

## Reconstructing the climate of the 250 years of instrumental records at the northern border of the Mediterranean (the Alps)<sup>(\*)</sup>

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**Summary.** — The paper provides a selection of first results based on a newly developed instrumental climate database for the European Alps and their wider surroundings. After an outline on data availability, network density, series durations and quality aspects some examples for the two main climate elements temperature and precipitation show some principal features of climate variability and trends in the region. Regional as well as seasonal differences are discussed. The overview closes with examples dealing with changes of climate variability: For temperature as well as for precipitation (the former stronger, the latter weaker and with regional modifications) inter-annual (-seasonal, -monthly) variability has not increased but decreased during the past two centuries of well-proved instrumental data in the study region.

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### 1. – Data aspects

During the past decade, the work of ZAMG's climate variability group (Ingeborg Auer, Wolfgang Schöner, Reinhard Böhm plus project-associates) has concentrated on data discovery, digitizing, quality improvement (homogenization, outlier correction and gap filling) in the "Greater Alpine Region" (GAR, 4° to 19° E, 43° to 49° N, 725000 km<sup>2</sup>, 7% of Europe). It was possible so far to create *high-resolution* (recent network densities 75 km (temperature) and 61 km (precipitation), *homogenized* (more than 1000 single

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