Title: Review of Manuscript on the Development and Testing of Feedforward Neural Networks for Classifying Wet and Dry Periods Using Commercial Microwave Links

Reviewer: Anonymous

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Journal: HESS

Recommendation: Accept with Minor and Major Revisions

This manuscript presents the development and testing of two simple feedforward neural networks (MLPs) designed for classifying wet and dry periods using signal attenuation from commercial microwave links (CMLs), comparing the performance against existing methods. The focus on high temporal resolution is crucial for enhancing the accuracy of rainfall measurements, representing the manuscript's central novelty. As a technical note, the manuscript sufficiently describes the relevance of the study within the existing literature and highlights the existing gaps it aims to bridge.

Minor Comments:

1. The last paragraph of the introduction (paragraph 45) could be more explicit in stating the study's objectives.
2. The first sentence in paragraph 120, subsection 3.1, should be rephrased for enhanced clarity.
3. It would be beneficial for the authors to elaborate on why using total signal loss from both sublinks, as opposed to one, results in improved classification outcomes in paragraph 70.

Major Comments:

1. The dataset comprising 3901 CMLs covers only a single month (01-07-2021 to 31-07-2021), which may not adequately represent different rainfall periods and seasonal variations. Expanding the temporal coverage or discussing the potential limitations and implications of this scope on the study's conclusions would strengthen the paper's validity.
2. The manuscript would benefit significantly from a brief discussion regarding the limitations of the study. Such a discussion may include the potential biases introduced by the dataset's temporal limitations (1-minute gauge data versus 5-minute Radar data), the generalizability of the MLP models to other geographic contexts, and the implications of the methodological choices made (e.g., neural network configuration).