Breakout Session: Ocean Color algorithms for Southern Ocean to constrain the Carbon Cycle

Maria Vernet, Mati Kharu and David Antoine
Antarctic Fronts
SACCF
PF
SAF
STF
Gyres
e.g. Orsi et al. (1995)
Complexity of SO waters

Talley (2011)
Program SO Breakout Session

• Mati Kahru and B. Greg Mitchell: “Experiences in building a Southern Ocean chlorophyll algorithm”
• Emmanuel Boss: “Revisiting Ocean Color algorithms for chlorophyll a and particulate organic carbon in the Southern Ocean using biogeochemical floats”
• Heidi Dierssen: "Southern Ocean backscattering: bubbles, coccolithophores, Phaeocystis, and protein.”
Program SO Breakout Session: speed talks

1. D. Antoine, "Antarctic Circumpolar Expedition – ACE"
2. M. Vernet, “Winter primary production in the Southern Ocean”,
4. A. Bracher et al., "Variability, trend and phenology of phytoplankton groups in the Southern Ocean via combining in-situ, satellite and coupled ecosystem-ocean modelling”
5. B. Balch, "The Great Calcite Belt: known knowns and known unknowns"
6. T. Hirawake et al., “Phytoplankton size/group, primary production and pCO₂ in the Southern Ocean”
7. M. Behrenfeld, "The missing iron stress signal”
NCP (Net Community Production) and Mixed Layer Depth
Net Community Production (NCP) based on 3 SO algorithms (NASA chla+VGPM, SPG-ANT and VGPM-ANT, and GSM01+CbPM)
Productivity in the Southern Ocean in the last 800,000 years.
Oceanic biological pump blue boxes are possible research project to constrain Net Community Production (NCP) estimates.