

ABSTRACT

An Object Oriented Approach To Simulating Convection Over Barbados.

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A model for simulating the life cycle of a convective supercell over an island as a product of daytime heating is being examined. The production of precipitation resulting from that process is also being developed. The evolution of the supercell from birth through to dissipation is represented as a sequence of stages, with both the supercell and supporting cells being described throughout by a fixed set of attributes whose values change as the atmospheric environment evolves. To predict the creation and subsequent development of the cloud cells, the convective process is initialized from a steady state. To simplify the model, some of the cloud physics elements have been scaled or parameterized. Object Oriented Modeling techniques are being used to represent the conceptual model.