

Interactive comment on “Radar-derived convective storms climatology for Prut River Basin: 2003–2017” by S. Burcea et al.

Anonymous Referee #2

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General aspects: This manuscript describes some aspects of a 15 year convective storm climatology for the Prut River Basin in South-Eastern Romania. The climatology is based upon continuous radar measurements. The availability of homogeneous radar data and the long time series is impressive, and well described in the manuscript. The observations confirm other observations of deep convection all over Europe. However, there are a number of open questions and almost no physical interpretation of the observations are given. Over all, the manuscript requires a major revision.

Specific remarks: Page 3, line 11: what is so special about the Prut River Basin? Is convection over other parts or Romania similar? Or, was just the long time series of observations the reason for selecting this area?

Page 5, line 8: what is about merging or splitting of cells? Has it taken in account?

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Section 4.3: The frequency of storm duration, speed, distance is certainly not normal distributed, in this case other parameters than average values are more appropriate. It would be worth to show distributions, maybe even showing the distributions for the three reflectivity groups. The 2D histograms require some discussion about the mesoscale background of the area. Is there any typical mesoscale or synoptic scale flow pattern in the region for the summer season? Neither Fig. 9 nor Fig 10 show a clear signal.

Section 4.4: Maybe my statistical knowledge is not sufficient, but I don't see any upward or downward trend in Fig. 11 and 12.

Section 4.5: Is there any physical explanation for the analysis of the EOF's? Is it possible to relate the inter annual variations to different weather patterns?

Section 5, page 11, line 3: What makes some parts of the Basin different from other parts? What causes the hot spots? It would be worth to discuss also the mountainous region west of the Prut Basin. Line 15: Is there any physical explanation for preferred travel directions?

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., <https://doi.org/10.5194/nhess-2018-354>, 2018.

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