

## ATS/CIRA Colloquium

Hermann Gerber

CSU ATS Ph.D. 1973

Visiting CSU ATS from Gerber Scientific, Inc., Reston, VA 20190  
Department of Atmospheric Science, U. of Utah

# ENTRAINMENT IN STRATOCUMULUS

Hosted by Jeff Collett

**Thursday, November 15, 2012**

**ATS room 101; Discussion will begin at 3:30pm  
Refreshments will be served at 3:00pm in the coffee lounge**

We know that stratocumulus clouds (Sc) contribute significantly to the Earth's radiation budget and thus must be understood for predicting climate change. This talk looks at relatively recent Sc measurements (POST; Physics of Stratocumulus Top) off the California coast that follow multiple other such efforts. The POST field campaign is a direct result of learning from earlier studies including DYCOMS-II. Both DYCOMSII and POST had the same goals: measure entrainment velocity in Sc accurately and use them as a reference for entrainment-velocity parameterization and as "ground-truth" for model inter-comparison. POST had the advantage of utilizing improved high-resolution sensors for both in- and out-of cloud measurements, with the ultra-fast temperature probe (UFT) from the University of Warsaw playing a starring role; and with the better co-location of probes on the POST aircraft also contributing. The POST results are compared to Sc modeling results from colleagues associated with the Department including David Randall, Bjorn Stevens, and Tak Yamaguchi. Others results from Margareet VanZanten, Shouping Wang, J. Katzwinkel, and Samantha Hill are also discussed.

I summarize where we presently stand on basic Sc research and suggest future Sc efforts.

Link to colloquium videos and announcement page: <http://www.atmos.colostate.edu/dept/colloquia.php>