

# Safety Bulletin

7 APRIL 2016

## Understanding AIREPS

Aircraft-based observations significantly contribute to the integrity of the global aviation meteorological system. Air-Reports (AIREPs), enable:

- meteorologists to be made aware of a condition that has not been forecast
- validation of global weather prediction models, including elements such as upper-air wind, temperature and humidity forecasts
- other pilots to be advised of hazardous meteorological conditions
- improvement in the accuracy of meteorological services, especially at remote locations.

In general terms, pilots are required to meet AIREP requirements through:

- Routine AIREPs
- AIREP (Special)
- Short AIREP

### Routine AIREPs

Routine AIREPs are reported at promulgated locations along certain routes, as detailed in Enroute Charts. This process is largely automated through the provision of information derived from the Aircraft Meteorological Data Relay (AMDAR) system.

### AIREP (Special)

AIREP (Special) are to be provided as soon as practicable after encountering any Significant Meteorological Information (SIGMET) phenomenon or any other MET condition which is likely to affect the safety, or markedly affect the efficiency, of other aircraft. SIGMET phenomenon are:

- severe turbulence
- severe icing (including severe icing due to freezing rain)
- severe mountain waves
- thunderstorms with or without hail that are obscured, embedded, widespread or in squall lines
- tropical cyclones
- heavy dust storm or heavy sandstorm
- volcanic ash cloud
- pre-eruption volcanic activity or volcanic eruptions
- radioactive cloud.

## **Short AIREP**

Pilots can report, or may be requested by Air Traffic Control (ATC) to provide a Short AIREP when they encounter any of the following conditions:

- unexpected significant variations to the cloud amount, base or tops (by reference to QNH)
- reduced visibility due to fog, mist, hail, rain, snow or dust (or if an improvement is observed)
- significant variation to forecast wind
- other phenomena, reduction or improvement in MET details that differ to the forecast information.

Although Airservices handling of AIREP (Special) and Short AIREP will be the same, it is important that pilots use the terms 'AIREP', 'AIREP Special', or 'Short AIREP' when advising ATC to ensure the information is processed accordingly. In addition to advising the Bureau of Meteorology, if the pilot reports an AIREP (Special) it may require ATC to commence hazard alerting services to other aircraft and ATC sectors.

It is imperative that pilots continue to report meteorological information through the AIREP system to maintain the integrity of the global aviation meteorological system.

## **Further information**

[AIP GEN 3.5.11](#)

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