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ABSTRACTS VOLUME

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Recent changes in precipitation extremes in Romania

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Changes in daily extreme precipitations have been identified in many studies conducted at local, regional or global scales. In Romania, only little research on this issue has been done so far. The present study is focused on the analysis of the trends in daily extreme precipitations indices over a period of 53 years (1961-2013). Data sets of daily precipitation recorded in 34 weather stations were analyzed. Among them, three are located in the Carpathian Mountains area and four are located on the Black Sea Coast. The main goal was to find changes in extreme daily precipitation using a set of 13 indices adopted from the core indices developed by ETCCDMI with appropriate modifications to suit to the studied area. The series of the indices as well as their trends were generated using RClimDex software. The trends have been calculated using the linear mean square method. The findings are similar to those obtained at the global and European continental scales and the most noteworthy are: increasing trends dominate for the most of the indices, but only about 25% of them are statistically significant at α=0.05; decreasing trends are more specific to southern area of the country; decreasing trends of R0.1, CDD and CWD dominate for the great majority of locations; the spatial distribution of the significant slopes in the area is extremely irregular.