

NHESS-2020-397

Authors' Responses to the **Editor** and **Reviewer 2 (RC2, anonymous)**

Date: 16 Nov 2021

Title: Evaluation of Mei-yu Heavy-Rainfall Quantitative Precipitation Forecasts in Taiwan by
A Cloud-Resolving Model for Three Seasons of 2012–2014

Authors: C.-C. Wang, P.-Y. Chuang, C.-S. Chang, K. Tsuboki, S.-Y. Huang, and G.-C. Leu

Reply:

The additional comments from the **editor** (Dr. J. G. Pinto) and **Reviewer 2** are appreciated, and the paper has been revised following these suggestions closely. In the revision (color-coded version), the minor modifications made in response to the **Editor** and **Reviewer 2** are marked in **green** and **blue**, respectively. A point-by-point response to each of the comments are given below following their order. In each point, how and where the revision is made in the text is also specified.

Comments from the Editor:

The paper has now been re-revised by one of the original reviewers. Additionally to his/her comments in the review, I would like to point out you have yet to provide an explanation of where the 0.15 threshold for TS come from or whether it has a mathematical or physical basis. This was asked previously by the reviewers but no further information was provided, just the references to the previous publications. Therefore, the paper is returned for a minor revision (by the editor)

Reply: The value of $TS \geq 0.15$ was used in some previous studies and based on experience (mainly in the operational sector), and we note in the revision that the value is perhaps somewhat arbitrary (**L211**), along the lines as suggested. The readers would understand that the model QPFs have the skill of $TS \geq 0.15$ at the specified thresholds and ranges stated in this sentence, and we do not imply anything beyond that.

Comments from Reviewer 2:

Please include the following corrections:

L19, L461: Please provide the exact value of TS for the 5 km simulations and the 250 mm threshold. An approximation in the form $TS \sim 0$ "approach to zero" here does not make sense. Please provide exact result with two decimals precision, just as for the other values.

Reply: Thank you for this suggestion. In the revision, the TS values of previous studies are explicitly indicated as $TS \leq 0.02$ at 250 mm (and beyond) in both places, as suggested (L19, L461).

L463. Change the word significant. It is not based on significance test analysis

Reply: In the revision, the word “significant” is changed to “considerable” as suggested (L463).