

[Review Form 3](#)

Book Name:	<a href="#">Geography, Earth Science and Environment: Research Highlights</a>
Manuscript Number:	Ms_BPR_4126
Title of the Manuscript:	Dynamic and Physical Processes Associated with Orographic Precipitation in a Conditionally Unstable, Low-CAPE and High-Speed Wind
Type of the Article	Book chapter

**PART 1: Comments**

	Reviewer's comment	Author's Feedback <i>(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
Please write a few sentences regarding the importance of this manuscript for the scientific community. A minimum of 3-4 sentences may be required for this part.	This manuscript provides valuable insights into the dynamics of moist flow regimes over mesoscale mountains under varying convective available potential energy (CAPE) and wind conditions, a critical area for understanding precipitation processes. By integrating high-resolution simulations and detailed analyses of vertical velocity, hydrometeor distributions, and rainfall patterns, it significantly enhances our ability to model and predict complex atmospheric phenomena. The findings are particularly relevant for improving weather forecasting models and understanding precipitation's spatial and temporal variability in mountainous regions. Additionally, the work offers a foundation for future studies on the interaction of topography with moist convection, aiding both meteorological research and practical applications in hydrology and climate science.	
Is the title of the article suitable? (If not please suggest an alternative title)	Dynamic and Physical Processes of Orographic Precipitation in Low-CAPE, High-Wind, and Conditionally Unstable Environments	

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<p>Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.</p>	<p>Based on the general requirements for a strong abstract, here are suggestions for improvement:</p> <ol style="list-style-type: none"> <li><b>Clarity of Objectives:</b> Ensure that the research goal is clearly articulated in the opening lines. Readers should immediately understand the study's purpose.</li> <li><b>Balance of Content:</b> Avoid being overly technical or including too many specific details that are better suited for the main text. Instead, focus on a high-level overview of the methodology and findings.</li> <li><b>Highlight Key Findings:</b> The results should be concisely summarized, emphasizing the most significant outcomes related to orographic precipitation, conditional instability, low CAPE, and high-speed wind.</li> <li><b>Implications:</b> End with a clear statement of the study's relevance to the scientific community, practical applications, or future research.</li> </ol>	
<p>Is the manuscript scientifically, correct? Please write here.</p>	<p>The manuscript appears scientifically sound, but a thorough review of the methodology and data interpretation is recommended to ensure accuracy. Specific attention should be given to whether the presented results are consistent with established principles of orographic precipitation and conditional instability. Additionally, verifying the alignment of findings with prior research in similar meteorological conditions would strengthen the scientific reliability of the work.</p>	
<p>Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.</p>	<p>The references cited in the manuscript appear to be sufficient and relevant to the study's scope. However, incorporating more recent studies, particularly from the last 3–5 years, could strengthen the manuscript's foundation and provide a broader context.</p>	
<p>Is the language/English quality of the article suitable for scholarly communications?</p>	<p>The language of the article is generally clear and suitable for scholarly communication, but it could benefit from minor revisions to enhance fluency and clarity. Attention should be given to grammatical accuracy, sentence structure, and the consistency of technical terminology. Improving these aspects would make the manuscript more polished and impactful for an academic audience.</p>	
<p><u>Optional/General</u> comments</p>		

**PART 2:**

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
<p>Are there ethical issues in this manuscript?</p>	<p><i>(If yes, Kindly please write down the ethical issues here in details)</i></p>	

**Reviewer Details:**

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