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Software for detection and correction of inhomogeneities in time series

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During the last decade, software package consisting of AnClim, ProClimDB and LoadData software for processing climatological data has been created. This software offers complex solution in processing climatological time series, starting from loading data from a central database (e.g. Oracle, software LoadData), through data duality control and homogenization to time series analysis, extreme values evaluation and model outputs verification (ProClimDB and AnClim software).

In recent years tools for correction of inhomogeneites in daily data was introduced. Partly methods already programmed in R (e.g. by Christine Gruber, ZAMG) like HOM of Paul Della-Marta and SPLIDHOM method of Olivier Mestre or own methods are available, some of them being able to apply multi-element approach (using e.g. weather types). Available methods can be easily compared and evaluated (both for inhomogeneity detection or correction in this case). Comparison of the available correction methods is also current task of ongoing COST action ESO601 (www. homogenisation.org).

Further methods, if available under R, can be easily linked with the software and then the whole processing can benefit from user-friendly environment in which all the most commonly used functions for data handling and climatological processing are available (read more at www.climahom.eu).