

Open data sources for aviation

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Starting point

mode-s.org/atmdata/sources/

SATURN WIKI Understanding t-Tes... Simple and Multiple... UoW - Professional... UoW Online expens... BEACON : Westmins... Home - UoW Confl... UoW self-services Mail

Open Aviation Data

Data sources Datasets Tools Add info About

Data sources

This page presents various sources of open data that are currently available for aviation research. Our preference goes for data that is fully open. Some providers make data freely available, some ask for registration and may impose limits. We try to cover the license issue as much as we can. However, it is your responsibility to check the licensing terms carefully around the provided data before using it.

Surveillance data, ADS-B, Mode S

Currently, the most easily accessible open flight data is undoubtedly ADS-B data. It is relatively simple to set up your Mode S/ADS-B receiver and start gathering data. Several crowd-sourced receiver networks also provide accesses to their live or historical data. Here are a few sources providing free access:

- [The OpenSky Network \(live API\)](#) allows you to obtain live flight data over the world for free, without registration.
- [The OpenSky Network \(historical data\)](#) allows academics to access historical data flight data (including decoded ADS-B data and raw Mode S data) over the world for free. Registration is needed. Access to the historical database must be requested individually.
- [ADS-B Exchange \(live API\)](#) allows you to obtain live flight data over the world freely. However, you must first feed data to ADS-B Exchange, and registration is also required.
- [Airplanes.Live](#): like many others live and historical data is available in some ways.
- [adsb.io](#)
- [adsb.fi](#): new community of feeders who fled from ADS-B Exchange after it went commercial.
- [TheAirTraffic](#)

For all the above sources, the data are provided for non-commercial use only. Specific agreements may be needed for commercial uses.

Flight (or schedule) data

The following websites provides access to flight data, usually contains the origin, destination, number of passengers or aircraft information

- [us Bureau of Transportation Statistics \(T-100 Segment, All Carriers\)](#). This table combines domestic and international T-100 segment data reported by U.S. and foreign air carriers, and contains non-stop segment data by aircraft type and service class for transported passengers, freight and mail, available capacity, scheduled departures, departures performed, aircraft hours, and load factor.

Flight/schedule data

- US Bureau of Transportation Statistics
- EU Aviation Data for Research
 - OneSky Online Extranet login
- Build your own database using API, example:
 - <https://airlabs.co/docs/schedules>

Bureau of Transportation Statistics

Topics and Geography

Statistical Products and Data

National Transportation Library

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[About BTS](#)

[Accounting and Reporting Directives](#)

[Advisory Council on Transportation Statistics](#)

[Air Cargo](#)

[Air Carrier Snapshots](#)

[Air Fares](#)

[Air Fares by Route](#)

[Air Travel Consumer Report](#)

[Airline Baggage Fees](#)

[Airline Codes](#)

[Airline Causes of Delays](#)

[Airline Chronically Delayed Flights](#)

[Airline Data, Seasonally Adjusted](#)

[Airline Employment Data](#)

[Airline Financial Data](#)

[Airline Fuel Costs and Consumption](#)

[Airline Information for Download](#)

[Airline Load Factor](#)

[Airline On-Time Database](#)

[Airline On-Time Performance](#)

[Airline Origin and Destination Survey](#)

[Airline Passengers](#)

[Airline Passengers Denied Confirmed Space Report](#)

[Airline Search](#)

[Airline Tarmac Times](#)

[Airline Traffic Data](#)

[Airport Codes](#)

[Airport On-Time Rankings and On-Time Summaries](#)

[Airport Search](#)

[Airport Snapshots](#)

[American Travel Survey](#)

Aircraft related data

- The OpenSky Network [aircraft database](#)
- FAA's [Aircraft characteristics](#)
 - Xls file, updated occasionally.
- Boeing's [airport planning manuals](#)
- Airbus [airport and maintenance planning documents](#)

Aeronautical charts, Aeronautical Information Publication (AIP)

- FAA's [Aeronautical Chart Users' Guide](#)
 - pdf explaining signs and other details
- [FAA Aeronautical Data Delivery Service](#)
- [FAA's AIP](#)
 - All AIP information and links to other data
- [EAD Basic](#)
 - is EAD's free Public Access Service application for the general public. The solution allows you to browse the European AIS Database (EAD) for a limited set of aeronautical information via the World Wide Web
 - AIP
 - Onesky online login
- EUROCONTROL' [Airport Corner](#)

Statistics

- EUROCONTROL's [STATFOR](#)
 - Requires Onesky login
- EUROCONTROL's [Our data](#)
 - Different publicly available data
- [Aviation intelligence portal](#) – also EUROCONTROL Data app (Google play)
- [Eurostat data](#)
 - Different EU-wide statistics, transportation modes covered

MET

- US Aviation Weather Center:
 - <https://aviationweather.gov/>
 - <https://aviationweather.gov/data/api/>
- Historic METAR
 - <https://mesonet.agron.iastate.edu/request/download.phtml>
- Historic METAR, TAF and SIGMET
 - <http://www.aviationwxchartsarchive.com/product/sigmet#>
- Integrated Forecasting System
 - https://www.ecmwf.int/en/forecasts/documentation-and-support/changes-ecmwf-model?check_logged_in=1
 - Requires login
- ERA5 reanalysis
 - <https://cds.climate.copernicus.eu/datasets?q=era+reanalysis&limit=30>
 - Requires login
- Volcanic ash info
 - <https://sacs.aeronomie.be/>
 - <https://www.ospo.noaa.gov/products/atmosphere/vaac/other-vaacs.html>

Live data

- Network Operations Portal
 - <https://www.public.nm.eurocontrol.int/PUBPORTAL/gateway/spec/>
- Weather and airspace quality - Windy
 - <https://www.windy.com/?45.437,11.933,5>
- OpenSky Network
 - <https://map.opensky-network.org/>
 - Requires account
- Flightradar24, others

Thank you
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