Geophysical Research Abstracts,
Vol. 11, EGU2009-9040, 2009
EGU General Assembly 2009

Scales and trends in 280-year observed rainfall time series

S. Zanetti, M. Boni, and M. Marani

Dept. IMAGE, University of Padova, Italy (marani@idra.unipd.it / Fax: +39 049 8275446 / Phone: +39 049 8275449)

Daily rainfall observations in Padova (Italy) arguably constitute one of the longest observed rainfall time series in the world. Observations started in 1725 and were regularly annotated by the scientists who headed the Astronomic Observatory of Padova over more than two centuries. A patient work of data recovery from the original registries allowed the reconstruction of the entire precipitation time series, characterized by a very limited amount of missing data (less than 500 days in total). Here we present some preliminary statistical analysis aimed at identifying the possible presence of trends, periodicities and characteristic scales, with particular attention to extreme events. The results indeed show the presence of trends in yearly amounts, average intensities, and extreme values. Cyclicities are also detected reflecting large-scale forcings as expressed by global atmospheric index (NAO, etc.), with implications for the documentation of past climatic