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Evaluation of gridding procedures for temperature over Southern Africa

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Although Africa is considered to be highly vulnerable to climate change, the availability of observational data and derived products is limited. As one element of the SASSCAL initiative ("Southern African Science Service Centre for Climate Change and Adaptive Land Use", a cooperation of Angola, Botswana, Namibia, Zambia, South Africa and Germany), networks of automatic weather stations have been installed or improved (www.sasscalweathernet.org). The increased availability of meteorological observations improves the quality of gridded products for the region. Here we compare interpolation methods for minimum and maximum temperature calculated from hourly temperature data. Due to a lack of long-term records we focused on data from 2014/15 only. The best interpolation results have been produced using a three dimensional interpolation method applying elevation, a continentality index and latitude as predictors.