

Uncertainty in Flux Measurements Calculated from Aircraft Measurements

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In September 2009, a series of unmanned aerial vehicles (UAVs) were flown over Terra Nova Bay, Antarctica to collect information on the atmosphere overlying a polynya present in the region. The purpose of these flights was to use measurements from the UAVs to calculate heat fluxes out of the ocean and into the atmosphere. Within each of these calculations comes a level of uncertainty in the final result, which can arise from instrument uncertainty, a variety of calculation methods, or inputs into the flux calculations. This presentation will discuss flux calculation methodologies and the uncertainty found in each measurement, as well as techniques to overcome these uncertainties.