Introduction
The International GEOTRACES program aims to increase our knowledge of trace elements and isotopes (TEIs) in the oceans, specifically their quantities, distribution, and roles played in biogeochemical cycles. Investigations of TEIs in the ocean are critical for further understanding of marine ecosystem functioning, global carbon and nutrient cycles, and the ocean’s response to changing environmental conditions. In 2010 and 2011, U.S. GEOTRACES investigators conducted cruises along two North Atlantic transects. Hydrographic and atmospheric sampling were conducted resulting in numerous datasets of TEI concentrations and associated data from across the North Atlantic. The Biological and Chemical Oceanography Data Management Office (BCO-DMO) is responsible for the management, sharing, and preservation of these datasets and others resulting from investigators funded by the U.S. National Science Foundation (NSF). As the designated U.S. GEOTRACES Data Assembly Center, BCO-DMO works closely with investigators to ensure quality and completeness of both the data and documentation to foster discovery and re-use by potential collaborators. Dataset documentation includes calibration information, quality flag definitions, and descriptions of standard sampling and analysis protocols used. In addition to data from the North Atlantic Transect cruises, data from the Eastern Pacific Zonal Transect cruises, as well as other GEOTRACES sampling and analysis protocols used. In addition to data from the North Atlantic Transect cruises, data from the Eastern Pacific Zonal Transect cruises, as well as other GEOTRACES-related cruises. The Biological and Chemical Oceanography Data Management Office (BCO-DMO) is responsible for the management, sharing, and preservation of these datasets and others resulting from investigators funded by the U.S. National Science Foundation (NSF). As the designated U.S. GEOTRACES Data Assembly Center, BCO-DMO works closely with investigators to ensure quality and completeness of both the data and documentation to foster discovery and re-use by potential collaborators. Dataset documentation includes calibration information, quality flag definitions, and descriptions of standard sampling and analysis protocols used. In addition to data from the North Atlantic Transect cruises, data from the Eastern Pacific Zonal Transect cruises, as well as other GEOTRACES-related cruises.

BCO-DMO Fosters Data Discovery
BCO-DMO fosters data discovery by providing multiple ways to search for data. BCO-DMO currently serves more than 100 datasets from U.S. GEOTRACES and GEOTRACES-related cruises.

Map-Based Search
Search by parameter or keyword
1. Enter search term (e.g. “iron”)
2. Map displays cruise tracks where relevant data were collected
3. List of relevant datasets that can be mapped/viewed

Text-Based Search
Search by dataset name, cruise id, person, project, etc.
1. Choose search category and enter search term (e.g. “trace metals”)
2. List of relevant datasets is returned
3. Dataset metadata can be viewed
4. Data can be viewed and downloaded

Discoverability and re-use are enhanced through collaborations and technology.
BCO-DMO utilizes SemanticWeb technologies and Linked Open Data to connect our data with complementary information in other relevant repositories. This leads to improved data quality and access. Data are preserved at the appropriate national archives, enabling long-term access and re-use.

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