

In-Situ Perspectives on the Sub-Cloud Layer during EUREC4A/ATOMIC

Tuesday 17 May 2022 12:00 (15 minutes)

During the ATOMIC and EUREC4A campaigns, the University of Colorado RAAVEN (CU-RAAVEN) uncrewed aircraft system (UAS) was operated in the near-shore environment from Morgan Lewis Barbados. The aircraft conducted 37 research flights, capturing detailed information on the sub-cloud layer and atmospheric boundary layer between 24 January and 15 February. In this presentation, we will provide perspectives on the connection between sub-cloud layer thermodynamic and kinematic properties and cloud regimes, as observed by the RAAVEN. This includes information on momentum fluxes and turbulence, as well as sub-cloud vertical velocity distributions. We will attempt to map these properties onto different cloud regimes, as determined through a variety of observations collected during these field campaigns.

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Session Classification: Shallow convection