EMS Annual Meeting Abstracts
Vol. 13, EMS2016-18, 2016
16th EMS / 11th ECAC

Identification and tracking of Mediterranean cyclones that are engaged on trans-Balkan trajectories towards Romania by using objective methods

Catrina Oana (1,2) and Kajsa Maria Parding (3)

(1) University of Bucharest, Faculty of Physics, P.O.BOX MG – 11, Magurele, Bucharest, Romania, (2) National Meteorological Administration, Sos. Bucuresti-Ploiesti No. 97, Bucharest, Romania, (3) Norvegian Meteorlogical Institute, Oslo, Norway

Mediterranean cyclones identification that are engaged on trans-Balkan trajectories towards Romania was achieved by using an enhanced version of the objective method CCI (Calculus Cyclone Identification) that was recently developed (2006).Dataset used was daily MSLP (Mean Sea Level Pressure) reanalysis, with spatial resolution of 0,125˚ x 0,125˚ and temporal coverage at 00 UTC, from ECMWF (European Centre for Medium Range Weather Forecast) ERA-Interim project. The study was made on the months in wich Genovese cyclones frequency is at highest, namely January-April 2015. The spatial domain of the study was between 0˚ - 40˚ E and 35˚ - 55˚ N. Furthermore, after cyclone identification, a trajectory traking method was used. From all obtained results, only those who unequivocally indicated trans-Balkan trajectories, respectively their asociated meteorological phenomena that had a major impact over weather in Romania, were kept. The results were validated by studying synoptical conditions for the cases used in the analyzes with the CCI method. The conclusion of the study confirm that CCI method for cyclones and its traiectories identification is reliable. So, this method used is important tool in weather prediction in a certain region or time, in order to prevent, as much as possible, property damage.