Natural Hazards and Earth System Sciences Discussions

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# Comment on nhess-2020-397

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Community comment on "Evaluation of Mei-yu heavy-rainfall quantitative precipitation forecasts in Taiwan by a cloud-resolving model for three seasons of 2012–2014" by Chung-Chieh Wang et al., Nat. Hazards Earth Syst. Sci. Discuss., https://doi.org/10.5194/nhess-2020-397-CC1, 2021

Comments on “Evaluation of Mei-yu Heavy-Rainfall Quantitative Precipitation Forecasts in Taiwan by A Cloud-Resolving Model for Three Seasons of 2012-2014” by Wang et al.

The purpose of this paper in to assess the skill of the 2.5 km CReSS in predicting mei-yu rainfall, to evaluate the model QPFs for larger and extreme events, as well as to understand the QPF strength of CReSS. The paper is well written and the results are of academic and application values. The paper can be accepted to be published in “Natural Hazards and Earth System Sciences”. Some comments and suggestions are as follows:

- In the Abstract, 2nd paragraph, “… the TSs are shown to be higher and the model more skillful in predicting larger events …”. The plausible physical explanations are needed.
- In the Abstract, 3rd paragraph, “The strength of the model lies mainly in the topographic rainfall in Taiwan rather than migratory events that are less predictable”. The plausible physical explanations are needed.
- Section 3.1, 2nd paragraph, “…, the TSs are higher and the skill better for larger events than smaller ones”. The plausible physical explanations are needed.
- Section 3.1, 3rd paragraph, “…, the model is more capable to produce hits toward the rainfall maxima,…”. The plausible physical explanations are needed.
- Section 3.1, 4th paragraph, “…the model also produces higher POD and SR for larger events compared to smaller ones…”. The plausible physical explanations are needed.
- Chapter 5, 3rd paragraph, “…the 2.5-km CReSS is more skillful in predicting the larger mei-yu events in Taiwan within 2 days,…” The plausible physical explanations are needed.