U.S. GEOTRACES Newsletter

Spring 2025 | Issue 4

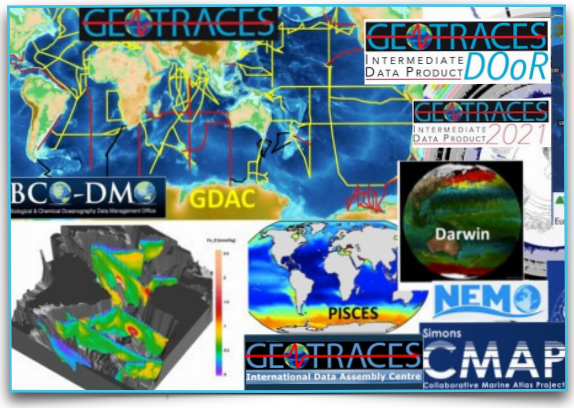
Standards and Intercalibration

- The GEOTRACES Standards and Intercalibration (S&I) Committee met in Black Rapids, Alaska, from March 3-7, 2025, to review intercalibration reports for the upcoming GEOTRACES IDP2025, resulting in the approval of over 1,100 datasets.
- We **want to emphasize that the upcoming S&I virtual meeting on June 12, 2025, is the last opportunity for intercalibration reports to be reviewed before the final preparation of IDP2025.** While the deadline to submit new data has passed, if there are datasets submitted to a data repository, such as BCO-DMO or GDAC for those in the U.S., and the corresponding intercalibration reports have not yet been submitted for review, ***it may still be possible to have those reports reviewed on* June 12 *if investigators submit them through* DOoR *immediately*.**

Intermediate Data Products

IDP2025

- November, 2025 - Planned release of the fourth Intermediate Data Product (IDP). With inclusion of data submitted before the December 2024 final deadline.
- **How to submit your data?**
  - ✓ Check the IDP flowchart



Advancing Marine Biogeochemistry. *Composite figure illustrating a subset of key ocean-wide programs and tools that advance marine biogeochemistry, including data repositories, portals, and earth system models developed through community collaboration. Featured resources are freely accessible to researchers worldwide. Figure modified from Shaked, Y., Twining, B. S., Browning, T. J., Koedooder, C., & Kranzler, C. F. (2025). Trace metal biogeochemistry in the ocean: From chemical principles to biological complexity. In Treatise on Geochemistry (pp. 371–414). Elsevier. doi: 10.1016/b978-0-323-99762-1.00115-7*

On Synthesis

As the U.S. GEOTRACES program transitions to a focus on Process Studies, as outlined in the Science Plan, the U.S. GEOTRACES Project Office continues to support synthesis studies while encouraging the community to propose new project ideas. The Scientific Steering Committee (SSC) is available to provide guidance and feedback based on its experience in supporting the GEOTRACES mission and initiatives that align with our goals. We look forward to hearing from the community about your plans for future process studies. For more information, please reach out to the Project Office; we will collaborate with the SSC as needed. The committee is exploring the development of synthesis products, such as global climatologies for trace elements and isotopes (TEIs), in preparation for the 2028 IDP cycle, with planning discussions set to begin in 2026. Ongoing synthesis of previous cruise data, including hydrothermal parameters like gallium, barium, and radium, is being integrated across different GEOTRACES sections. Efforts are underway to combine datasets from various GEOTRACES cruises, highlighting the importance of integrating multiple parameters for a comprehensive synthesis. The team will continue analyzing cruise data and preparing for upcoming virtual and in-person synthesis

IDP2021v2

The IDP2021v2 is available for:

- bulk download
- subset via webODV

In addition,

- analyze, explore and visualize the data online with WebODV Explore
- overview relevant tracers with section plots, 3D animations) with the eGEOTRACES Electronic Atlas

Early Career Scientists Committee

GEOTRACES is recruiting seven early career professionals for its Early Career Scientist (ECS) Committee, established in August 2024 and currently comprising 15 members. Learn more about the committee here. **The deadline for applications is June 15, 2025**, and application information can be found here.

Update on NOBIAS PA1 Resin

Thank you for completing the survey! Unfortunately, the company has confirmed its decision to discontinue the production of the resin NOBIAS PA1. You can find alternative resins and related references here.

Advancing Synthesis Studies

We encourage the scientific community to develop integrative synthesis studies–both global and regional–that connect chemical, biological, and physical components, along with modeling efforts that utilize available data from GEOTRACES and other ocean programs. For recent works and additional synthesis publications, please check our Database.

Contributions - Contact Us

If you would like to **contribute content** for our next issue or share educational materials for the Educational Resources page, please *email* us.

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meetings, emphasizing the need for data synthesis and model comparisons, as well as identifying new observational opportunities, particularly for shallow-to-deep observational programs. As the GEOTRACES project nears its completion, our focus will shift to synthesizing data into user-friendly products, which will be made available through repositories such as PANGAEA, NCEI, OBIS, and the GEOTRACES International Data Assemble Centre, ensuring the project's legacy continues for decades.

Highlights of Synthesis Products

Recently Published Synthesis Papers Collections:

- U.S. GEOTRACES Pacific Meridional Transect (GP15): This special issue focuses on the 2018 GP15 cruise, which sampled along 152°W from Alaska to Tahiti. As the first meridional cruise of the U.S. GEOTRACES program, it aligns with the CLIVAR P16 line. The sampled trace elements and isotopes (TEIs), including micronutrients, are crucial for understanding various oceanic processes, such as those in ocean margins, subarctic high-nutrient low-chlorophyll (HNLC) waters, deep water, hydrothermal plumes, oxygen minimum zones, equatorial upwelling, and the oligotrophic waters of the South Pacific gyre.
- Treatise on Geochemistry (Third Edition): This collection of articles provides vital insights into marine and environmental geochemistry, addressing topics like sedimentary diagenesis, chemical tracers of particle dynamics, and the role of organic matter. It also explores the geochemistry of pore water, trace element distributions, paleo proxies, groundwater discharge in coastal areas, marine hydrothermal processes, and the geochemistry of sediments and particles. Furthermore, it examines metal stable isotopes, the biological carbon pump, trace metal biogeochemistry, air-sea gas exchange, and the geochronometry of marine deposits, offering a comprehensive overview of the field.

Conferences, Workshops and Schools

- *Ocean Carbon Biogeochemistry OCB2025 Workshop*: June 2-6, 2025, virtually. Learn more.
- *U.S. GEOTRACES SSC Meeting*: June 23-24, 2025, Alexandria, VA, USA.
- *GEOTRACES Synthesis Meeting Workshop:* July 3-4, 2025, Delmenhorst, Germany. Hybrid format. Learn more.
- *GEOTRACES sessions at Goldschmidt 2025*: July 6-11, 2025, Prague, Czech Republic. Learn more.
- 2025 *Chemical Oceanography Gordon Research Conference*: July 20-25, 2025, Manchester, NH, USA. *Applications by* ***June 22, 2025***. Learn more.
- *GEOTRACES Data Management Meeting (DMC):* October 13-14,2025, GOA, India.
- *GEOTRACES SSC Meeting:* October 15-17, 2025, GOA, India.
- *GEOTRACES Summer School:* 17-21 November, 2025, Cape Town, South Africa. Training in marine biogeochemistry of trace elements for *36* students. *Pre- registration is* ***open until June 30, 2025***. Information and pre-registration.

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