



Winter precipitation variability during the western atmospheric circulation in Central Poland

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A long-term winter precipitation variability in Europe indicated significant increase in precipitation totals. In that season the western atmospheric circulation plays a vital role in the formation of precipitation condition over Poland. Western inflow, mostly from the Atlantic, was observed during almost 28% of time. This circulation type favors frequent but small precipitation totals. Since, the current and future climate projection presents warmer conditions in Poland, especially in winter, it might drives changes in precipitation totals and its character (positive trend in rainfall and negative trend in snowfall occurrence). Furthermore, the humidity transport over the Central Poland and its long-term variability was considered. Temporal analyze of precipitation condition based on daily data form the 15 weather station from the Institute of Meteorology and Water Management, National Research Institute located in the Central Poland for the 1958-2013 period was performed. The data analyze based on western atmospheric circulation was divided into cyclonic, anticyclonic and intermediate types. Additionally, the relation between NAO and precipitation and moisture conditions were studied.