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Testing the performance of six PBL Parameterizations under six Weather Types in Portugal

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This study evaluates the performance of the Weather Research and Forecasting (WRF) model in simulating temperature, wind speed, and precipitation across six Weather Types (WTs) in Portugal. We compare six Planetary Boundary Layer (PBL) parameterizations, using observational data from IPMA for validation. Key metrics—Root Mean Square Error (RMSE), Bias, and Standard Deviation of Errors (STDE)—are calculated for each WT and PBL scheme.

Our findings highlight the significant impact of PBL choices on simulation accuracy, particularly for wind and precipitation, providing insights for improving regional climate modeling and weather forecasting applications.

Which topic best fits your talk?

Climate and Environment

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