Title: Supersaturation in Tropical Storms Measured during CAMEX-3 and CAMEX-4

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Abstract:
The meteorology and cloud microphysics of hurricanes were studied during NASA’s
Third and Fourth Convection and Moisture Experiments (CAMEX-3 and CAMEX-4) in
the summers of 1998 and 2001, respectively. In-situ instrumentation on the NASA DC-8
aircraft included the JPL Laser Hygrometer, the Meteorological Measurement System
(MMS) for measurements of pressure, temperature, and winds, a 2DP particle
spectrometer, a Cloud Particle Imager ( CPI), and for measurements of cloud water
content, a Counterflow Virtual Impactor (CVI) and a Neuzorov Probe. On several
flights, the DC-8 intercepted intense updrafts in the upper levels of tropical storms.
Within these updrafts were ice particles and significant supersaturations (10 to 20% or
more). This paper will examine the supersaturations and particle properties within
updrafts to better understand the evolution of ice particles in tropical storms.