

008 Weather

(Preparation for Flight)

Aim to learn how to obtain aviation weather forecasts in preparation for flight.

Definitions: Weather forecasts can be broadly divided into 2 groups 1- safety information and 2-Soaring information. This guide helps with obtaining safety and legal information prior to flying.

How to

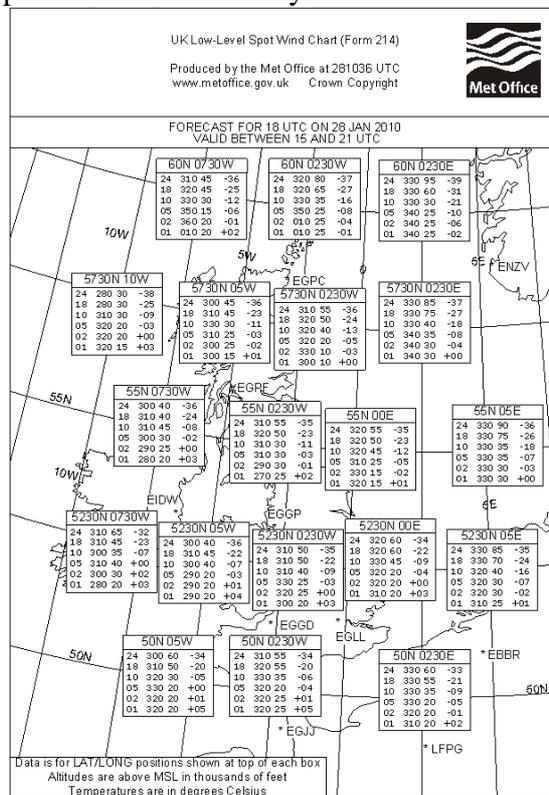
Under international agreements, the MET office provide UK weather information for Aviators world wide. Most countries have adopted this agreement in the name of flight safety.

Go to <http://www.metoffice.gov.uk/aviation/ga.html> and log on and register. There are some pay services, but you should not need those. You will be asked the purpose, tick other and insert Gliding in the box. Once registered you are good to go.

The two charts we will concentrate on are Form 214 and Form 215, you will see a mass of other material but this will do for now.

Form F214

UK spot-wind chart providing wind speed and direction and temperature for standard levels up to FL240, updated four times a day.



You will notice that each box has a latitude and longitude on the top. Brentor is approximately 50° 36'N and 4° 15'W, so the 50N 05W box is fairly close.

50N 05W			
24	300	60	-34
18	310	50	-20
10	320	30	-05
05	330	20	+00
02	320	20	+01
01	320	20	+05

1. The first column shows altitude (above sea level) in thousands of feet.
2. The 2nd column shows the wind direction in °T.
3. The 3rd column shows wind strength in knots.
4. the 4th column shows temperature in °C.

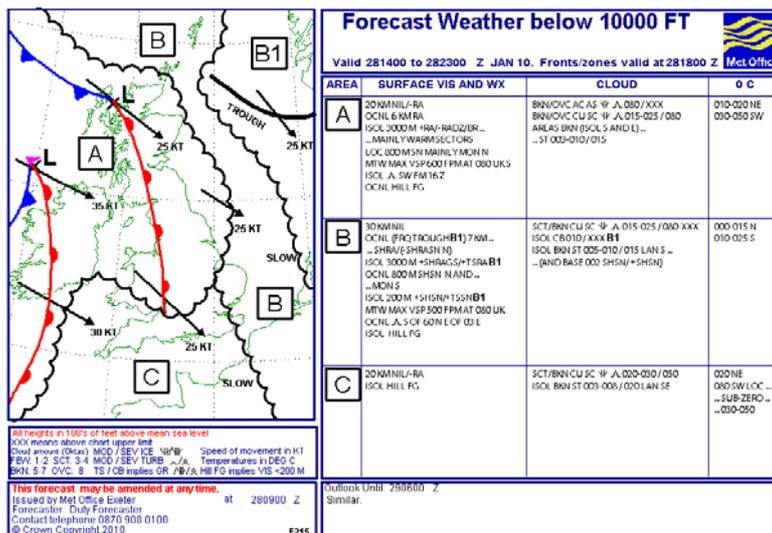
ALWAYS check the date and valid time on the top, before using the information. Winds will vary during the course of the day, particularly if fronts are passing through. This forecast is for 18.00hrs UTC.

In this example the winds at 2000ft amsl (Top of the winch launch) are predicted to be 320°T at 20 kts with a temperature of 1°C. This would be at 18UTC on the 28 January 2010.

What is the forecast for 10000ft?

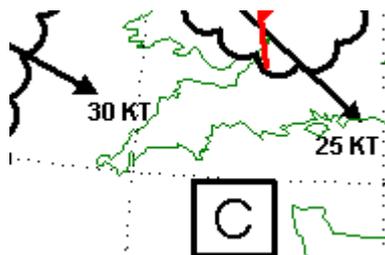
Form F215

UK low-level weather synoptic chart providing a graphical display of areas of different weather plus text relating to surface visibility, weather and cloud up to FL100, updated four times a day.



You will notice that this form has a picture illustrating the exact position the fronts are expected to reach by the time shown. The wiggly lines do not indicate cloud, but are the expected boundary between different weather areas.

On the right, each area is described, in this example Brentor is in area C.



A warm front will have passed through at about 25 knots and is moving away. Another warm front is approaching at 30 knots, so you should be able to estimate when it might arrive. This is the prediction for 1800hrs UTC.

C	20 KM NIL/-RA ISOL HILL FG	SCT/BKN CU SC 4/ A. 020-030 / 050 ISOL BKN ST 003-008 / 020 LAN SE	020 NE 080 SW LOC SUB-ZERO 030-050
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The table on the right tells us that Area C is expected to have a horizontal visibility of 20Km, with no significant weather and light rain.

The cloud will be scattered to broken cumulus and strato-cumulus, bases will be between 2000 and 3000ft amsl with cloud tops at 5000ft amsl. Also there will be isolated patches of broken stratus with bases of 300ft to 500ft and tops of 2000ft, inland to the south east of zone C.

Freezing levels will be 2000ft in the NE, and 8000ft in the SW.

You can see how with some simple codes the Met Office have been able to condense the data into a small space. With some help from your instructors, GETMET, and some intuition of your own you will soon learn to use it. The key is practice, practice and practice.

Tips

Register with the Met office and start using the service, use it often and ask questions if you are unsure. Decodes are available on the Met office site to help you get started.

Further Reading

1-Met Office Publication GETMET available on line
<http://www.metoffice.gov.uk/aviation/services/getmet2009.pdf>

2-Explanations and training materials on line Met Office web site.