

User guide

Graphical Aviation Forecast (GAF)

A product from MET Norway - The designated service provider for
Aviation Weather Forecasting in Norway

Version 1.1
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Disclaimer

Please be aware that the specific values of any of the elements given in these forecasts must be understood to be probable values the elements are likely to assume during the period of the forecast. This is due to variability of meteorological elements in space and time and to limitations in numerical forecasting techniques. Considerations concerning flight safety and fueling requirements must take into account that the forecast values could differ from the encountered actual values at the validity time of the forecast.

These products are automatically generated from the Norwegian Meteorological Institute's numerical weather models. It does not eliminate the need to check out available information from: TAF, Metar, Sig-WX and Sigmet/Airmet.

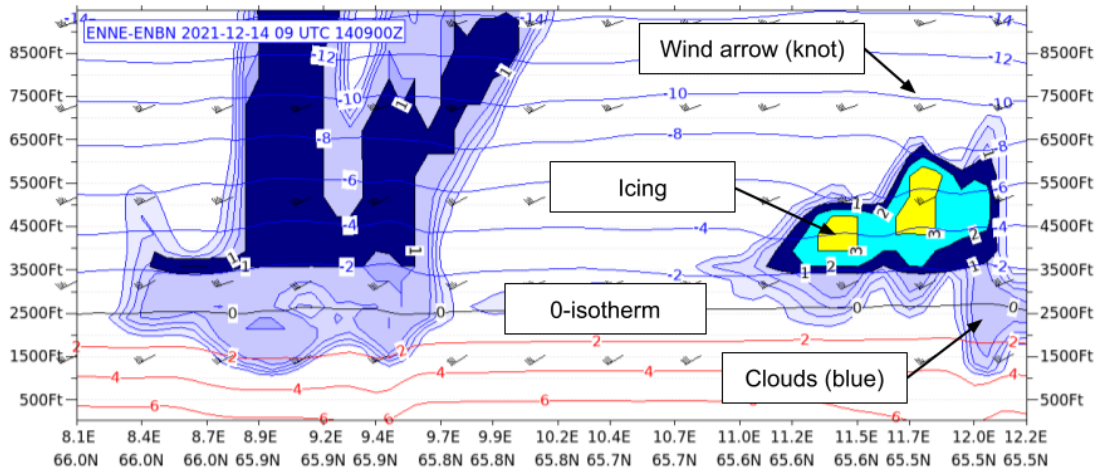
If in doubt, call the aviation forecaster at MET Norway or stay on the ground!

Description of content

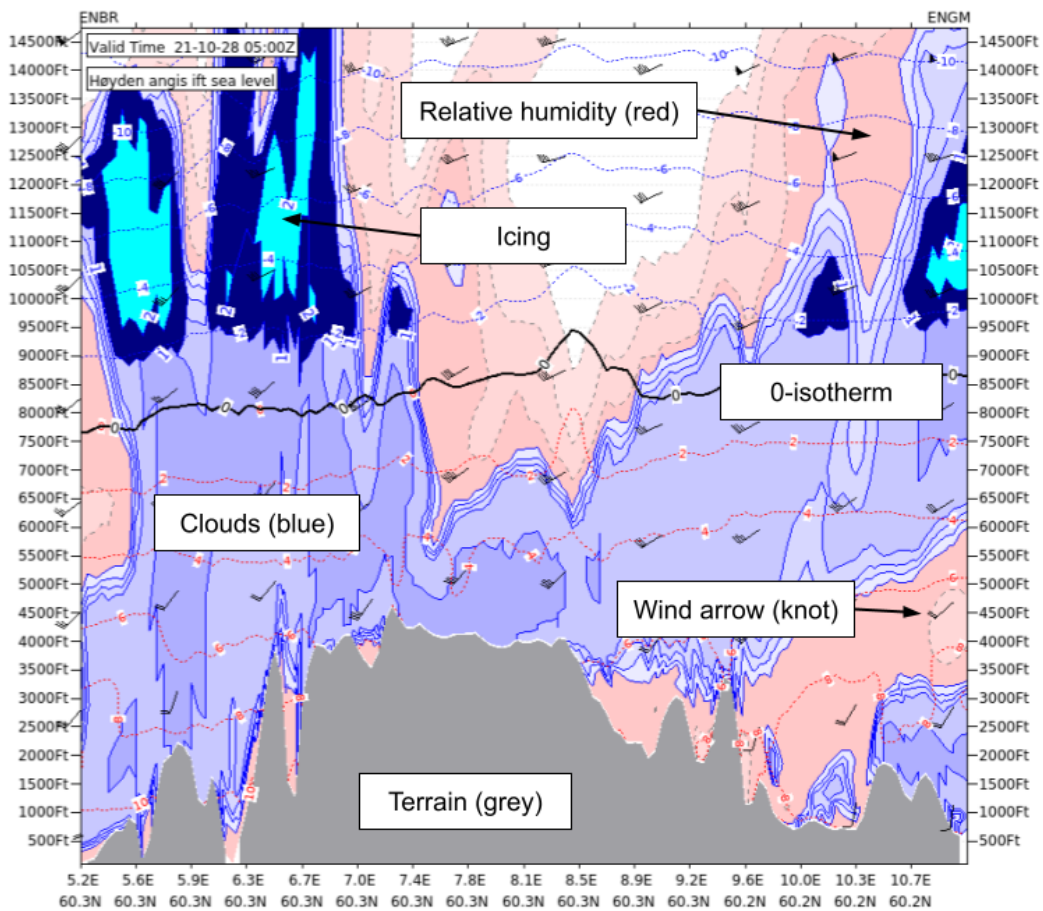
Graphical Aviation Forecast for General Aviation (low level flights up to FL100) consists of vertical cross sections and map layers with meteorological parameters. Data is given on hourly resolution. The vertical cross sections are shown for 12 hours ahead, and the map layers have forecasts for three days. An exception is the map layer for turbulence, which is shown 9 hours ahead.

Vertical cross sections

Predefined vertical cross section plots for flight routes offshore and over land. The plots are 2-dimensional, with flight path on the X-axis and altitude along the Y-axis (from SFC to 10,000ft for offshore routes, and from SFC to 15,000ft for routes over land). Height is given in feet above sea level.







Example of a vertical cross section offshore which shows wind, temperature, clouds and icing.



Example of a vertical cross section over land which shows wind, temperature, relative humidity, clouds and icing. Terrain is plotted in grey.

Wind arrows indicate the direction and strength of the wind in knots. The wind direction is indicated as follows: North (360°) by arrows pointing downwards, south (180°) by arrows pointing upwards, west (270°) by arrows pointing to the right and east (90°) by arrows pointing to the left.

Isolines for temperature: blue for temperature below zero, red above zero, while the 0-isotherm is displayed as a black solid line.

	Severe	The blue palette shows the density of clouds for degrees 0.2, 0.4, 0.6, 0.8 and 1, where 1 means completely cloudy. Darkest color indicates the highest density of clouds.
	Moderat	
	Feeble	The multicolor palette shows icing intensity : dark blue = traces of ice, cyan = feeble icing conditions, yellow = moderate icing conditions, red = severe icing conditions.
	Trace	

The red palette shows **relative humidity** for 70, 80, 90 and 100 %, the darkest red shadow indicates the highest humidity (only available over land).

The gray palette shows the **terrain**.

Map layers

Wind 10m

Map with wind and mean sea level pressure. Blue, solid isolines for mean sea level pressure. Wind arrows indicate the direction and force of the wind in knots. The palette shows the wind force: from weak winds (light green, 0.4-3 kt) to strong winds (blue, > 63.5 kt).

Wind FL

Maps with wind. Available for flight level 005, 025, 050, 065 and 100. Wind arrows indicate the direction and force of the wind in knots. The palette shows the wind force: from weak winds (light green, 0.4-3 kt) to strong winds (blue, > 63.5 kt).

Clouds

Map with clouds and fog. The light brown palette shows medium level clouds with altitude between 6500 ft and 13000 ft. The yellow palette shows low level clouds, with altitude from the surface up to 6500 ft. The red palette shows fog. For all palettes: darkest colors indicate the highest cloud/fog density.

Visibility

Map with visibility at the surface. The palette shows visibility in meters, from poor visibility (dark red, 0-100 m) to good visibility (blue/white, > 10000 m). For visibility below 1000 meters the palette has 100 meters intervals. For visibility above 1000 meters the palette has 1000 meters intervals. Areas in the map with visibility more than 10 km have no color coding.

Freezing level

Map with freezing level (0-isotherm). The palette shows freezing level (0-isotherm), from surface (no color coding) to above 10000 ft (red).

Precipitation 1 hour

Map with precipitation. The palette shows precipitation intensity, from light precipitation (light blue, 0.1-0.2 mm) to heavy precipitation (dark purple, > 30 mm). Yellow solid lines show precipitation as snow. If all of the precipitation is enclosed by yellow lines, all of the precipitation is snow. The red pixels show risk of freezing rain/drizzle.

Icing index

Map with atmospheric icing. The palette shows icing intensity: dark blue = traces of ice, cyan = feeble icing conditions, yellow = moderate icing conditions, red = severe icing conditions.

Temperature 2 meter

Map with temperature at 2 meters height. Blue and purple colors indicate temperature below zero, yellow and red colors indicate temperature above zero.

Sea surface temperature

Map with temperature at sea level. Blue and purple colors indicate temperature below zero, yellow and red colors indicate temperature above zero.

Helicopter triggered lightning index

Map with risk for helicopters to trigger lightning offshore. The index is only valid offshore and in coastal areas, and is set to zero inland. Yellow indicates low risk, orange indicates moderate risk and red indicates high risk. In addition, cyan (dark blue) coloured areas indicate (high) risk for natural triggered lightning.

Thunder index

Map with risk of natural triggered lightning. Cyan indicates risk of lightning, and dark blue indicates high risk of lightning.

Helicopter significant wave height

Map with significant wave height for offshore helicopter operations. Grey color indicates the lowest wave heights, and purple color indicates the highest wave heights.

Turbulence

Map layer which indicates moderate and severe turbulence below FL100. Orange indicates moderate turbulence and red indicates severe turbulence. Values are given 9 hours ahead and are updated every hour.