

Abstract Submitted  
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**Seasonal Variability and Dynamics of Mesospheric Gravity Waves Over the Andes**<sup>1</sup> NEAL CRIDDLE, MICHAEL TAYLOR, DOMINIQUE PAUTET, YUCHENG ZHAO, Utah State University — The ALO is a new facility developed for atmospheric research, located at the foot of the Andes in Cerro Pachon, Chile (30.2 S, 70.7 W). As part of a collaborative program, Utah State has a mesospheric temperature mapper (MTM) on site, which is used to study short period gravity wave dynamics and temperature variations in the mesosphere-lower thermosphere region. The MTM began taking measurements of the OH(6,2) and O<sub>2</sub>(0,1) spectral bands in August 2009 and a complete profile of seasonal variation in gravity wave characteristics has been created for August 2009 through August 2010 using the OH(6,2) Band. The primary goal of this program is to Quantify seasonal variability of gravity wave structures. Compare and contrast seasonal directionality with results from the Maui-MALT site. Quantify mountain wave observations, their frequency, characteristics and seasonal variability. Seasonal variability for gravity wave structures at this site is shown. Mountain waves have been exclusively observed to appear in the winter months. Future work includes verifying yearly repeatability, which is seen at other sites, and continued investigation of unique events occurring over the Andes mountain range.

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