

## Selection of long term mean temperature and precipitation series in the Greater Alpine Region (GAR)

The diagrams of the 6 files of this directory show a selection of 45 homogenised, outlier-corrected and gap-completed temperature- and precipitation series of the new HISTALP releases of July 2004. They shall give an overview of the 131 temperature- and 192 precipitation series of the database. The selection covers the longest series (temperature max back to 1760, precipitation max back to 1800) plus those of the classical high elevation Alpine observatories (Grand St. Bernard, Säntis, Zugspitze, Sonnblick, and Villacher Alpe - Obir). Four additional shorter series were added to close regional gaps (Sarajevo, Bratislava, Ljubljana and Hvar).

In general the long-term variability of **temperature series** is highly similar in the entire region (also the high elevation series do not deviate from low elevation sites) but there are considerable differences in different seasons whereas

**precipitation series** show (in addition to the regional differences) also different short- and long-term trends in different sub-regions. Especially the trend differences and the different seasonalities among the Mediterranean, the NW and the Eastern part of the GAR are severe

The applied methods for quality improvement and some first variability analyses are described in the below mentioned references.

The six files contain (each in alphabetical order from Augsburg to Zürich):

T-YR-SH-WH.zip	Annual and half-years-series of temperature means
T-SP-SU.zip	Spring and Summer series of temperature means
T-AU-WI.zip	Autumn and Winter series of temperature means
R-YR-SH-WH.zip	Annual and half-years-series of precipitation totals
R-SU-WI.zip	Summer and Winter series of precipitation totals
T-SP-AU.zip	Spring and Autumn series of precipitation totals

All series show the single annual values and a smoothed version (10-yrs low pass filtered)

3 to 5.... March to May (Spring)

6 to 8.... June to August (Summer)

9 to 11...September to November (Autumn)

12 to 2...December of running year to February of the following year (Winter)

4 to 9....April to September (Summer half year)

10 to 3...October of running year to March of the following year (Winter half year)

1 to 12....January to December (Year)

### References:

Böhm, R., I. Auer, M. Brunetti, M. Maugeri, T. Nanni and W. Schöner, 2001: Regional temperature variability in the European Alps 1760-1998 from homogenised instrumental time series. *International Journal of Climatology* **21**, 1779-1801

Auer I, Böhm R., Jurkovic A, Orlik A, Potzmann R, Schöner W, Ungersböck M, Brunetti M, Nanni T, Maugeri M, Briffa K, Jones P, Efthymiadis D, Mestre O, Moisselin JM, Begert M, Brazdil R, Bochnicek O, Cegnar T, Gajic-Capka M, Zaninovic K, Majstorovic Z, Szalai S, Szentimrey T, 2004: A new instrumental precipitation dataset in the greater alpine region for the period 1800-2002. accepted for *Journal of Climatology*