

Interactive comment on ““Changes” of the thermal continentality in Central Europe between the years 1951 and 2013: case study – Slovak Republic” by J. Vilček et al.

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The presented paper discussed the thermal continentality within the Slovakia. The authors selected the six meteo stations from different topography conditions and the meteo data from the Slovak Hydrometeorological Institute have been used for the analysis of the simple climate continentality index during the period 1951–2013.

1. The relatively poor additional information about detailed description of geomorphology, data quality etc. are in the paper, but it is unknown if due to limited range of the paper or inconsistencies of the authors. I think that the more detailed description of the geomorphology of Slovakia for better understanding the meteo station locations should

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not be a problem for the authors.

2. The climate data are very sensitive for the temporal changes caused by location change, mesoclimate change due to land use change etc., therefore some information about the homogeneity of the climate data used in the paper should be mentioned. On the other hand all climate data in the official climate database of the Slovak Hydrometeorological Institute (Bratislava, Slovakia) have been homogenized through the standard processes recommended by WMO.

3. Geomorphology is a factor that can significantly modify the climate variables and therefore the correct selection of representative climate stations for such analyses is a crucial point. Selected stations represent the three main geotypes in Slovakia: lowlands (West and East Slovakia), basins or valleys (central part of Slovakia) and highlands (Northern part of Slovakia). The lowlands in Slovakia seems to be the most suitable for the "continentality" analysis due to low mesoclimate effects such as temperature inversions in basins, or "mountain" modification effects in highlands.

4. Presented results showed no significant temporal changes in thermal continentality what means that trends of maximum and minimum monthly temperatures are more or less the same. It means that the thermal continentality is the stable within the long period, but the analysis e.g. of the frequency of synoptic types or some circulation indices could be interesting. May be in future the authors will continue in this research.

5. Climate change scenarios are widely discussed in relation to deeper analyses of the special features of future climate. Each scenario is influenced by the model resolution on the all levels of knowledge. Analyses of the climate continentality change according to the various climate change scenarios are interesting, but the obtained results should be presented very cautiously. I think that the authors are aware of this.

My conclusion is that this short paper brings the new information to the mosaic of knowledge connected with "continentality of climate" and after slight revision (e.g. clarification and English revision) this paper could be published.

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