Site forecast for ballonists

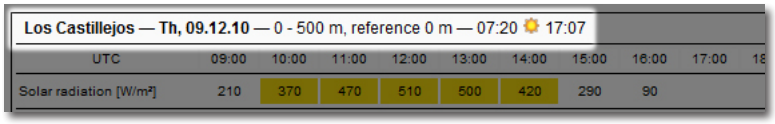
Explanations - page 1

Frequently used abbreviations

UTC	Universal Time Coordinated	
MSL	Height above sea level	*[Mean Sea Level]*
GND	Height above ground	*[Ground]*
FL	Flight level - height above a pressure level of 1013,25 hPa in standard atmosphere	*[Flight Level]*
	Example: FL100 corresponds to 10.000 ft above the pressure level of 1013,25 hPa	
VFR	Visual Flight Rules	
m	Meter	*[100 m correspond to 328 ft]*
ft	Feet	*[100 ft correspond to 30,48 m]*

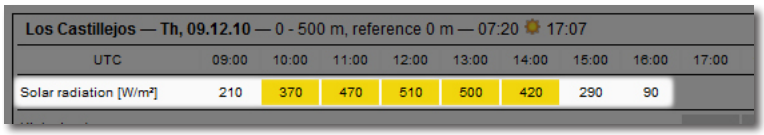
Title

- Location of forecast
- Starting day of forecast
- Reference height
- Sunrise and sunset in UTC



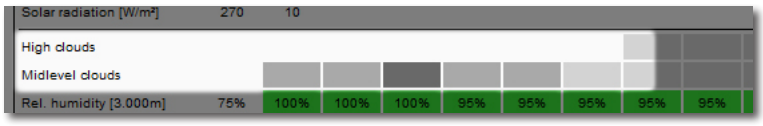
Insolation

- Solar radiation in Watt per m²
- On a typical middle European summer day midday values are around 1000 W/m²
- A grey November day shows values around 100 W/m²



Clouds

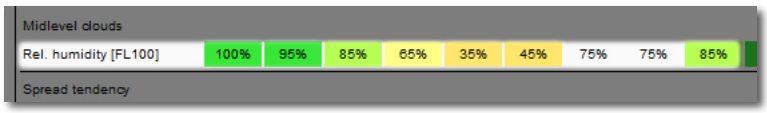
- Information about the optical thickness (vertical extend) of layer clouds
- High clouds
  - Ice clouds (normally above 7000 m MSL)
  - Cirrus
- Midlevel clouds
  - e.g. Altocumulus



- Vertical extend in four categories:
  - Non-existing or very weak
  - Weak
  - Medium
  - Strong

Relative humidity in FL100

- Relative humidity is a benchmark for midlevel clouds around FL100



... 70% Probably no midlevel clouds
VFR-ride in FL100 possible

70% ... 90% Midlevel clouds likely

90% ... 100% Midlevel clouds present

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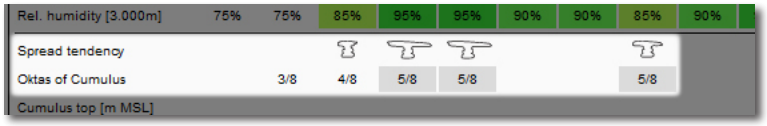
Spread and Cumulus cover

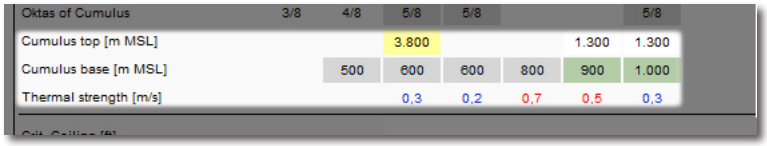
- Tendency of the Cumulus to spread in the upper level due to an inversion
- Cumulus cover in octas



Weak spread
Medium spread
Strong spread

Cumulus tops, Cumulus base and thermal strength

- Upper extend of Cumulus clouds in m above MSL
- Base of Cumulus or blue thermals in m above MSL
- Estimated thermal strength in m per second



Critical ceiling

- Lower base of layer clouds in feet above ground

<2000 Complete cover of layer clouds below 2000 ft
<1000 .. below 1000 ft
<500 .. below 500 ft

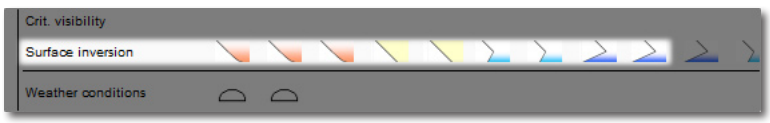
Critical visibility

- Critical visibility at ground level
- The ICAO shortcuts are both in English [FG, HZ] and French [BR]

BR [BRUME] Visibility under 5000 m, haze possible
HZ [HAZE] Visibility under 2000 m, haze possible
FG [FOG] Visibility under 1000 m, fog possible

Surface inversion

- Symbolic expression of the temperature gradient for the lowermost 50 m
- Information about turbulent conditions whilst take-off and landing
- With pronounced inversions in the early morning just above the boundary layer a high wind speed can be expected



Marked inversion → no turbulence
Weak inversion → turbulence weakens (evening)
turbulence starts (morning)
Indifferent stratification → turbulence present
No inversion → turbulence fully developed

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Explanations - page 3

Weather conditions and precipitation

- Significant weather conditions displayed by standard symbols
- A Cumulus symbol on days without frontal activity indicates thermal activity with Cumulus clouds
- Precipitation in mm per hour

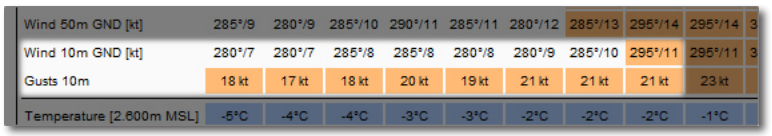
- Light showers
- Moderate showers
- Heavy showers
- Showers of rain and snow
- Heavy sh. of rain and snow
- Snow shower
- Heavy snow showers

- Drizzle
- Light rain
- Moderate rain
- Heavy rain
- Sleet
- Heavy sleet
- Light snowfall
- Moderate snowfall
- Heavy snowfall
- Freezing rain
- Heavy freezing rain

- Cumulus humilis
- Cumulus congestus
- Cumulonimbus calvus
- Cumulonimbus
- Light thunderstorms
- Moderate thunderstorms
- Heavy thunderstorms

Wind

- Reference height is either
  - MSL
  - GND
- In mountain regions no values are displayed if the forecast height is less than the reference height



Base of data

- Regional numerical weather simulation model, processed at our weather computing centre
- Hourly forecasts
- High update frequency - four model runs per day