

Large-scale Data Analysis of NetCDF Files Using R on Gordon @ San Diego Supercomputer Center

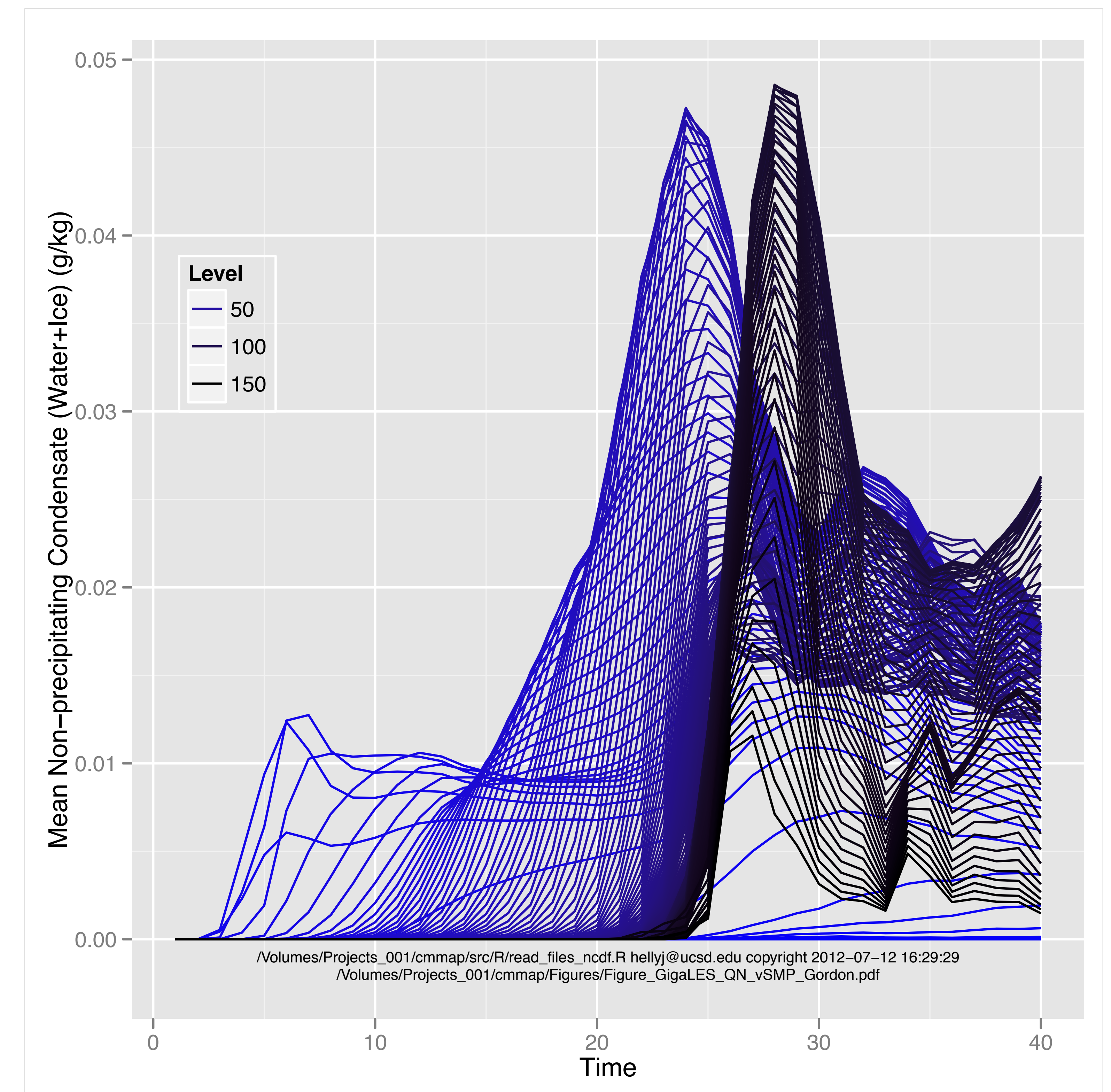
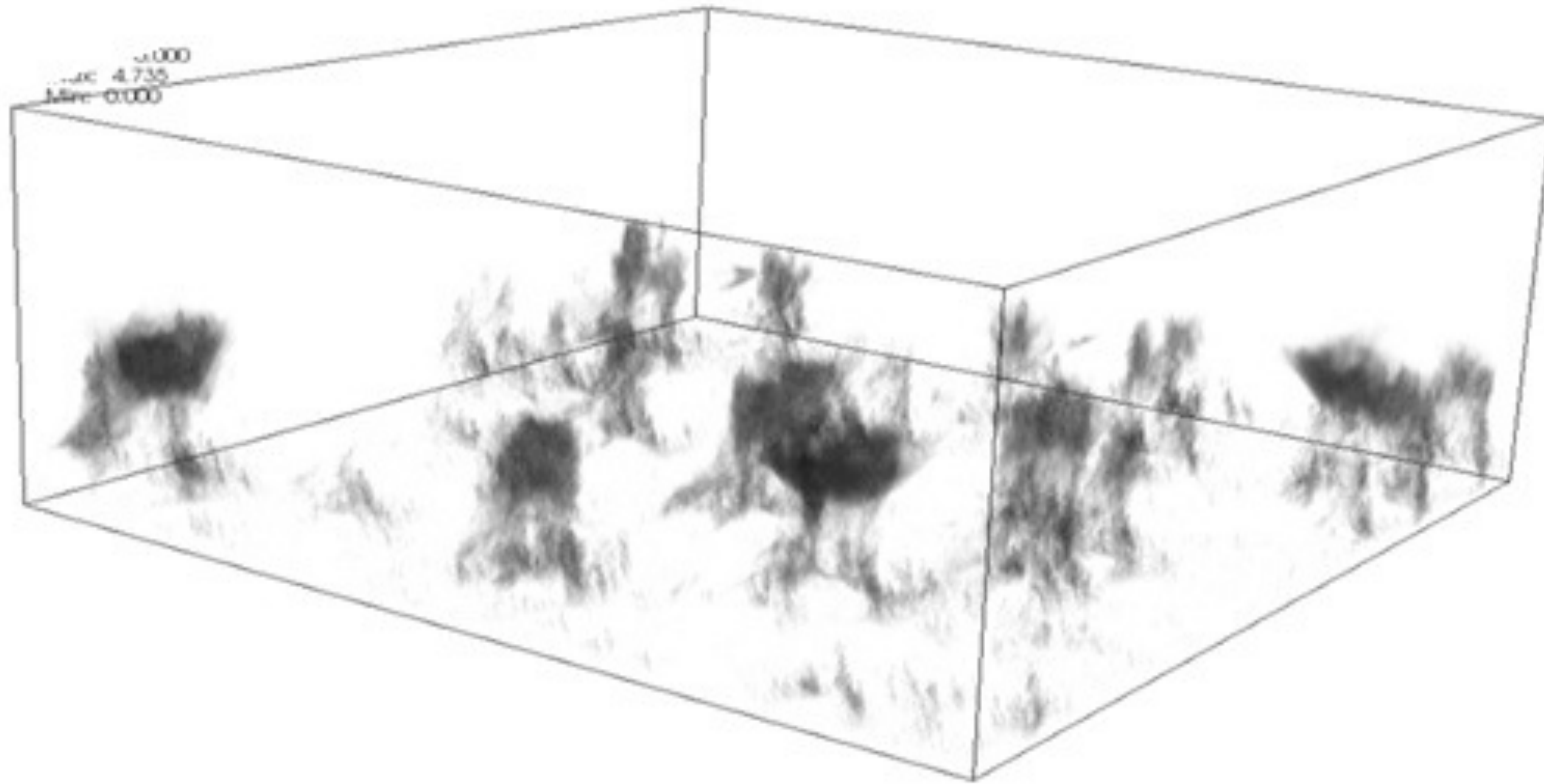
Massive Data Analysis of Large-eddy Simulation of Deep Convection in Atmosphere (Clouds) using vSMP

Simulation Details

- GigaLES Model Run Dataset (partial)
- 40 time-steps (24 hour simulation)
- 256 vertical layers
- 2048 x 2048 meters
- 100 m horizontal resolution

R Analysis

- 160 GB data set (40 netCDF files @ 4 GB each)
- 340 GB memory footprint
- ~ 3 ½ hours for data input and analysis



- *Multi-scale Modeling Framework: M. Kharoutdinov, SUNY Stonybrook*
- *Visualization: J. Helly, A. Chourasia*
- *Analysis: J. Helly, S. Strande*

The **Center for Multi-scale Modeling of Atmospheric Processes (CMMAP)** is an NSF Science and Technology Center focused on improving the representation of cloud processes in climate models.