

SESSION: Oceans 3 (Chairs: Sarah Fawcett & Susanne Fietz)

MARS Themes:

Oceans and marine ecosystems under global change

Earth systems observations

Title:

Characterising phytoplankton communities: A Southern Ocean case study of environmental coupling

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Abstract:

The combination of photosynthetic pigments allows one to distinguish specific phytoplankton groups. The analysis of these pigments therefore allows assessment of the phytoplankton community group composition. Global oceans act as carbon sinks, partly due to surface water phytoplankton primary production. However, Southern Ocean data on these communities is sparse and biased toward summer sampling expeditions. This study presents data from winter 2017 (Indian sector) and winter/spring 2019 (Atlantic sector) expeditions aboard the SA Agulhas II. We linked phytoplankton community functional group prevalence with environmental factors. This study aims to better understand how specific phytoplankton groups relate to environmental drivers, and how Southern Ocean hydrography spatially constrains these connections.

Format:

Oral Presentation

Keywords: (add ; between keywords)

Southern Ocean; Phytoplankton; CHEMTAX; Environmental Coupling