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Development of Tropical Cyclones from African Easterly Waves : comparative study of three African Easterly Wave events during the CADDIWA campaign

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During the CADDIWA (Cloud-Atmospheric Dynamics-Dust Interaction in West Africa) airborne campaign that took place in September 2021, three tropical disturbances initiated from African Easterly Waves were sampled. Two of them reached the Tropical Storm state and were named Rose and Peter by the National Hurricane Center. The last one, later named Pierre-Henri, failed to develop. After a validation of reanalysis data for september 2021 against the data collected during the campaign, a comparative study of the three events will be conducted using ERA5, satellite and campaign data, with a focus on energy budgets. Several processes that may be catalysts or inhibitors for tropical cyclogenesis (AEW-Monsoon -, AEW-AEW -, dust-dynamics interaction ...) will especially be discussed.