



The new WegenerNet climate station network web portal – A gateway to over 10 years of high-resolution precipitation data

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The Feldbach region in southeast Austria, characteristic for experiencing a rich variety of weather and climate patterns, has been selected as the focus area for a pioneering weather and climate observation network at very high resolution: The WegenerNet comprises 153 meteorological stations measuring temperature, humidity, precipitation, and other parameters, in a tightly spaced grid within an area of about $20 \text{ km} \times 15 \text{ km}$ centered near the city of Feldbach (46.93°N , 15.90°E). With its stations about every 2 km^2 , each with 5-min time sampling, the network provides regular measurements since January 2007. Detailed information is available in the recent description by Kirchengast et al. (2014) and via www.wegcenter.at/wegenernet.

As a smaller "sister network" of the WegenerNet Feldbach region, the WegenerNet Johnsbachtal consists of eleven meteorological stations (complemented by one hydrographic station at the Johnsbach creek), measuring temperature, humidity, precipitation, radiation, wind, and other parameters in an alpine setting at altitudes ranging from below 700 m to over 2100 m. Data are available partly since 2007, partly since more recent dates and have a temporal resolution of 10 minutes.

The networks are set to serve as a long-term monitoring and validation facility for weather and climate research and applications. Uses include validation of nonhydrostatic models operated at 1-km-scale resolution and of statistical downscaling techniques (in particular for precipitation), validation of radar and satellite data, study of orography–climate relationships, and many others.

Quality-controlled station time series and gridded field data (spacing $200 \text{ m} \times 200 \text{ m}$) are available in near-real time (data latency less than 1–2 h) for visualization and download via a data portal (www.wegenernet.org). This data portal has been undergoing a complete renewal over the last year, and now serves as a modern gateway to the WegenerNet's more than 10 years of high-resolution data.

The poster gives a brief introduction to the WegenerNet design and setup and shows a detailed overview of the new data portal. It also focuses on showing examples for high-resolution precipitation measurements, especially heavy-precipitation and convective events.

Reference: Kirchengast, G., T. Kabas, A. Leuprecht, C. Bichler, and H. Truhetz (2014): WegenerNet: A pioneering high-resolution network for monitoring weather and climate. *Bull. Amer. Meteor. Soc.*, 95, 227–242, doi:10.1175/BAMS-D-11-00161.1.