

Auxiliary material for

Seasonally different carbon flux changes in the Southern Ocean in response to the Southern Annular Mode

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Global Biogeochemical Cycles

Introduction

There are two appendices to the manuscript:

- 1) The detailed description of the ecosystem model: Regulated Ecosystem Model with 2 phytoplankton classes (REcoM-2) including model equations and parameter values.
- 2) More information on the model set-up and evaluation, including:
 - Model
 - Initialisation
 - Simulations
 - Mean model state
 - Southern Ocean circulation and nutrient fields
 - Phytoplankton growth limitation and distribution
 - Carbonate system
 - Contemporary carbonate system
 - Natural CO₂ fluxes
 - Seasonal cycle
 - Sea ice
 - Chlorophyll
 - SAM