

Dependence of Cloud Radiative Effect on Cloud Organization in the Trades

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Shallow cumuli are the most frequent types of clouds over the subtropical oceans where they occur in several shapes and patterns. These types of clouds potentially play a major role in regulating the radiative budget of the Earth system. An important question is to what extent cloud patterns alter under climate change and how this will feedback onto a rising of temperature. In this study, we aim at finding how cloud feedback depends on the macro-physical characteristics of cloud fields. To this end, we investigate the relationship between different organization metrics derived from shallow cloud fields and the net cloud radiative effect of the associated fields.

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