



## **Exploration of sea ice proxies in Antarctic near-coastal ice cores**

**N.J. Abram**, R. Mulvaney and E.W. Wolff.

British Antarctic Survey, Cambridge CB3 0ET, United Kingdom. (nabr@bas.ac.uk / Phone: +44-1223-221539)

Sea-ice around Antarctica plays a crucial role in modulating regional climate, ocean circulation and ecosystem productivity. Reconstructing past sea ice variations has implications for improving our understanding of Antarctic climate processes, and it has been previously shown, with varying degrees of success, that the chemistry of ice cores from near-coastal sites may provide a proxy for such reconstructions. Here, we examine records of sea salt and methanesulphonic acid (MSA) in ice cores collected from three near-coastal sites in the Antarctic Peninsula/Weddell Sea region. These chemical records are compared to historical records of sea ice extent and concentration around Antarctica, and to the findings of similar studies using near-coastal ice cores from other parts of the continent. This allows for a broad-scale evaluation of sea salt and MSA as proxies for recent variability in Antarctic sea ice, and their suitability for reconstructing sea ice variations further back in time.