Wednesday, 12 November, 2025 at 16:00 CET / 15:00 UTC
Zoom Link: https://washington.zoom.us/meeting/register/RWJqny02Q3azb3b1ck0FeA
Meeting ID: 945 6821 7722 ● Passcode: 877451
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SCOR Working Group 168 Webinar #5

Title: Secret shifts in the ocean's biological carbon pump

Presenter:
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Recent advances have improved estimates of marine carbon uptake, but the processes driving spatial and vertical variability in biologically mediated carbon fluxes under climate change remain insufficiently understood. Analysis of the past two decades indicates that the global mean of biologically respired carbon has remained stable, yet its vertical and regional distribution is shifting in response to climate-driven changes in circulation, stratification, and ecosystem structure. These reorganizations have not altered the global inventory, but they are reshaping the depth and location of sequestration in ways that reduce the structural stability of the biological carbon pump. This emerging instability in the return flux may pose a greater long-term risk, as it points to a weakening resilience of the ocean carbon sink under continued climate change.

Webinar Series Information

The 4D-BGC Working Group seeks to enhance access and utility of Biogeochemical (BGC) Argo observations through four-dimensional (4D) data products. These advanced data products aim to refine our understanding of ocean biogeochemistry, improve biogeochemical models and reanalysis products, and provide valuable insights for policy-making. The goal of this webinar series is to introduce new and in-development BGC data products, review techniques used to develop data products from in situ observations, and to explore way in which 4D-BGC products are leveraged to answer scientific questions.