What is a aerological meteogram ?

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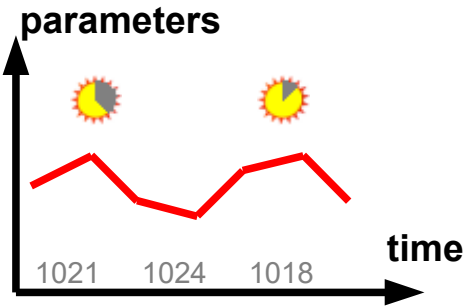
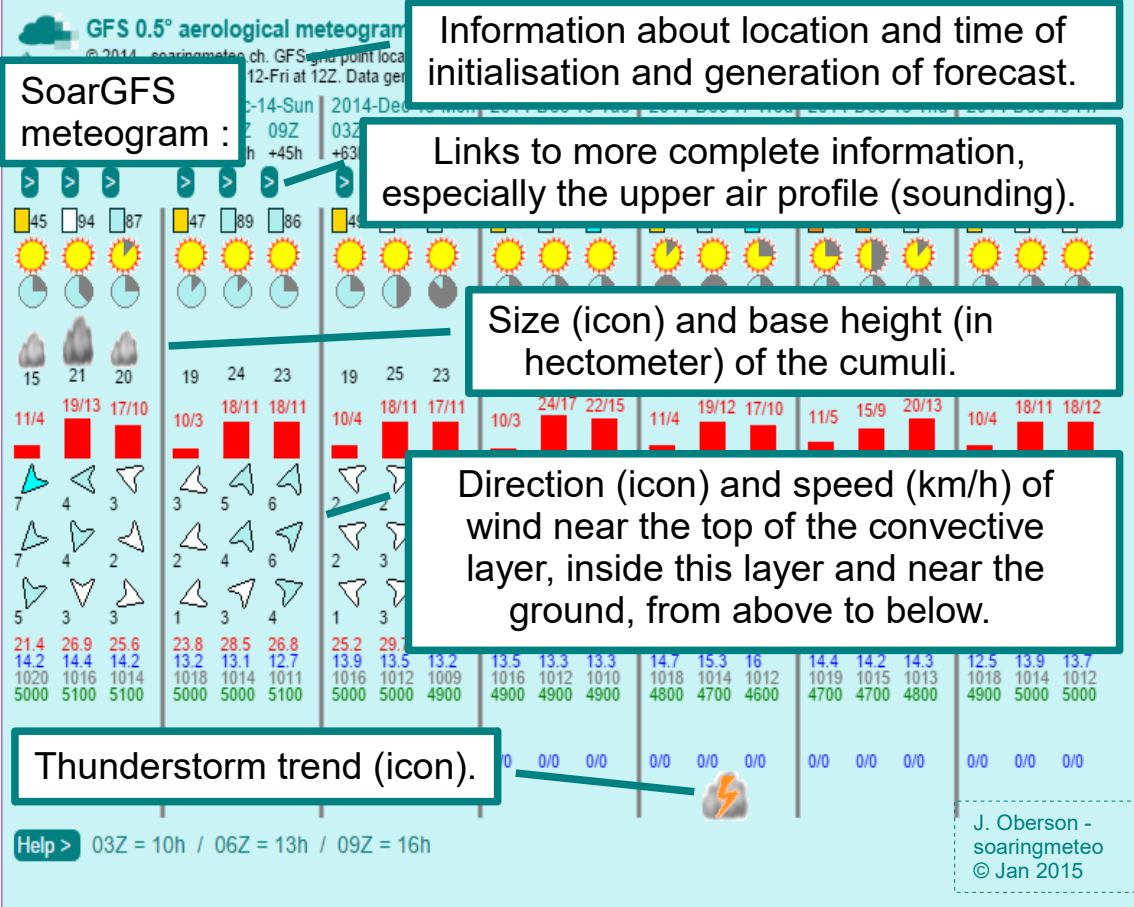
It is a simple xy graph. It represents at **<u>any particular place</u>**, the evolution of one or more aerological parameters y during a time frame x (a few hours to a few days).



The parameters can be in the form of icons, curves or numerical values. If there are too many parameters, especially the curves, the meteogram can rapidly become unreadable.

The meteograms of soarGFS have many parameters, distributed in 21 periods during 7 days (3 periods / day) of forecasting. So icons and numerical values are preferred.


GFS 0.5° aerological meteogram
SoarGFS meteogram :
Information about location and time of initialisation and generation of forecast.
Links to more complete information, especially the upper air profile (sounding).
Size (icon) and base height (in hectometer) of the cumuli.
Direction (icon) and speed (km/h) of wind near the top of the convective layer, inside this layer and near the ground, from above to below.
Thunderstorm trend (icon).
Help > 03Z = 10h / 06Z = 13h / 09Z = 16h
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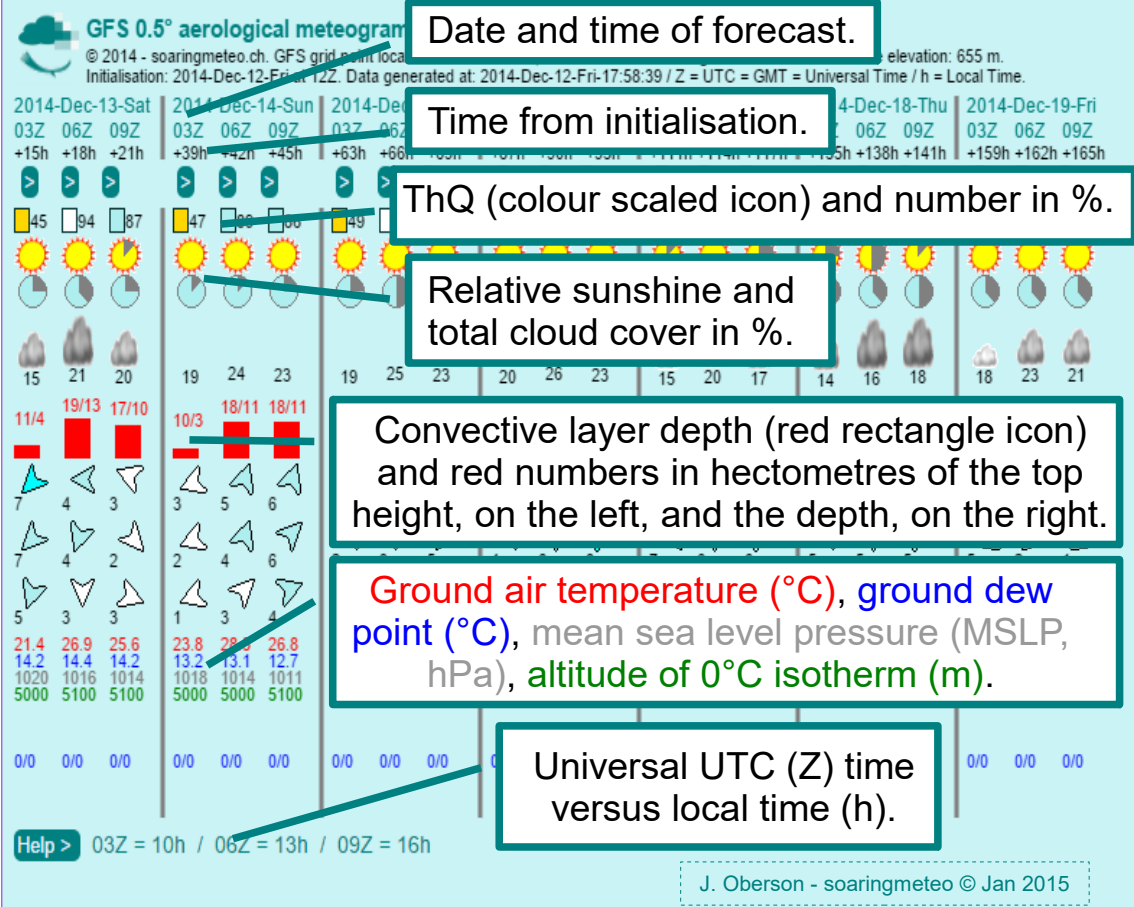
GFS 0.5° aerological meteogram
© 2014 - soaringmeteo.ch. GFS grid point local
elevation: 655 m.
Initialisation: 2014-Dec-12-Fri at 12Z. Data generated at: 2014-Dec-12-Fri-17:58:39 / Z = UTC = GMT = Universal Time / h = Local Time.
2014-Dec-13-Sat
03Z 06Z 09Z
+15h +18h +21h
2014-Dec-14-Sun
03Z 06Z 09Z
+39h +42h +45h
2014-Dec
+63h +66h
4-Dec-18-Thu
06Z 09Z
+135h +138h +141h
2014-Dec-19-Fri
03Z 06Z 09Z
+159h +162h +165h
45 94 87
47
49
15 21 20
19 24 23
19 25 23
20 26 23
15 20 17
14 16 18
18 23 21
11/4 19/13 17/10
10/3 18/11 18/11
7 4 3
3 5 6
7 4 2
2 4 6
5 3 3
1 3 4
21.4 26.9 25.6
14.2 14.4 14.2
1020 1016 1014
5000 5100 5100
23.8
13.2
1018
5000
13.1
1014
5000
26.8
12.7
1011
5100
0/0 0/0 0/0
0/0 0/0 0/0
0/0 0/0 0/0
0/0 0/0 0/0
Help >
03Z = 10h / 06Z = 13h / 09Z = 16h
Date and time of forecast.
Time from initialisation.
ThQ (colour scaled icon) and number in %.
Relative sunshine and total cloud cover in %.
Convective layer depth (red rectangle icon) and red numbers in hectometres of the top height, on the left, and the depth, on the right.
Ground air temperature (°C), ground dew point (°C), mean sea level pressure (MSLP, hPa), altitude of 0°C isotherm (m).
Universal UTC (Z) time versus local time (h).
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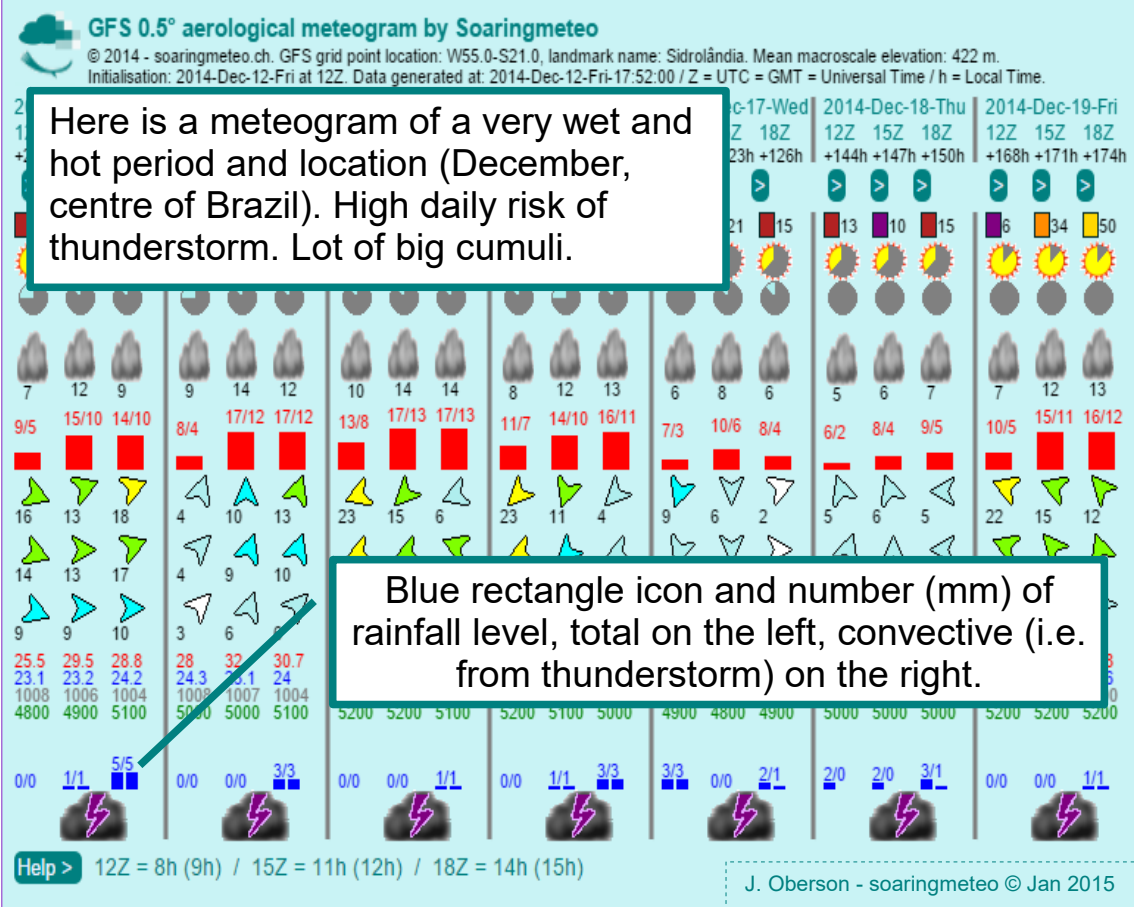
GFS 0.5° aerological meteogram by Soaringmeteo
© 2014 - soaringmeteo.ch. GFS grid point location: W55.0-S21.0, landmark name: Sidrolândia. Mean macroscale elevation: 422 m.
Initialisation: 2014-Dec-12-Fri at 12Z. Data generated at: 2014-Dec-12-Fri-17:52:00 / Z = UTC = GMT = Universal Time / h = Local Time.
Here is a meteogram of a very wet and hot period and location (December, centre of Brazil). High daily risk of thunderstorm. Lot of big cumuli.
2014-Dec-18-Thu
12Z 15Z 18Z
+144h +147h +150h
2014-Dec-19-Fri
12Z 15Z 18Z
+168h +171h +174h
Blue rectangle icon and number (mm) of rainfall level, total on the left, convective (i.e. from thunderstorm) on the right.
Help >
12Z = 8h (9h) / 15Z = 11h (12h) / 18Z = 14h (15h)
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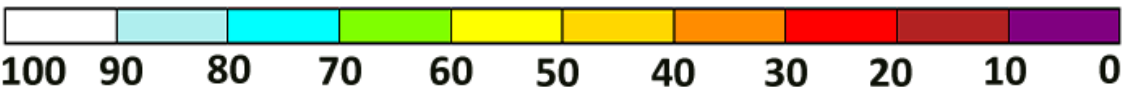
The ThQ (thermal quality) is a parameter in % that combines three others: the amount of clouds, the thickness of the convective boundary layer and the average wind speed of this layer. This artificial parameter allows to assess the conditions of thermal flying at a glance. But it must not replace the assessment of the true weather parameters. Its values range from 0% (very bad thermal soaring) to 100% (good thermal soaring). If there is no cloud (i.e. lot of sunshine), if the convective layer has a thickness of more than 1200 m and if the winds are weak, the ThQ is close to 100%. The ThQ decreases if the amount of cloud increases, the winds strengthens or the convective layers thickness decreases. If two of these three parameters are favourable, but the third is very unfavourable, for example few clouds, good convective boundary layer but strong winds, the ThQ is near 0. To evaluate the ThQ even faster, there are small colour-coded icons. See the colour scale below:



Relative sunshine in % : examples from links to right, 100, 75, 50, 35, 0.

Cloud cover in % : examples from links to right, 100, 65, 50, 25, 0.

Many translucent clouds, generally located at high level, allowing the solar radiation to cross them.

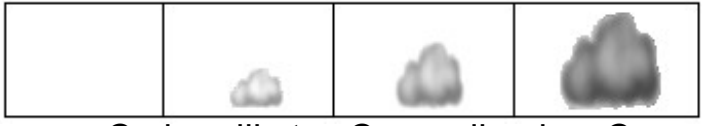
Generally clear sky with locally numerous and large cumulus, in location with good thermals.

N < 1 NE 1-2 E 2-3 SE 3-5 S 5-7

In m/s

SW 7-9 W 9-12 NW 12-15 ESE 15-20 WSW >20

Zero or almost zero risk | Low risk | Medium risk | High risk | Very high risk of thunderstorm



No or rare cumulus. | Cu humilis to mediocris. | Cu mediocris to congestus | Cu congestus to cumulonimbus