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ANGWIN: International Collaboration in Polar Atmospheric Research

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Atmospheric gravity waves play a fundamental role in transporting energy and momentum between atmospheric regions and drive circulations that affect key processes like the formation of the ozone hole and the cold summer polar mesosphere. Despite their importance, gravity-wave activity over Antarctica suffers from a lack of comprehensive observations. The ANtarctic Gravity Wave Instrument Network (ANGWIN) is a highly successful grassroots programme that was started in 2011. It seeks to use a network of observations to measure gravity waves continent wide and through all levels of the atmosphere, in order to fully understand their impact and to constrain modelling work. Although initially focused on the Antarctic, the group is now aiming to develop collaborations in both Polar Regions.
ANGWIN is an international network, supported by activities based in Australia, Brazil, Japan, Korea, the United Kingdom and the United States of America.
The objectives of the ANGWIN network include: Quantify the longitudinal variation in gravity-wave activity and determine causes; Characterise wave propagation and influence; Relate observed gravity waves to sources throughout the atmosphere; Study the interaction of gravity waves with global scale waves; Compare polar wave observations to model parameterizations; Determine the effects of gravity waves on polar stratospheric cloud formation.
This poster will describe the ANGWIN network, its objectives and some recent results.