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## Expedition Weather – Forecast

for  
**OLYMP**

### Individual informations on the forecast for **OLYMP**

**latitude** 40,09° (N...positive values, S...negative values)

**longitude** 22,36° (E...positive values, W...negative values)

**altitudes for temperature and humidity forecasts** 1500 m, 2200 m, 3000 m

**altitude for wind forecasts** 3000 m

**time difference** Local time in Greece is UTC +2 h.

**weblink** All infos and forecasts can be found here:

[LINK](#)

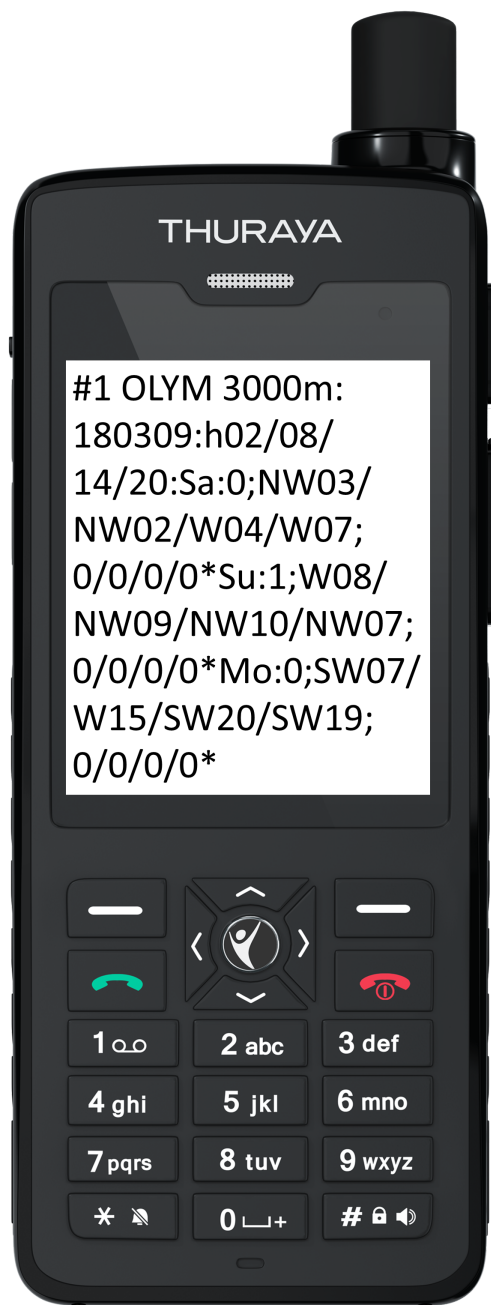
**daily update** ... of weblink and provision of daily forecast:

ca. 10:00 local time in Greece.

**end of the service** 2018-03-20 (year-month-day)

### General informations

- Above-mentioned weblink is updated daily. It provides all GeoSphere Austria expedition weather informations and forecasts. The SMS are created daily. Still, various problems can occur during the transmission to satellite phones, which are beyond GeoSphere Austria's scope. In these cases expeditions are requested to organize SMS transmission on their own: A contact person with access to internet copies the SMS texts (text-files at mentioned link) and paste them at the messaging service of the satphone provider, e.g. *messaging.iridium.com* oder *inmarsat.com/sms*.
- Coordinates and altitude levels might differ slightly from actual values of expedition goal due to difference between the weather model and the real world.
- All time values of the SMS and the meteogram (x-axis) correspond to local time mentioned above. Time difference is rounded to full hours.
- Any queries and optional **telephonic weather briefings** can be made under +43 512 28 55 98 - **DDI is announced when order is confirmed**. The optional briefings per phone are not included in the base order. Details on costs and procedures can be found on the order sheet.



## USER GUIDE

### 6-day – SMS-Forecast

**#1** beginning with #1 the first SMS contains the first three days, #2 is the head of the second SMS containing day four to six.

**OLYM 3000m:** Abbreviation for the expedition goal and altitude for which the following temperature und wind forecasts are valid.

**180309:** Forecast issued on March, 09<sup>th</sup> 2018

**h02/08/14/20:** The following forecast values are valid at these four times of the respective days (02:00, 08:00, 14:00, and 20:00). All time values are in local time at the expedition goal!

**Sa:** Weekday for which the forecast is valid, here: Sa = Saturday.

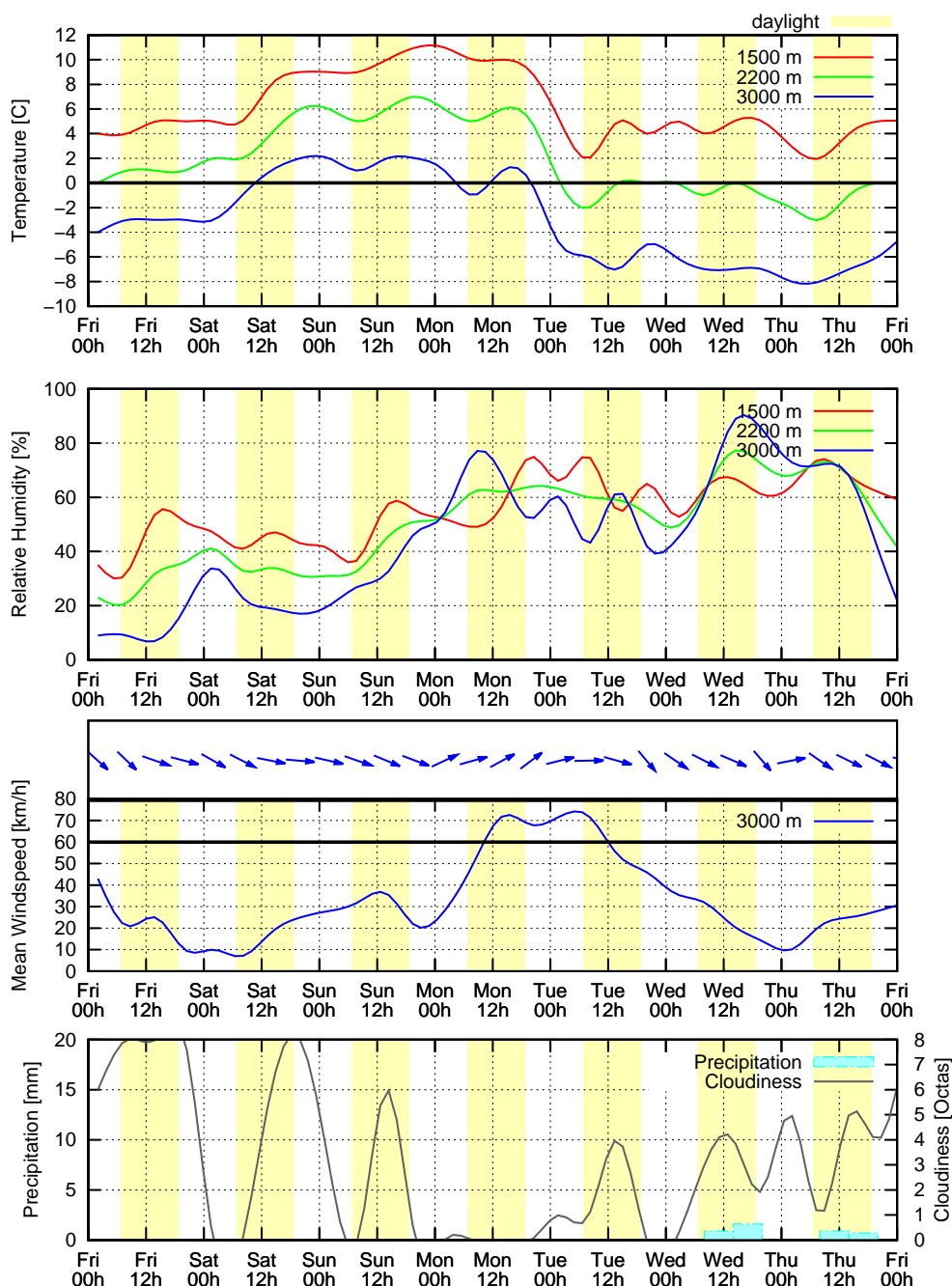
**0;** Expected daily mean temperature in °C at the altitude of the expedition goal (= highest of the above-mentioned forecast altitudes, here: 3000 m).

**NW03/NW02/W04/W07;** Forecasted mean wind speed and wind direction at the altitude of the expedition goal in m/s at the above-mentioned four times of the respective day. In this example, a 3 m/s wind from Northwest is predicted on Saturday 02:00 (a.m.). At 14:00 (2:00 p.m.) winds from West at 4 m/s are expected.

**0/0/0/0** Expected precipitation in liter/m<sup>2</sup> or millimeter (mm), respectively, during the preceding 6 hours of the respective time of day. In this example no precipitation is forecasted.

\* ends the forecast day.

**ZAMG – Weatherforecast for  
Olymp (Lat=40.09°, Lon=22.36°)**  
All time values correspond to localtime in Griechenland.  
(Forecast Date and Time: Friday, 2018-03-09 00 UTC)



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**USER GUIDE**  
**7-day – Meteograms**

**Days and times** ... are always in local time at the expedition goal. Yellow shaded areas frame the time window with daylight.

**Temperature** Forecast of the air temperature of the free atmosphere in °C at 3 relevant altitudes.

**Relative Humidity** Forecast of relative humidity of the free atmosphere in % at 3 relevant altitudes. Above 80-90% clouds/fog is likely at this height; below 50% means dry air.

**Wind arrows** Forecast of wind direction, e.g. ↓ = wind from North, → = wind from West.

**Mean Windspeed** Forecast of the mean wind speed in free atmosphere in km/h at the given altitude. Local wind speed is strongly modified by topography (windward or leeward side, canalization effects,...). Gusts can be 1.5- to 2-times stronger than mean wind speed.

**Precipitation** Forecast of precipitation in mm; in case of snow: 10 mm correspond to of fresh snow, depending on temperature and wind 5-30 cm.

**Cloudiness** Forecast in eights: 0 = clear sky, 8 = overcast. No information about height level of clouds – relative humidity can be an indicator of cloud height level.

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## AID TO INTERPRETATION for SMS and Meteograms

**Windspeed** The forecasts of mean windspeed represent the values in the free atmosphere at summit height or the height of the expedition's target. These prognostic values match very good with reality for freestanding mountains or great plains (→ polar- or desert-expeditions). For less exposed mountains centered in mountain ranges, as well as for valleys or passes the forecasts are less precise. Gusts can be 1.5 to 2-times higher than mean windspeeds.

**Conversion from m/s to km/h** In meteograms the windspeed is specified in km/h. In SMS forecasts it is provided in m/s due to reasons of space.  $1 \text{ m/s} = 3.6 \text{ km/h}$ . As a rough estimation the values from the SMS can be taken  $\times 4$  to get the approximate windspeed in km/h.

**Precipitation** The precipitation amount is given in millimeters (mm). 1 mm is equal to 1 liter per squaremeter ( $l/m^2$ ). It is always a prognosis of the 6-hourly precipitation amount, i.d. the rain or snowfall amount to be estimated during the 6 hours before the given time.

**Snowfall limit** In the meteogram the temperatures in different altitudes allow an evaluation of the snowfall limit. In the SMS the temperature at summit height is given. This way the snowfall limit can be roughly evaluated also with the information out of the SMS without meteogram.

**Snow height** As a rule of thumb to estimate the 6-hourly fresh snow height: 10 mm precipitation mean about 5 cm (wet) to 30 cm (dry, very loose) fresh snow.

**Clouds** The cloudage given in the meteogram doesn't contain any information about the height level of the clouds. It is equal to a sum of "low clouds" (e.g. fog around mountains or clouds in valleys), "middle clouds" (e.g. diffuse stratus clouds above summits or as fog around higher mountains) and "high clouds" (cirrus clouds way above the summits). The forecast of relative humidity can be an indicator for the height levels of clouds: If 7/8 cloudage is forecasted but the relative humidity in all levels is low, it could be high clouds above the summit only. Diffuse light can be expected but no fog.

**Weather charakter in SMS** Due to reasons of space no forecast for cloudage is given in SMS. But the precipitation forecast can be taken to evaluate the estimated weather character. Comparing the forecasted precipitation amount with the real weather character during the expedition (e.g. while reaching base camp) can be very useful to learn about the behaviour of the weather model. An example: Precipitation amounts of 0 mm can stand for clear sky, small amounts between 0.1 and 0.5 mm can mean more and more cloudy conditions and only with higher 6-hourly precipitation amounts it rains or snows with considerable intensity.