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Examining Stratocumulus Properties over the Southeast Pacific

ISABEL MCCOY, New Mexico Tech, ANDREAS MUHLBAUER, JISAO, ROBERT WOOD, University of Washington — Variability in Stratocumulus (Sc) clouds is important to the planetary albedo and radiation budget because of the resulting range in reflection of incoming shortwave radiation back to space, thereby cooling the atmosphere differently. Understanding more of their micro and macro physical properties is essential to reduce uncertainty in global climate model prediction and add confidence in future climate predictions. Sc clouds have been characterized into four main categories based on their morphology and level of mesoscale organization (Wood and Hartmann, 2006). Working with satellite data from NASA's CloudSat and Goes 10 in combination with these occurrence identifications, we developed statistics on the microphysical characteristics for each cloud type. Comparisons are drawn between our results and aircraft data sampling the region of interest (the VOCALS Regional Experiment over the Southeast Pacific in 2008). We conclude that this is a feasible method of characterizing satellite data to derive pertinent results about Sc clouds.

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