



Temperature and precipitation fluctuations in the Czech Republic 1701–2010: comparison of instrumental, documentary and proxy data with model simulations

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The paper concentrates on the analysis of monthly, seasonal and annual temperature and precipitation fluctuations in the Czech Lands during the past 310 years. The following data are used: (i) secular long-term series of six stations (longest observations from 1775 for Prague-Klementinum temperatures and from 1803 for Brno precipitation/drought indices); (ii) reconstructions based on series of temperature and precipitation indices derived from interpretation of documentary sources; (iii) long-term reconstruction of phenological data (dates of winter wheat harvest); (iv) reconstructions from dendrochronological data of spruce from the Krkonoše Mts. and fir from southern Moravia. Different statistical methods are used to characterise and analyse temporal and spatial coherence among these series, also with respect to climate anomalies. The series obtained are compared with millennium model simulations ERIK1 and ERIK2 of the ECHO-G climate model. Particular attention is devoted to the extraction of high- and low-frequency climate signal which is further discussed in the context of other similar papers covering the region of Central Europe.