

-Stratocumulus (and other) clouds in WRF with MYNN-EDMF and downdrafts

Wayne M. Angevine, CIRES, University of Colorado, and NOAA CSL

Joseph Olson and David D. Turner, NOAA GSL

Julia Simonson, CIRES and NOAA GSL

Yao-Sheng Chen and Takano Yamaguchi, CIRES and NOAA CSL

Abstract: Marine clouds are important for NWP and climate modeling. We have been exploring and improving the performance of WRF with a RAP-like configuration for these cloud situations. A downdraft sub-scheme has been added to the MYNN-EDMF in hopes of improving stratocumulus performance in particular. Reference simulations were conducted with the SAM LES. Several cases from a large LES ensemble are shown, as well as the venerable DYCOMS RF02 case. Performance varies from case to case, showing the importance of the ensemble approach.