

## The ANGWIN Program and Future Plans for Research in Antarctica

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ANGWIN is a “scientist driven” program designed to develop a network of **Antarctic gravity wave observatories**, operated by different nations working together in a spirit of close scientific collaboration. Our research plan has brought together colleagues from several international institutions, all with a common collaborative goal to better understand the large “continental-scale” field characteristics and impacts of gravity waves on the mesosphere and Lower Thermosphere (MLT) environment over Antarctica for the first time. To achieve this goal ANGWIN will combine complementary measurements obtained using new and existing aeronomy instrumentation with new modeling capabilities. To date, our activities have focused on developing coordinated airglow image data of the MLT region at the following sites: McMurdo (US), Syowa (Japan), Davis (Australia), Halley (UK), Rothera (UK), and Cmdnte. Ferraz (Brazil). These are all well-established international research stations that are uniformly distributed around the continental perimeter, and together with ongoing measurements at South Pole Station they provide unprecedented coverage of the Antarctic gravity wave field and its variability during the extended polar winter season. This presentation introduces the ANGWIN program and current goals, summarizing recent research activities with new coordinated measurements and results. We also discuss future plans for development of this exciting program for Antarctic research.