Recent Investigations of the Statistical Characteristics of Mesospheric Gravity Waves Over Antarctica

JOSEPH R. JEPSON, MIKE J. TAYLOR, P.-DOMINIQUE PAUTET, Utah State University, ANGWIN TEAM — The Antarctic Gravity Wave Instrument Network (ANGWIN) is a National Science Foundation (NSF) sponsored international program designed to develop and utilize a network of gravity wave observatories using existing and new instrumentation operated at several established research stations around the continent. The primary goal is to better understand and quantify gravity wave climatology and their effects on the upper atmosphere around the Antarctic continent. ANGWIN currently comprises research measurements from five nations (U.S., U.K., Australia, Japan, and Brazil) at seven international stations. Utah State University’s Atmospheric Imaging Lab operates all-sky infrared and CCD imagers and an Advanced Mesospheric Temperature Mapper (AMTM) imager at Davis, Halley, Rothera, McMurdo, and South Pole research stations. In this poster we present an analysis of recent measurements of short-period mesospheric gravity waves imaged from Rothera Station (67.57°S, 68.12°W) on Adelaide Island. This camera has operated continuously at Rothera since 2006 and the new results combined together with coordinated measurements from the other sites will significantly improve our understanding of the large scale dynamics of gravity waves and their regional variability. Here we present image results from 2012.

Joseph R. Jepson
Utah State University

Date submitted: 12 Sep 2014

Electronic form version 1.4