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Improvements to the E-OBS gridded dataset

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Based on the daily station data of the European Climate Assessment & Dataset (ECA&D), gridded data for daily maximum, daily minimum and daily averaged temperature, daily precipitation sum and daily averaged sea-level pressure are calculated. This data spans the period from January 1st 1950 and is updated monthly. The gridded dataset is referred to as the E-OBS data and comes in four different grid flavours, of which the 0.25 x 0.25 degree grid is the finest.

The number of stations included in ECA&D has grown steeply in the recent past, making ECA&D and E-OBS excellent tools to assess pan-European climate variability and change. The use of E-OBS has spread beyond the traditional user groups of climatologists and regional climate modellers to other scientific disciplines.
However, the growth of the number of stations makes the calculation of E-OBS computationally expensive and the growing E-OBS user community has uncovered some flaws in the gridded data. The presentation will focus on new developments within E-OBS which aim to address these issues.

The developments relate to a modified algorithm to calculate the gridded data which will enhance the internal consistency between the E-OBS data sets and give an improved representation of extremes. Additional elements, next to temperature, precipitation and sea-level pressure, will be included in the E-OBS suite. Finally, alternative ways are explored to assess the uncertainty in the E-OBS gridded data.