
EOL SEMINAR *MMM*

The Dynamics of the Generation of Internal Waves by Explosive Volcanic Eruptions.

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Explosive volcanic eruptions (in locations such as Iceland) have the potential to cause sudden disruption and potential for damage to air traffic on a large scale. Observations on the Caribbean island of Montserrat have shown that explosive volcanic eruptions can generate atmospheric internal waves with periods of several minutes. These waves can be observed by surface microbarographs (Baines & Sacks 2014, Geol. Soc. London Mem. 39, 153), and can give information about the nature of such eruptions. This may be significant in locations where other observations are scarce or absent. In this paper a new model for the generation of such waves is presented, based on the representation of the eruptions as modified forms of turbulent plumes, and the results are compared with observations. Properties of the internal waves produced by various forms of eruption are determined, for a variety of atmospheric conditions. One general conclusion is that powerful eruptions that are confined to the troposphere will generate larger amplitude waves than eruptions that penetrate into the stratosphere.

Seminar will be webcast at: <http://www.fin.ucar.edu/it/mms/fl2-live.htm>

Thursday, 25 August 2016, 11:00 AM
Refreshments 10:45 AM
NCAR-Foothills Laboratory
3450 Mitchell Lane
Bldg 2 Small Seminar Room (Rm1001)