

1125-VC-1448

Ryan Joseph Nicely* (rnicely@asu.edu), School of Mathematical & Statistical Sciences, Box 871804, Arizona State University, Tempe, AZ 85287, **Ali S Cole**, School of Mathematical & Statistical Sciences, Box 871804, Arizona State University, Tempe, AZ 85287, and **Mohammed Moustouai**. *Wave-Induced Momentum Transport through a Non-Uniformly Stratified Thin Layer near the Tropopause.*

This research gives a study of the transmission and reflection of momentum induced by atmospheric gravity waves generated by mountains. The wave-induced transport of momentum through a stably stratified thin layer near the tropopause is controlled by the change in stability above and below the layer, the thickness and the flow. The thickness of the tropopause and the change in stability across it is found to play a major role in regulating the amount of wave transmitted and reflected. This role is evidenced by deriving analytically and numerically the coefficients of transmission and reflection under various representative profiles of stability. The coefficients are computed from the least squares method. The results demonstrate how the stability in the troposphere, tropopause and the stratosphere modifies wave transmission across the tropopause. (Received September 16, 2016)