

WMO and IATA Agree to Improve Aircraft Meteorological Reporting

The International Air Transport Association (IATA) and World Meteorological Organization have signed an agreement to increase and improve the automated reporting of meteorological data by commercial aircraft.

The new initiative, called the WMO and IATA Collaborative AMDAR Program (WICAP), aims to expand the existing WMO Aircraft Meteorological Data Relay (AMDAR) system to ensure coverage over data-sparse areas. It is expected to bring many additional and new partner airlines into the program, which is already supported by approximately 40 airlines and covers several thousand passenger and cargo aircraft.

“One of the many unfortunate aspects of the COVID-19 crisis has been the severe loss – of up to 90% – of aircraft-derived meteorological data as a result of the steep decline in airline operations and passenger flights since March 2020,” said WMO Secretary-General Professor Petteri Taalas.

“Meteorological services and other data providers



have tried to offset this loss, but there has been a measurable negative impact on the accuracy of weather forecasts as a result of AMDAR data reductions,” said Professor Taalas.

“Safety is aviation’s highest priority and ensuring airlines and other safety stakeholders have access to the most comprehensive and reliable weather forecast data is vital to achieving this,” said Alexandre de Juniac, IATA’s Director General and CEO.

“It is important that in rebuilding and re-establishing their operations, airlines are able to take advantage of all available cost and operational efficiencies. One such efficiency can be derived from the enhanced use of better-

quality weather forecasts and other meteorological information that results from the improved availability of AMDAR data,” said de Juniac.

The AMDAR observing system produces over 800,000 high-quality observations per day of air temperature and wind speed and direction, together with the required positional and temporal information, and with an increasing number of humidity and turbulence measurements being made.

This information is provided to meteorological agencies and computerized weather prediction systems. These in turn support the generation of forecast and weather service products for aviation.

The AMDAR system has made a positive contribution and improvement to weather forecasts. These are vital to airline and aviation efficiency and safety in an era when the industry is striving to make flying more sustainable and limit its contribution to climate change.

Under the new WICAP collaboration, the WMO community will take on the role of establishing a regionally based operational framework for reception and processing of the data. The IATA will be responsible for promoting airline participation in the program and help coordinate technical solutions for data relay, while protecting the airlines’ ownership of the data.