EMS Annual Meeting Abstracts
Vol. 13, EMS2016-630-1, 2016
16th EMS / 11th ECAC

Are jet tracks changing over Central Europe?

Anna Zsilinszki, Zsuzsanna Dezsö, Rita Pongrácz, and Judit Bartholy
Eötvös Loránd University Department of Meteorology, Budapest, Hungary (zsilinszkia@caesar.elte.hu)

Jet stream substantially influences the daily weather conditions in the midlatitudes including Central Europe, the Carpatian Basin. In our analysis, we begin with a general description of high level winds in this region and examine whether any change can be detected in the recent decades.
A detailed general statistical analysis is performed for wind speeds at 18 levels above 500 hPa pressure level over the region. The analysis includes a general description, complex trend and correlation analysis with the Arctic Oscillation and the North Atlantic Oscillation, and EOF analysis to explore the action centers of variability. Our ultimate goal is to create an objective classification for the location of jet stream related to the Carpatian Basin. This classification is expected to provide a useful tool to understand the effect of detected or potential future changes related to the high level winds, and furthermore, to improve forecasts' skills over the area.