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Interactive comment on "Cloud condensation Nuclei over the Southern Ocean: wind dependence and seasonal cycles" *by* John L. Gras and Melita Keywood

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Comments from Reviewer 1

This study examines long-term aerosol measurements at Cape Grim with a focus on CCN sources and the sensitivity of number concentrations to wind speed, marine biological emissions, and long-range transport. There are a number of useful findings reported that will be of interest to those in the atmospheric sciences community concerned with quantifying the sources and nature of CCN in the marine boundary layer, especially over the Southern Ocean region. The paper is written well. The methods used are robust. The title and conclusions are well-supported by the data. A major strength of this work is the long-term nature of the data collected. I support publication

and just had a very minor comment that the authors can choose to address if they'd like. More specifically, on Line 98, it may be likely that some readers will not be familiar with the reference to the 'roaring forties'.

Authors Response We thank Reviewer 1 for their positive and supportive comments. Regarding the comment about the roaring forties (line 98) we have reworded the text to provide an explanation of this term.

Changes to the manuscript text Line 98-100 The Southern Ocean region upwind of Cape Grim comprises part of the "roaring forties" which are strong westerly winds that generally occur between 40 and 50 degrees south. It is a term persisting from the days of sailing ships and has a well-earned and enduring reputation for strong and persistent winds.