



Friends & Partners
— IN AVIATION WEATHER —

Position Paper:

Statement of Support for the Implementation of Automatic
Dependent Surveillance – Broadcast Weather
(ADS-B Wx)

What is ADS-B

- ADS-B **IN** is a datalink service that transmits weather information from ground-based stations to aircraft equipped with ADS-B "In" receivers.
- ADS-B **OUT** is a technology that allows an aircraft to broadcast its position and other information to other aircraft and ground stations.
 - Aircraft with ADS-B Out broadcast their position, altitude, speed, and other data once per second
 - Aircraft use a transponder and GPS receiver to broadcast the information
 - Ground stations use an antenna, receiver, and surveillance processor to receive the information

ADS-B Weather

- Aircraft-based observations provide data critical to numerical weather prediction models and enable rapid updating of forecast products.
- Recent developments in aircraft surveillance system standards and operational requirements now allow aircraft position surveillance systems to include weather surveillance capabilities.
- Weather awareness and forecasts enhanced by improved weather surveillance could increase aircraft utility, operational efficiency, and aviation safety, and help to mitigate the significant economic impact of weather events and variability within and beyond the aviation domain.

FPAW Position Paper Recommendations

- ✓ **Avionics** - FPAW recommends that Automatic Dependent Surveillance – Broadcast Weather (ADS-B Wx) Air Report (AIREP) and Pilot Report (PIREP) capabilities be implemented by avionics manufacturers in ADS-B V3 avionics and that commercial and general aviation operators equip with ADS-B Wx capable avionics as early and as widely as possible.
- ✓ **Government** - FPAW recommends that the Federal Aviation Administration (FAA), the National Weather Service (NWS), and the weather and aviation communities be prepared to fully leverage ADS-B Wx data as soon as they become available.

FPAW Position Paper Recommendations

- ✓ **Funding/Research** - FPAW recommends that the NWS and FAA evaluate the benefits of ADS-B Wx by conducting a large-scale demonstration of its potential, using funds appropriated in support of the Aviation Weather Improvement Act, the Weather Act and/or FAA reauthorization acts, or other appropriations.
- ✓ **Incentives** - FPAW recommends that, if ADS-B equipage incentives are again made available, the FAA uses such incentives to strongly encourage operators to equip with ADS-B Wx capable avionics and that the NWS and FAA integrate ADS-B Wx data provided by aircraft equipped through an incentive program into any demonstration of the potential of ADS-B Wx. (FAA offered \$500 before 2020 for ADS-B Out)

ADS-B Weather

The full position paper is available via the following link:

https://fpaw.aero/sites/default/files/192/2024-08-26-fpaw-ads-b-wx-paper-v11_0.pdf

Please reach out to Elizabeth.Wilson@synopticdata.com or Richard.Curtis@Collins.com for additional information.

Thanks very much for your support!