

Abstract Submitted
for the MAR08 Meeting of
The American Physical Society

Sorting Category: 11.8.5 (E)

New Particle Formation in the Free Troposphere and Lower Stratosphere DAVID BENSON, Kent State University, SHAN-HU LEE, LI-HAO YOUNG, WILLIAM MONTANARO, HEIKKI JUNNINEN, MARKKU KULMALA, TERESA CAMPOS, DAVID ROGERS, JORGEN JENSEN — Recent studies show that new particle formation is very active in the free troposphere and lower stratosphere, but the new particle formation mechanisms are not well understood. Here, we show observations of aerosol size distributions during the NSF/NCAR GV Progressive Science Missions in December 2005. Aerosol size distributions with diameters from 4 to 2000 nm were measured, along with other trace gas species including water vapor, ozone, and carbon monoxide. We will show how strong and weak new particle formation events were associated with convection and other meteorological parameters. Latitude dependence of new particle formation is also discussed, by comparing with previous studies. We also report unique nighttime new particle formation events observed in this region.

Prefer Oral Session
 Prefer Poster Session

David Benson
dbenson2@kent.edu
Kent State University

Date submitted: 27 Nov 2007

Electronic form version 1.4