



Regional distribution of torrential convective precipitation in Bulgaria (1990-2014)

Tsveta Nikolova, Lilia Bocheva, Petio Simeonov, and Tania Marinova

National Institute of Meteorology and Hydrology, Sofia, Bulgaria, (Tsveta.Kirilova@meteo.bg)

The objective of this work is to present the spatial and temporal distribution of torrential convective precipitation during the last 25 years in different regions of Bulgaria. Only days in which there is thunderstorm activity combined with 24-hour precipitation amount above 60 mm are selected and analyzed. The choice of 60 mm/24h as a bottom limit is motivated by the fact that for 90% of all meteorological stations in Bulgaria it is equal or above the climatological monthly precipitation normal. The regional intra-monthly distribution of such extreme events is also presented. All cases are classified by duration and severity.

Analyze of annual and monthly distribution of wide-spread convective precipitation (which affected at least 4 out of 27 administrative regions of the country) is also presented. These types of severe convective events have become more frequent during the last 10 years. Most of them caused floods and economic loss in the affected regions. They are more often found in Central and East Bulgaria than in the western part of the country. The reported damages as well as type of synoptic situation leading to such convective storms are summarized.