Alexandra S Cole* (ascole4@asu.edu), School of Mathematical & Statistical Sciences, Box 871804, Arizona State University, Tempe, AZ 85287, and Ryan J Nicely and Mohamed Moustaoui. A Numerical Simulation of Mountain Waves. Preliminary report.

In this talk I will present atmospheric dynamics associated with gravity waves as they propagate through the atmosphere, specifically focusing on the propagation of these waves through the troposphere and stratosphere. Gravity waves impact large scale atmospheric dynamics and can contribute to the general circulation at upper atmospheric levels. I will focus on a real case scenario of mountain waves. For the real case, I will analyze data from a simulation using a high-resolution numerical prediction model. The simulation will be conducted over Owens Valley, CA, a mountainous region, over a 48-hour period in March, 2006, using multi-nested domains. The results illustrate the impact of the change in stability above and below the tropopause on the amount of momentum flux transmitted to upper atmospheric levels. (Received September 16, 2016)