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Storm activity in North Atlantic and precipitation anomalies in European region during winter seasons

N. A. Vyazilova and A. E. Vyazilova

Russian Research Institute of Hydrometeorological Information - World Data Center, Obninsk,, Russian Federation (nav@meteo.ru)

The purpose of this paper is to show the storm activity influence on the formation of wet and dry zone in North Atlantic and European region during winter seasons 1994/95, 2006/07 and 2007/08 years with positive mode of NAO, 1995/96, 2000/01 and 2005/06 years with negative mode of NAO.
The study of storm activity includes the analyses of cyclonic intensity and cyclone track number. Analyses of cyclonic intensity based on calculation cyclone centers number (CCN) and sum of cyclone centers MSLP anomalies (CCMA). This analyses based on automated cyclone tracking algorithm and the 6-hourly MSLP from the NCEP/NCAR reanalyses 2 from 1979 to 2009. Precipitation anomalies were calculated from CMAP archive.
Analyses had included the calculation of cyclone track number in all region [30°N-80°N, 50°W-70°E]and selected latitude zone for long cyclones (with lifetime more 2 day) and short cyclones (with lifetime less 2 day). The study had shown the special features of CCN and CCMA patterns in region for long and short cyclones. The study shows, that every winter season short cyclone track number twice as much long cyclone track number. However, the contribution of long cyclones in main determines the CCMA in region.
Study had shown that winter seasons with positive NAO mode Nord Europe were outstanding by strong positive precipitation anomalies and strong cyclonic intensity, and during winter seasons with negative NAO mode in this region were observed negative precipitation anomalies and weak cyclonic activity.
Standartizide anomalies of integral CCMA for selected latitude zone [55°N-80°N, 50°W-70°E] had shown the intensification of cyclonic activity over North Atlantic and North European region in last years.