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Investigating Characteristics of Mesospheric Gravity Waves Over Antarctica VANESSA CHAMBERS, Utah State University, MICHAEL TAYLOR, YUCHENG ZHAO, P.D. PAUTET, Center for Atmospheric and Space Science — As part of the international ANtarctic Gravity Wave Instrument Network (ANGWIN) program, the Utah State University all sky IR imager has been operated at the British Antarctic Survey (BAS) Halley Station (7536′ S, 2612′ W) since 2012, obtaining valuable gravity wave information in the higher mesosphere and lower thermosphere region (MLT). In this study, we have utilized a new 3D spectral analysis technique (Matsuda, et al., 2014) to quantify the horizontal phase velocity distributions of gravity waves over Antarctica. This new tool enables us to analyze extensive amounts of airglow imaging data in a relatively short time frame. Additionally, it eliminates the bias present in analyses performed by individuals with varying wave event identification experience. Using this new method, forty nights (total ˜500 hours) throughout the 2012 winter season have been analyzed. This study will provide insight into variabilities of the gravity wave energy and propagation characteristics during the 2012 winter season.

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