

Article: "Investigation of An Extreme Rainfall Event during 1 8-12 December 2018 over Central Vietnam. Part I: Analysis and Cloud-Resolving Simulation" Research on the problems of record heavy rainfall in the central part of Vietnam is very interesting for the readers.

This rain is caused by the influence of cold air and strong high-altitude westerly wind, followed by strong easterly winds, so from the evening of December 7, it was heavy rain in Quang Tri. After that, it rained heavily, until 3 am on December 8, it rained heavily in Da Nang until about 9 am, then it rained heavily on the coast of the Quang Nam Sea. Rain mainly concentrated from the evening of December 8 to the end of December 10, and on December 11 and 12, the area still had rain but the intensity decreased.

COMMENTS

- After reading the article, readers have some comments as follows:
- - Part 1: The overview of the article has not mentioned much about the situation causing heavy rain and the ability to solve the problem of heavy rain caused by this weather pattern in Vietnam.
- - Part 2: It is necessary to describe more clearly the two options for removing terrain and not removing terrain in the experiment. Additional options for physics of Cress model.
- - Part 3: analyzes a lot about the weather patterns that cause rain but still does not explain the cause of rain for this period.
- - Part 4: The forecasted rainy area with the case of keeping the topography (Ctl) gives the rain center deviation from reality and also does not simulate the rain well in the Truong Son mountain range. It should be noted that in this case of heavy rain, the topography is not the main factor, as evidenced by very heavy rains at coastal stations (400-600mm/day) and less rain at stations in mountainous areas.
- - Note the activities of weather patterns such as the combination of cold air with the high easterly wind and the activity of the westerly wind channel.

Question:

1/ It is necessary to clarify how many hours are the rain analysis periods of the cress model? Rain spreads from the north to the south, but it shows as cumulative rain in the article, so can the model describe this phenomenon?

2/ Compare the experiment with keeping the terrain with removing the terrain to explain what?

3/ In fact, the time of heavy rain of the rain being studied is short, the center of heavy rain moves from north to south, so the total of 3 days in the article is heavy rain on a large scale, not suitable for this rain. What is the cause of the occurrence of heavy rainfall in a short period of time on a small scale in this case?

DECISION: MAJOR REVISION

Principal criteria	Excellent (1)	Good (2)	Fair (3)	Poor (4)
Scientific Significance: Does the manuscript represent a substantial contribution to the understanding of natural hazards and their consequences (new concepts, ideas, methods, or data)?			X	
Scientific Quality: Are the scientific and/or technical approaches and the applied methods valid? Are the results discussed in an appropriate and balanced way (clarity of concepts and discussion, consideration of related work, including appropriate references)?			X	
Presentation Quality: Are the scientific data, results and conclusions presented in a clear, concise, and well-structured way (number and quality of figures/tables, appropriate use of technical and English language, simplicity of the language)?			X	

1. Does the paper address relevant scientific and/or technical questions within the scope of NHESS?

No

2. Does the paper present new data and/or novel concepts, ideas, tools, methods or results?

yes

3. Are these up to international standards?

yes

4. Are the scientific methods and assumptions valid and outlined clearly?

No

5. Are the results sufficient to support the interpretations and the conclusions?

No

6. Does the author reach substantial conclusions?

No

7. Is the description of the data used, the methods used, the experiments and calculations made, and the results obtained sufficiently complete and accurate to allow their reproduction by fellow scientists (traceability of results)?

No

8. Does the title clearly and unambiguously reflect the contents of the paper?

Yes

9. Does the abstract provide a concise, complete and unambiguous summary of the work done and the results obtained?

Yes

10. Are the title and the abstract pertinent, and easy to understand to a wide and diversified audience?

Yes

11. Are mathematical formulae, symbols, abbreviations and units correctly defined and used? If the formulae, symbols or abbreviations are numerous, are there tables or appendixes listing them?

Yes

12. Is the size, quality and readability of each figure adequate to the type and quantity of data presented?

Yes

13. Does the author give proper credit to previous and/or related work, and does he/she indicate clearly his/her own contribution?

Yes

14. Are the number and quality of the references appropriate?

Yes

15. Are the references accessible by fellow scientists?

Yes

16. Is the overall presentation well structured, clear and easy to understand by a wide and general audience?

No

17. Is the length of the paper adequate, too long or too short?

Too short

18. Is there any part of the paper (title, abstract, main text, formulae, symbols, figures and their captions, tables, list of references, appendixes) that needs to be clarified, reduced, added, combined, or eliminated?

Part 2, 3 and 4

19. Is the technical language precise and understandable by fellow scientists?

Yes

20. Is the English language of good quality, fluent, simple and easy to read and understand by a wide and diversified audience?

yes

21. Is the amount and quality of supplementary material (if any) appropriate?

No