

**ECE 793A/794 ECE GRADUATE SEMINAR
(Required for Electrophysics Area Graduate Students)**

Everyone is invited to attend.

**Robert Wood
Dept. Of Atmospheric Sciences,
University of Washington, Seattle, WA**

Title: The importance of precipitation in marine boundary layer clouds

Date: Tuesday, November 7, 2006

Time: 4:00 p.m.

Place: Marston 132

Abstract:

Clouds in the marine boundary layer (MBL) cover about a third of the world's oceans, have an enormous impact on the planetary radiation budget, and are an integral component in the atmospheric general circulation. Over the colder regions of the subtropical oceans to the west of continents, and during quiescent periods in the midlatitude storm tracks, stratocumulus is the dominant form of MBL cloud, with annual mean coverage exceeding 50%. Prior to the late 1980s, observational and modeling studies of stratocumulus tended to ignore the potential role of precipitation (drizzle), and the general paradigm was that drizzle played a secondary role in the dynamics and thermodynamics of these clouds. Increasing sophistication in both observing systems and numerical models is starting to alter our view of stratocumulus clouds as non-precipitating systems. However, much remains uncertain and unquantified. This talk will focus upon recent efforts to study the microphysical, dynamical, and structural properties of precipitating MBL clouds using a range of tools including aircraft, surface and satellite active and passive remote sensing, and numerical models. We are entering an era where light precipitation (1 mm/day) will be detected using satellites, and I will discuss how localised multi-sensor in-situ studies will complement these wide ranging new measurements.

Bio:

Robert Wood recently started as an assistant professor in the department of Atmospheric Sciences at the University of Washington where he has been working as a research associate and research professor. Prior to arriving in the US, he worked for four years as a research scientist at the UK Met Office Meteorological Research Flight in Farnborough, England. Rob obtained a PhD in atmospheric physics at the University of Manchester in 1997. Rob is interested in physical processes occurring in clouds, most recently how light precipitation forms and affects the structural properties of shallow marine clouds.