

EUROCONTROL guidance notes for pilots

4. Getting Meteorological Information before Flight



AIRSPACE INFRINGEMENT

This is one of a series of Guidance Notes (GN) intended to help you keep out of trouble. The others are listed at the foot of the next page.

Airspace is occasionally infringed by pilots being forced to deviate from their planned route or level due to bad weather and unintentionally entering restricted airspace. VFR pilots may not be qualified to fly in IFR conditions, or their aircraft may not be suitably equipped.

This note deals with sources of meteorological information available to the aviator and the procedures for getting this information.

UNDERSTANDING METEOROLOGICAL INFORMATION

Before flying, a pilot needs to know several things about the weather:

1. What conditions he/she should expect at the departure, arrival and alternate airfields, and at any other airfields he/she might visit,
2. What conditions he/she should expect on the ground and around the aircraft during the flight,
3. The winds and temperatures to plan the departure, navigation and arrival, and
4. Whether these forecasts are likely to be correct.

It is well worthwhile buying a good book on the subject and studying it carefully.



AIRFIELD WEATHER FORECASTS AND REPORTS

Airfield weather forecasts (TAF) indicate the expected weather at the aerodrome for the period stated. The information is presented in a set sequence, and in an internationally agreed code, much of which is shorthand English. A TAF with its decode is illustrated in the Annex.

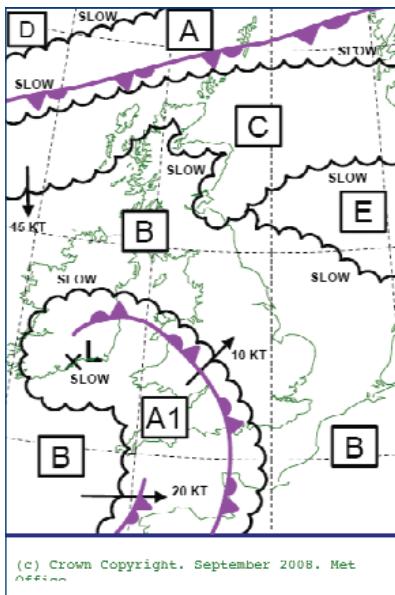
Like any forecast, a TAF can only be a best estimate of the conditions to come, which may turn out worse than anticipated. It is important to check that the actual weather at the aerodrome agrees with the forecast. A routine (usually every half hour) report of actual conditions is called a METAR, a non-routine report of changes is called a SPECI. Pay special attention to SPECI reports - they tell you about significant, and often sudden change of mete-

orological conditions. An example of a METAR is included at the Annex.

Note that all cloud vertical measurements in aerodrome forecasts or reports are heights expressed in feet above the aerodrome, and all directions are Magnetic.

EN-ROUTE WEATHER

Some countries produce GA Forecasts (GAFOR) which may divide their country into areas with not only their own coded forecast but advice about the possibility of safe VFR flight. However, the pilot is always responsible for interpreting the available information. Specific route forecasts may be obtained at a cost from National Meteorological Offices, but most general aviation pilots use area forecasts which are usually published free of charge, and may be in text or pictorial form.



For flights at medium level, "significant weather charts" include the altitudes of cloud bases and tops, the freezing level and areas where icing or turbulence is expected. Such charts should be read in combination with the VFR forecasts which describe the conditions to be found at low altitudes.

All cloud vertical measurements in area forecasts are altitudes in feet above sea level, and all directions are True.

Above is an example of a low altitude chart (F215) published by the UK Meteorological Office (see link).

The chart depicts areas of weather and the speed and direction in which they are moving. Each area is marked with an identifying letter and a table describes the weather to be expected in each area. The

description uses a format similar to the METAR code.

WINDS AND TEMPERATURES EN-ROUTE

Winds and temperatures at various altitudes for a geographical area are usually available either in the form of a chart or a table.

SOURCES OF METEOROLOGICAL INFORMATION

Most large airfields have a briefing facility where pilots can obtain a weather briefing before flight. However, usually the pilot must interpret the information provided without help.

In many countries, an aviation meteorological briefing can be obtained on-line, either in association with the aeronautical information briefing, or separately (see Briefing Note GN 2 - Flight Preparation). For example, the UK Meteorological Office provides a free weather briefing service to registered users for general aviation at <http://www.metoffice.gov.uk/aviation/ga.html> which covers parts of Europe as well as UK. Another popular source of meteorological information is <http://euro.wx.propilots.net/>.

Always make a phone call to your local Met office when you are unsure of the weather or of the interpretation of the weather information. However you get your information, never go flying without first obtaining a good weather briefing.

HAVE A SAFE FLIGHT

We hope you have found this useful. If you have any suggestions for improvement, please let us know.

OTHER GUIDANCE NOTES

1. Rules for VFR Flight
2. Flight preparation
3. Getting Aeronautical Information Before Flight
4. Getting Meteorological Information Before Flight
5. Using Meteorological Information for Planning
6. Visual Navigation
7. VOR / DME / ADF Navigation
8. GPS Navigation
9. Getting Aeronautical & Met Information In Flight
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