

B-SOSE Workshop: 16 June 2020

12:00 - 5:00 pm ET / 9:00 - 2:00 pm PT

[Register](#)

Goal: Increasing Involvement in Biogeochemical State Estimation

This workshop will focus on the [SOCCOM](#) biogeochemical Southern Ocean state estimate ([B-SOSE](#)) resource. B-SOSE assimilates physical and biogeochemical data into the MIT ocean general circulation model to provide a complete, budget-closing analysis of Southern Ocean biogeochemical and physical processes. The B-SOSE objective is to yield a baseline estimate of the large-scale Southern Ocean biogeochemical, sea ice, and physical properties, and a framework to understand this baseline.

We will have short discussions, with flashcard slides to help guide the conversations.

Flashcards available at:

<https://drive.google.com/drive/folders/1X9jDCWn5JqGqPOY9OzX4Lky73ltBUNnh?usp=sharing>

1. Introduction and Overview (12 -1 pm ET / 9-10 am PT)

Moderator: Sarah Schlunegger

- a. The need for BGC reanalysis (Joellen Russell, 5 minutes)
- b. BSOSE overview (Matt Mazloff, 5 minutes)
- c. BSOSE methodology (Graeme MacGilchrist, 5 minutes)
- d. BSOSE product (Matt Mazloff, 5 minutes)
- e. SOCCOM1 accomplishments (Ariane Verdy, 5 minutes)
- f. SOCCOM2 plans (Matt Mazloff, 5 minutes)

Break (15 min)

2. The BSOSE resource 1: Model - B-SOSE - observation comparison (1:15 - 2:15 ET / 10:15 - 11:15 am PT)

Moderator: Becki Beadling and Stan Swierczek

- a. Overview (Becki Beadling and Stan Swierczek, 10 minutes)
- b. Comparison to observational products and CMIP models (Becki Beadling, 5 minutes)
- c. Comparison to reanalyses (Stan Swierczek, 5 minutes)
- d. Comparison of surface CO₂ fluxes (Seth Bushinsky, 5 minutes)
- e. Vertically resolved NPP product for BSOSE comparison (Lionel Arteaga, 5 minutes)

Break (15 min)

3. The BSOSE resource 2: Budget analysis and attribution (2:30 - 3:30 pm ET / 11:30 - 12:30 PT)

Moderator: Isa Rosso and Ben Taylor

- a. Overview (Isa Rosso and Ben Taylor, 10 minutes)
- b. Budgets in the presence of real freshwater fluxes (Ben Taylor, 5 minutes)
- c. Zonal asymmetry of the carbon budget (Channing Prend, 5 minutes)
- d. Bloom dynamics: iron budget (Isa Rosso, 5 minutes)
- e. Nitrate budget in a watermass framework (Ivy Frenger, 5 minutes)

Break (15 min)

4. Looking forward (3:45 - 5:00 pm ET / 12:45 - 2:00 pm PT)

Moderator: Graeme MacGilchrist and Matt Mazloff

- a. Ecosystem hindcasting and forecasting (Joellen Russell, 10 minutes)
- b. B-GOSE: BGC Global Ocean State Estimate (Sarah Schlunegger, 5 minutes)
- c. BGC-Argo (Ken Johnson, 5 minutes)
- d. Optics (Oscar Schofield, 5 minutes)
- e. BGC modeling (John Dunne, 5 minutes)
- f. Reflection (Graeme MacGilchrist, 5 minutes)