meteoblue SNOW Meteogram 1-6 days

1 Display

The SN☼W meteogram 1-6 days (see Figure 1 - 3) shows the local development of temperature in various altitudes, and the precipitation, snow melt and snow height at ground level in hourly steps for the next days. All data are displayed in local time, beginning with the valid time at the beginning of the forecast period for the surrounding area.

The SN☼W meteogram is available for all meteoblue model domains (Europe, South America, Africa, Southeast Asia). In other areas, the SN☼W meteogram can only be produced upon special request. The current availability of meteoblue models is presented with our model coverage (http://www.meteoblue.com/en_GB/content/464).

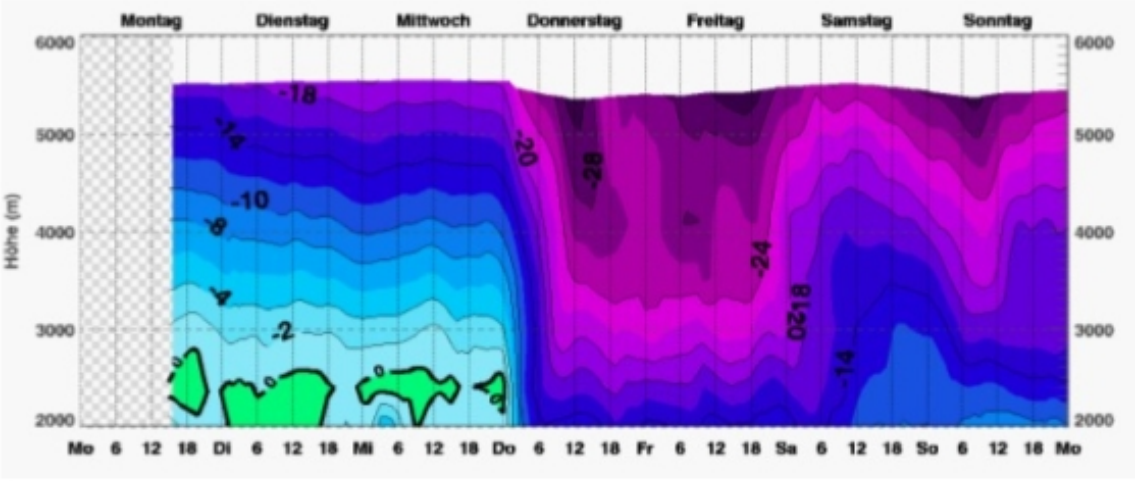

Figure 1. Diagram of temperature layers with 7 day forecast. Freezing level (Zero °C) marked by black line. Ground level is the average altitude of the area surrounding the selected place.

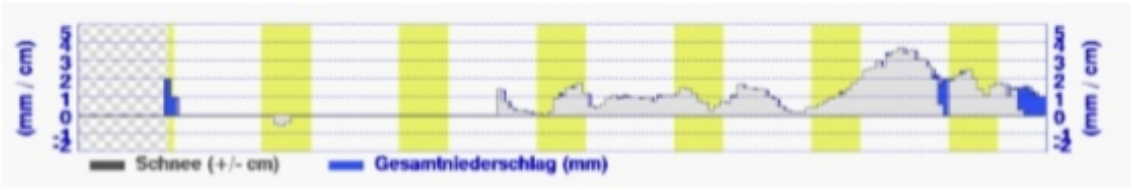

Figure 2. Precipitation diagram with 7 day forecast. Precipitation amounts for total (blue bars) and snow (white bars). Snow is given in mm water equivalent (WE): 1 mm WE = approximately 10 mm snow cover. Negative snow bars indicate snow melt. Values are accumulated sums of preceeding hour.

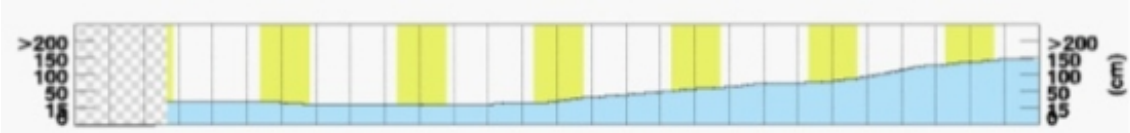

Figure 3. Snow cover diagram with 7 day forecast. Snow level (light blue) in cm represents average ground cover of area. Values are valid for each hour. Scale for snow levels ends at >200 cm.

2 Parameters

2.1 Temperature

The temperature diagram (Figure 1) shows the hourly temperature in the air up to 500 hPa pressure (approximately 5 km asl) during the forecast period, including the freezing level, if it occurs below the 500 hPa level. Temperature curves use the standard temperature colour scales, to improve interpretation.

2.2 Precipitation amount and type

The precipitation diagram (Figure 2) shows the amount and type of precipitation, as well as snow melt (negative scale). All values are sums of the preceding hours.

Precipitation amount is shown in mm (which corresponds to liter per square meter). **Precipitation types** are rain (blue bars) or snow (white bars). **Snow fall** is shown in cm (centimeters) as white bars.

2.3 Snow melt and cover

Snow melt is shown in cm (centimeters) as white bars with negative value (sum of preceding hour) underneath the precipitation diagram (Figure 2). **Snow cover** is shown in cm depth as light blue area in the snow diagram (Figure 3) for the respective time. The scale for snow levels end at >200 cm, and higher levels are shown as if they were slightly above 200 cm.

The s**now cover (**snow level) represents the average ground cover in the area surrounding the selected location. It considers previous snowfall during the cold seasons, so it represents an accumulated value for the season.

3 Units & conversions

3.1 Snow levels

Snow fall, melt and **cover** are all shown in cm (centimetres). One cm of snow cover is equivalent to 0.4 inches, and to approximately one mm of water equivalent (WE), when melted. Light snow is less dense (0.7- 0.9 mm of WE) and "old" compacted snow is more dense (1.2 - 2 mm WE).

3.2 Ground elevation

The elevation is shown in kilometers above sea level (km asl). The level can be converted to pressure levels for comparison with other weather charts: See the table for the conversion of air pressure in height (Fig. 4).

The ground level is the average elevation of the area surrounding the selected location. It will be rounded down to 500m. If a location is located 300m above sea level for example, then the ground is set at 0m. If a location is located at 700m above sea level, the ground level is set at 500 m. Therefore, the SN☼W meteogram rather represents the lower locations in the area.

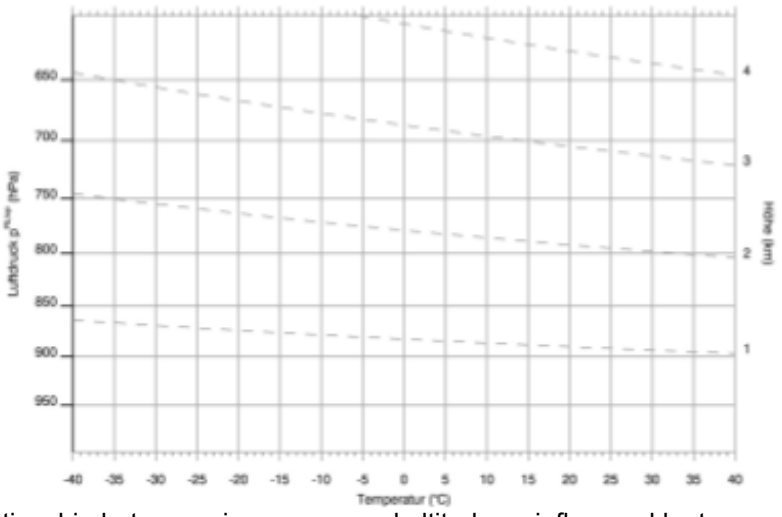

Figure 4. Relationship between air pressure and altitude as influenced by temperature.

3.3 Forecast area and radius

The model "grid cell" (smallest area unit for calculation) size defines the validity area of a SN☼W meteogram: the grid cell diameter is 1/3 of the rainSP☼T radius for the selected location (see Pict☼cast) and varies between forecast domains (see rainSP☼T in the location pict☼cast). The elevation of the SN☼W meteogram is the averaged elevation of the model "grid cell" from which the meteogram is extracted: this may be different from the elevation of the selected location.

3.4 Areas with SN☼W Meteogram

The SN☼W Meteogram is available within all meteoblue model domains. These include Europe, South America, North and Sub-Saharan Africa and Southeast Asia. A detailed overview of the areas covered can be found on http://www.meteoblue.com/de_EN/content/464.

3.5 Time

The SN☼W meteogram time axis is shown in local time valid at the date of diagram generation. The time of forecast update is shown in UTC (Universal Coordinated Time), corresponding to time at the 0° Meridian. Time for places with Eastern longitude has to be added (+ 1 to +12 hours) and time for places with Western longitude subtracted (- 1 to -12 hours). Local time zone information is available in the Standard meteogram or Pict☼cast (which contain sunrise and sunset time), from local airports or http://www.timeanddate.com//worldclock/.

In countries with summertime correction, the meteogram time will be changed on the day of the summertime switch. A meteogram produced 1-6 days before the summer-time switch will thus display the days after the switch with 1 hour difference to the future “actual” time. After the switch, the SN☼W meteogram will again display day 1-6 in the correct actual time.

4 Application

The SN☼W meteogram shows the snowfall, snow melt and snow accumulation within the area surrounding a selected place, as well as the freezing level. This gives a good indication of the snow level in the area, and as it develops through the season.

The SN☼W meteogram can be used for short range planning, area monitoring and as an easily readable information tool. Correct interpretation may require a certain knowledge of the area and constant comparison to the actual situation.

The SN☼W meteogram provides an overview for the area. Actual snow levels may differs con siderably within an area, even within short distances of hundred meters. Differences are caused by accumulation, wind drift, slope, and other factors. Further, snow levels may be altered locally by compression, sliding or water runoff. *An area forecast can therefore not be directly compared to individual measurements of snow in the area.*

The SN☼W meteogram should therefore not be used as quantitative tool, to replace mea surements, for risk assessment and for forensic purposes. The SN☼W meteogram can not replace a thorough assessment of the situation in an area if remote areas or unstable surfaces are being accessed. Local avalanche risk can be estimated, but NOT assessed with help of the SN☼W meteogram.

For decisions which depend on the quantity of snow and movement in snow covered areas, always consult the local observations and recommendations.

The particular value of the SN☼W meteogram is the exact representation of the 6 days forecast, the demonstration of the local temperature stratifi cation and the availability for every place in the region, independently of whether there is a populated location or measuring site in the neighbourhood.