug	1–7 Sep	16–22 Sep	23 Sep	Note
Turkey	28.3	33.7	31.7	36	No cut-off observed
UAE	5.4	7.4	6.9	8	No cut-off observed
Oman	6.9	6.0	5.3	0	Last flight 22 Sep
China	5.1	6.7	7.7	12	Rising
Georgia	0.6	5.6	4.3	0	Last flight 20 Sep
Armenia	0.7	2.6	3.4	2	Continuing

Table 1. Iran flights per day by foreign country (Confirmed, route-data and Probable links with an identified foreign end). Coverage in Georgia and Armenia may itself have changed in mid-August, so the rise there is less certain than the later fall.

Two patterns stand out. First, the loss of access was selective. Georgia (no flights after 20 September) and Oman (none on the deadline day, 23 September, after at least two on every earlier day), both named in press reports as having stopped servicing Iranian airlines, show the drop in the data, while Iran's biggest hub link (Istanbul) and the UAE continued to the end of the period. Flightradar24's departures board for Tehran Imam Khomeini on the morning of 25 September still listed Iranian airlines' flights to Istanbul, Dubai, Muscat, Iraq, the Caucasus and China, several with aircraft assigned (whether they actually flew is outside the scope of this report). Second, Iranian airlines are getting by with old and irregularly sourced aircraft:

- **Foreign-registered aircraft (apparent wet lease).** A320 C5-SUA (Gambian register, built 1991, operator listed as 'Su Airlines') made 132 observed flights, 93 of them international Iran flights, under Taban callsigns (Flightradar24 also shows Su Airlines flight numbers): almost daily Tehran–Istanbul, plus Yerevan, Karachi, Trabzon, Batumi and Gazipasa (verified on Flightradar24).
- **A new airframe.** Mahan 777-200ER EP-MTA (built 2001) first appears on 24 August on Tehran–Muscat and then flies to Bangkok, Beijing and Moscow, consistent with reports that Mahan acquired 777s this summer through intermediaries in the UAE and Oman.
- **An ageing fleet.** The most-flown Iranian types were the 737-300 (663 flights), A320 (489), A300-600 (283), A310 (283) and A340-300 (214); the airframes we checked on Flightradar24 were 25–36 years old. In all, 97 Iranian-operated aircraft were seen on international flights.
- **Reliability.** Taban/AVA A310 EP-TBH (built 1990) squawked the 7700 emergency code and diverted to Ankara on 25 August on an Istanbul–Tehran flight, resuming the same day (verified on Flightradar24).

7. Government and VIP flights

TABLE 2

Date (UTC)	Aircraft	Callsign	Movement	Evidence
11–13 Sep	EP-IGI A340-300 (Iran Government)	IRAN02	Tehran–Delhi–Tehran	adsb.lol + FR24
15–18 Sep	EP-IGF RJ85 (Iran Government, operated by Meraj)	IRAN06	Tehran–Riyadh–Jeddah–Tehran	adsb.lol + FR24
20 Sep	EP-IGF RJ85	IRAN05	Tehran–Doha (DIA)–Tehran, same day	adsb.lol + FR24
22–23 Sep	EP-IGI A340-300	IRAN02	Tehran–Algiers–New York JFK; JFK–Baltimore	adsb.lol + FR24
5 Sep	EP-SSN A321 (Meraj)	IRAN03	Seen over India (route unresolved)	adsb.lol
25 Aug	A4O-AE G550 (Oman Royal Flight)	ORF4	Muscat–Iran–Muscat, same day	adsb.lol only (FR24 filters this aircraft)

Table 2. Diplomatic movements of government aircraft. The most significant are the Iranian government jets' trips to Saudi Arabia and Qatar during the war and the New York trip in the week of the UN General Assembly. The Omani flight is consistent with Oman's role as a mediator. Flight data cannot tell us who was on board or why. adsb.lol's aircraft database lacked EP-IGI's registration; Flightradar24 resolved it from the aircraft's ICAO address.

8. Iranian airspace as a transit corridor

FIGURE 5

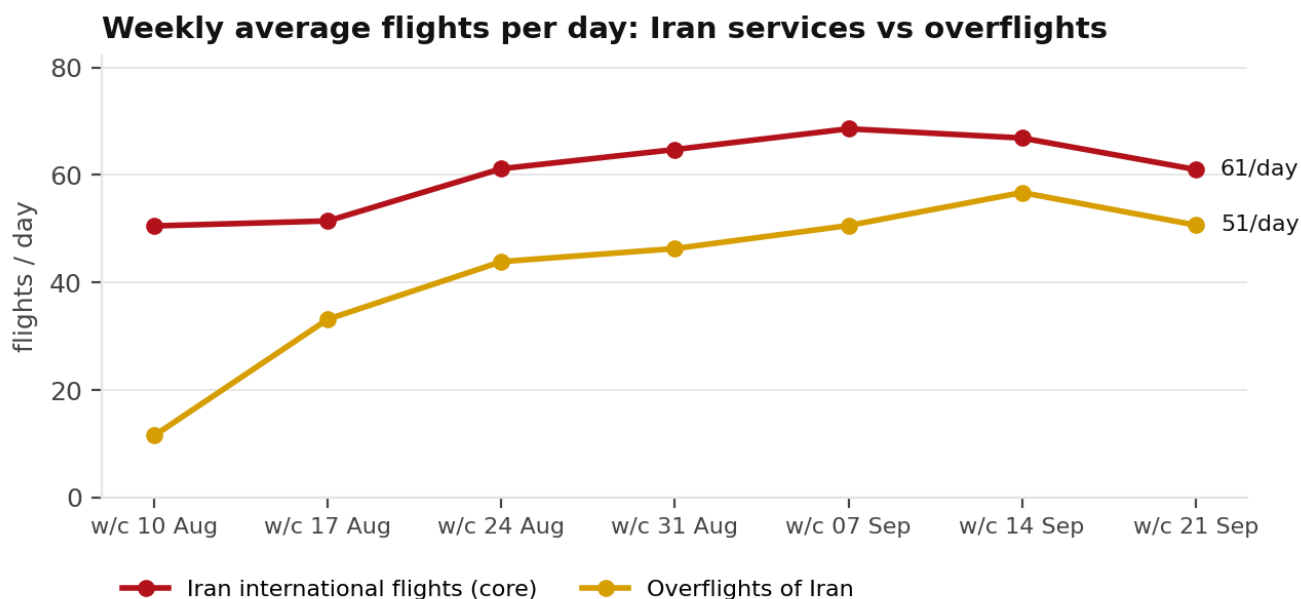


Figure 5. Weekly average flights per day. Overflights jumped after the first, partial week (13–16 August) and then rose steadily (about 1.7 times from the week of 17 August to the week of 14 September), while Iran's own international services grew modestly.

We identified 1,812 overflights (both ends outside Iran, track inside Iranian territory). 84% were UAE-registered airliners (flydubai 1,131; the Air Arabia group 383), followed by Aeroflot (147), Belavia (32) and Pobeda (24). The main city pairs were UAE–Russia (721), UAE–Georgia/Azerbaijan/Armenia and UAE–Pakistan/Kazakhstan/India; 44% touched Russia or Belarus. Almost all were seen entering or leaving on the Oman and Gulf of Oman side, consistent with use of Iran's southern and eastern airspace. *Our assessment (moderate confidence)*: non-Western airlines, led by UAE low-cost carriers on Russia and Caucasus routes, made growing use of Iranian airspace during the period, which also means continued overflight revenue for Iran. The jump between 13–16 August and the

following week is too abrupt to rule out a coverage change; the steadier growth afterwards is the more reliable signal.

9. The 'proxy corridor': Iraq, Syria, Lebanon, Yemen

The data contain **no Iranian-operated flights to Syria or Lebanon**. One apparent Mashhad–Beirut service by Meraj Airlines (flight MRJ4853, taken from a route-database entry) was checked on Flightradar24 and turned out to be Tehran–Ankara on the dates checked (7 and 10 September). Iran–Iraq traffic (schedules list Najaf, Baghdad, Erbil and Sulaimaniyah) and Iran–Afghanistan traffic (Kabul; Flightradar24 also shows a Meraj flight from Kandahar on 22 September) is invisible to adsb.lol because it has no receivers in Iraq or Afghanistan. *Our assessment (low confidence)*: the absence of Syria and Lebanon flights fits with those routes having been closed to Iranian airlines since 2024, but the coverage gap over Iraq means covert or indirect flows cannot be assessed this way. Satellite ADS-B or regional receivers would be needed.

10. Military air activity in the region (aggregate only)

FIGURE 6

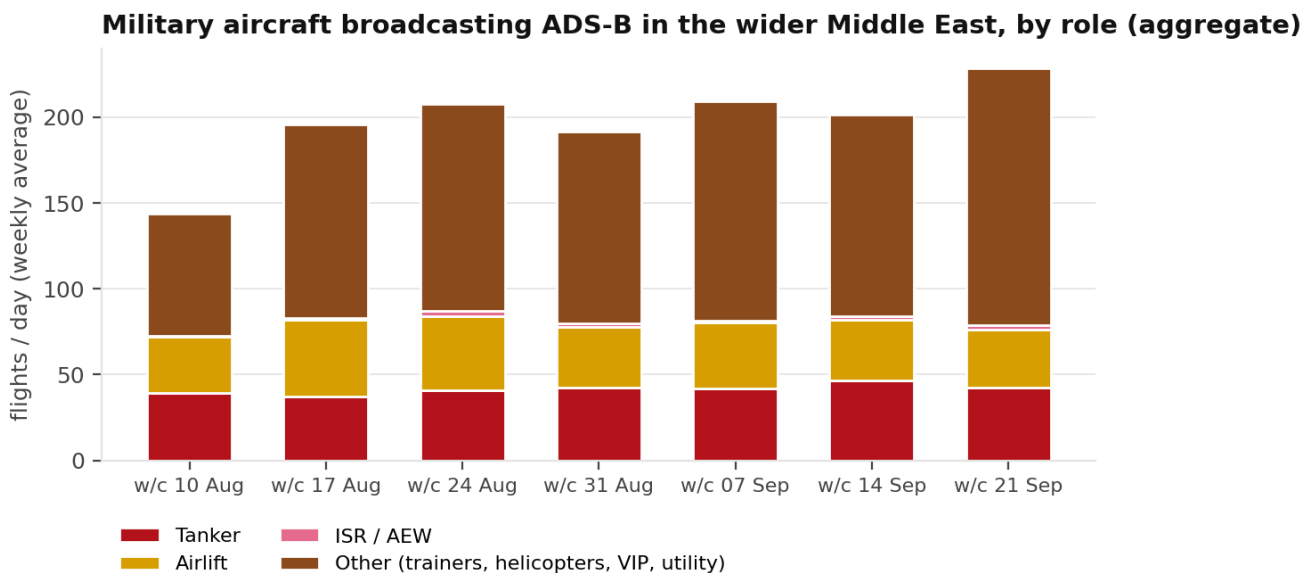


Figure 6. Military aircraft broadcasting ADS-B in the wider Middle East, by role (weekly average flights per day; the first week is 13–16 August, the last 21–23 September).

We recorded 8,297 flights in the region by 821 military-registered aircraft that broadcast ADS-B. US military aircraft accounted for 29% (about 50–63 flights a day). Arab states (the Gulf, Jordan, Egypt) rose from about 60 to 95–100 a day (132 in the last, three-day week); Israeli, Turkish and European military aircraft made up smaller shares. Tanker-type flights held steady at about 37–46 a day; airlift peaked in the week of 17 August (45 a day) before settling at around 35–38; and surveillance and early-warning types, rarely visible, rose from under one to about 2–3 a day from late August. *Our assessment*: sustained support activity throughout the period, without a visible surge around the sanctions milestones. Because fighting was ongoing, this report and the data deliberately withhold flight-level military records, bases, airports, patrol areas and timings.

11. Other anomalies

- **Medical-priority flights.** flydubai FDB2EX (Dubai to Iran) transmitted 'lifeguard' status on 26 August and 22 September.

- **Air turn-back.** Sepehran SHI7357 took off from Dubai and returned there on 1 September.
- **Registry gaps.** Several Iranian aircraft, including the government A340 EP-IGI, are missing from the open aircraft database. One aircraft using an Iranian ICAO address but a US-style callsign, flying only over the United States (4 flights), was set aside as a probable misconfigured transponder.
- **False positives found and fixed.** Peruvian Army aircraft registered 'EP-8xx' (Peru's army uses the EP- prefix) had been counted as Iranian, and GNSS-spoofed tracks appeared to put a US tanker and a Kaliningrad–St Petersburg jet inside Iran. Anyone reusing the data should apply the same filters.

12. Open questions and what to watch

- **Coverage inside Iran and Iraq** is the main gap. Flightradar24's paid data service or satellite ADS-B would resolve Iranian airports and Iraq and Afghanistan routes at scale.
- **After the deadline** (from 24 September): whether Istanbul, Dubai and Chinese airports keep handling Iranian airlines, and which foreign-registered or newly acquired aircraft appear.
- **Cargo.** Further Fars Air Qeshm, Aviacon Zitotrans and other Il-76 and 747 freighter movements between Russia, Belarus and Iran.
- **Diplomatic flights.** Iranian and Omani government aircraft movements as markers of negotiations.
- **Transit.** Overflight volumes by UAE, Russian and Central Asian airlines, as an indicator both of how risky airlines judge Iranian airspace to be and of Iran's overflight revenue.

Annex A. Evidence levels

Level	Meaning
Confirmed	Both ends resolved from the track itself (seen on or near the ground, or climbing or descending at the airport).
Confirmed (FR24)	Endpoints verified or corrected by a Flightradar24 check.
Route DB	At least one end comes from the callsign's crowd-sourced route entry and agrees with the observed track.
Probable	One end resolved; the Iranian end is inferred (the aircraft was lost from view inside Iran, is Iranian-operated, or was heading to an Iranian airport).
Possible	Weaker evidence, for example a foreign operator lost from view inside Iran that may be an overflight, or an Iranian operator abroad with neither end resolved.

Annex B. Flightradar24 checks (summary)

#	Subject	Result
1	C5-SUA (A320, Gambia)	Confirmed: Taban schedules; Tehran–Istanbul and regional routes
2	IRAN02 / 7324E9	Confirmed: EP-IGI, Iran Government A340; Delhi and Algiers–New York trips
3	IRAN05/06 / 7324E6	Confirmed: EP-IGF; Riyadh, Jeddah, Doha
4	MRJ4853 (EP-SSM)	Corrected: Tehran–Ankara, not Mashhad–Beirut (stale route entry)
5	EP-FAB (747-281F)	Destination corrected to Minsk; Minsk–Moscow–Tehran on 9 Sep; unexplained Minsk round trip
6	EP-SAT (MD-87)	Destination corrected to Minsk; weekly Atlas Air service
7	EP-MTA (777-200ER)	Confirmed: history starts 24 Aug; Bangkok flight on 24 Sep
8	TBN7282, squawk 7700	Confirmed: diverted to Ankara on 25 Aug
9	A4O-AE (Oman Royal Flight)	Not verifiable: FR24 shows no data for this aircraft
10	Omani military callsign	Corrected: an Omani military shuttle within Oman, not an Iran flight (details withheld)
11	RA-76834 (IL-76TD)	FR24 only: Yekaterinburg/Novosibirsk to Bushehr province, 1 and 8–9 Sep; 21 Aug Abu Dhabi–Moscow overflight corrected
12	Tehran IKA departures board	Iranian airlines' flights still scheduled on 25 Sep (outside the data window, unverified)

Annex C. Sources

- adsb.lol globe_history_2026 daily archives (github.com/adsblol/globe_history_2026), Open Database License (ODbL 1.0). Contains information from adsb.lol.
- Virtual Radar Server standing-data route and airline files; OurAirports airport data; tar1090 ICAO address allocation table.
- Flightradar24 aircraft, flight and airport pages, viewed 24–25 September 2026.
- Al Jazeera, 'US aviation sanctions disrupt Iran flights, push travellers overland', 23 September 2026; IranWire, 'All Iranian airline operations worldwide to stop from September 23', September 2026; MiGFlug, 'Iranian airlines grounded worldwide', September 2026; Bloomberg, 'Iran flights head to China, Thailand in defiance of US sanctions', 23 September 2026 (headline only).
- Wikipedia, '2026 Iran war' (accessed 25 September 2026); Safe Airspace, Iran page (EASA CZIB 2026-04-R1 and national NOTAMS); SafeRoutes, 'Iran airspace restrictions in August 2026'.