



Multidecadal variations and trends of central European temperature in simulated climates

Jiří Mikšovský (1,2), Aleš Farda (2), and Michal Belda (1)

(1) Charles University, Faculty of Mathematics and Physics, Department of Atmospheric Physics, Prague, Czech Republic (jiri.miksovsky@mff.cuni.cz), (2) Global Change Research Institute, Czech Academy of Sciences, Brno, Czech Republic

Despite the steady advances in numerical modelling, the current generation of climate simulations still struggles to reliably reproduce some of the processes in the climate system and their effects. Aside from the long-term variations, related to the responses to anthropogenic and natural forcings, a great deal of attention is also being devoted to the ability of the climate models to mimic the multidecadal variability observed in the climatic records, including the possible imprints of phenomena such as Atlantic Multidecadal Oscillation or Pacific Decadal Oscillation. In this presentation, we deliver some of our findings resulting from an analysis of observed and simulated temperature variability in central Europe – a region with long history of climatic measurements, with some of the records extending back to (or even beyond) the 19th century. Comparison of the measured temperature data to multiple historical runs of the CNRM-CM5 global climate model is performed, over the 19th and 20th centuries. For the period since 1850, an analysis is also carried out for temperature series originating from various simulations within the Coupled Model Intercomparison Project Phase 5 (CMIP5). We show that while many of the studied models exhibit relatively good skill in capturing the basic statistical characteristics of regional temperature, their representation of long-term trends and multidecadal variability in the temperature series often differs substantially from the observations.