

GEOTRACES-SSC報告と 今後の対応

京都大学化学研究所

宗林由樹

2013GEOTRACES-SSC



Alfred Wegener Institute (AWI) for Polar and Marine Research
Bremerhaven, Germany
2-4 October 2013

Bremerhaven



ATLANTIC Hotel SAIL City



Alfred Wegener Institute (AWI) for Polar and Marine Research



List of participants - DMC/S&I and SSC meetings 2013

Name	Origin	Role
SSC Members		
Andrew Bowie	Hobart, Australia	SSC and DMC co-chair
Ed Boyle	Cambridge, USA	SSC Co-chair
Pinghe Cai	Xiamen, China	SSC Member
Ludmila Demina	Moscow, Russia	SSC Member
Jordi Garcia-Orellana	Barcelona	SSC Member
Tung-Yuan Ho	Taipei, Taiwan	SSC Member
Phoebe Lam	Woods Hole, USA	SSC Member
Maeve Lohan	Plymouth, UK	SSC Member
Maite Maldonado	Vancouver, Canada	SSC Member
Olivier Marchal	Boston, USA	SSC Member
Katharina Pahnke	Oldenburg, Germany	SSC Member
Micha JA Rijkenberg	Den Burg, The Netherlands	SSC Member
Alakaendra Roychoudhury	Stellenbosch, South Africa	SSC Member
Geraldine Sarthou	Brest, France	SSC Member
Reiner Schlitzer	Bremen, Germany	Co-Chair SSC
Yoshiki Sohrin	Kyoto, Japan	SSC Member
David Turner	Göteborg, Sweden	SSC Member
Angela Wagner	Rio, Brasil	SSC Member

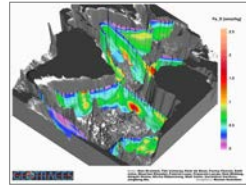
Name	Origin	Role
Past SSC members		
Bob Anderson	NYC, USA	Past SSC Co-chair
Gideon Henderson	London, UK	Past SSC Co-chair
Hein de Baar	Den Burg, The Netherlands	Past SSC
Martin Frank	Kiel, Germany	Past SSC
S&I Committee		
Per Andersson	Stockholm, Sweden	S&I Committee
Lou Codispoti	Cambridge, USA	S&I Committee
Peter Croot	Galway, Ireland	S&I Committee
Greg Cutter	Norfolk, USA	Chair S&I Committee
Hajime Obata	Tokyo, Japan	S&I Committee
Michiel Rutgers van der Loef	Bremerhaven, Germany	S&I Committee
DMC Committee		
Chris Measures	Hawaii, USA	Co-chair DMC
Sunil Kumar Singh	India	DMC Member
Alessandro Tagliabue	Liverpool, UK	DMC Member
Jing Zhang	Japan	DMC Member
IPO, DMO, and SCOR		
Catherine Jeandel	Toulouse, France	IPO
Elena Masferrer Dodas	Toulouse, France	IPO
Ed Mawji	Liverpool, UK	GDAC / DMC member
Ed Urban	PHL, USA	SCOR

2013_SSC_minutes_1

- National Reports
 - Recommendation for Japan: SSC recommends that the Japanese cruise KH-14-10 along GEOTRACES sections GP18-GP10-GP19 have a resolution of 5 degrees, as the GEOTRACES sampling at 5 degree resolution has shown that some features would be difficult to characterize at further spacing.

2013_SSC_minutes_2

- BioGEOTRACES
- International Project Office
- Outreach and Publicity
- GEOTRACES Publications
- International Partnership Issues
- Standards and Intercalibration
- Data Management
- Intermediate Data Product
- GEOTRACES Sections
- GEOTRACES Budget
- Capacity Building
- Process Studies and Compliant Data
- GEOTRACES Workshops
- GEOTRACES Special Sessions
- SSC and DMC Rotation
- Venue for next SSC meeting



Main motivation

GEOTRACES is releasing and sharing hydrographic and marine geochemical data acquired during the first 3 years of the program to strengthen and intensify collaboration within the broader ocean research community. At the same time, we seek feedback from the community to help us improve future data products.

The Product

The IDP2014 consists of two parts:

- (1) the **digital data** and
- (2) the **eGEOTRACES Electronic Atlas**.

The **digital data** (available at <http://www.bodc.ac.uk/geotraces/data/idp2014/>) contains data for more than 1000 stations from 15 cruises. More than 70 hydrographic and geochemical parameters are included, and scientists from 10 countries have contributed. The data product covers the Arctic, Atlantic and Indian Oceans, data density being the highest in the Atlantic.

Data Access: Users are required to register and agree to usage rules asking for proper citations of the product itself and of the relevant original papers associated with the particular data used. The data is available as ASCII text files suitable for usage in spreadsheet software such as Microsoft Excel and as ODV collections for use with the popular *Ocean Data View* software (odv.awi.de).

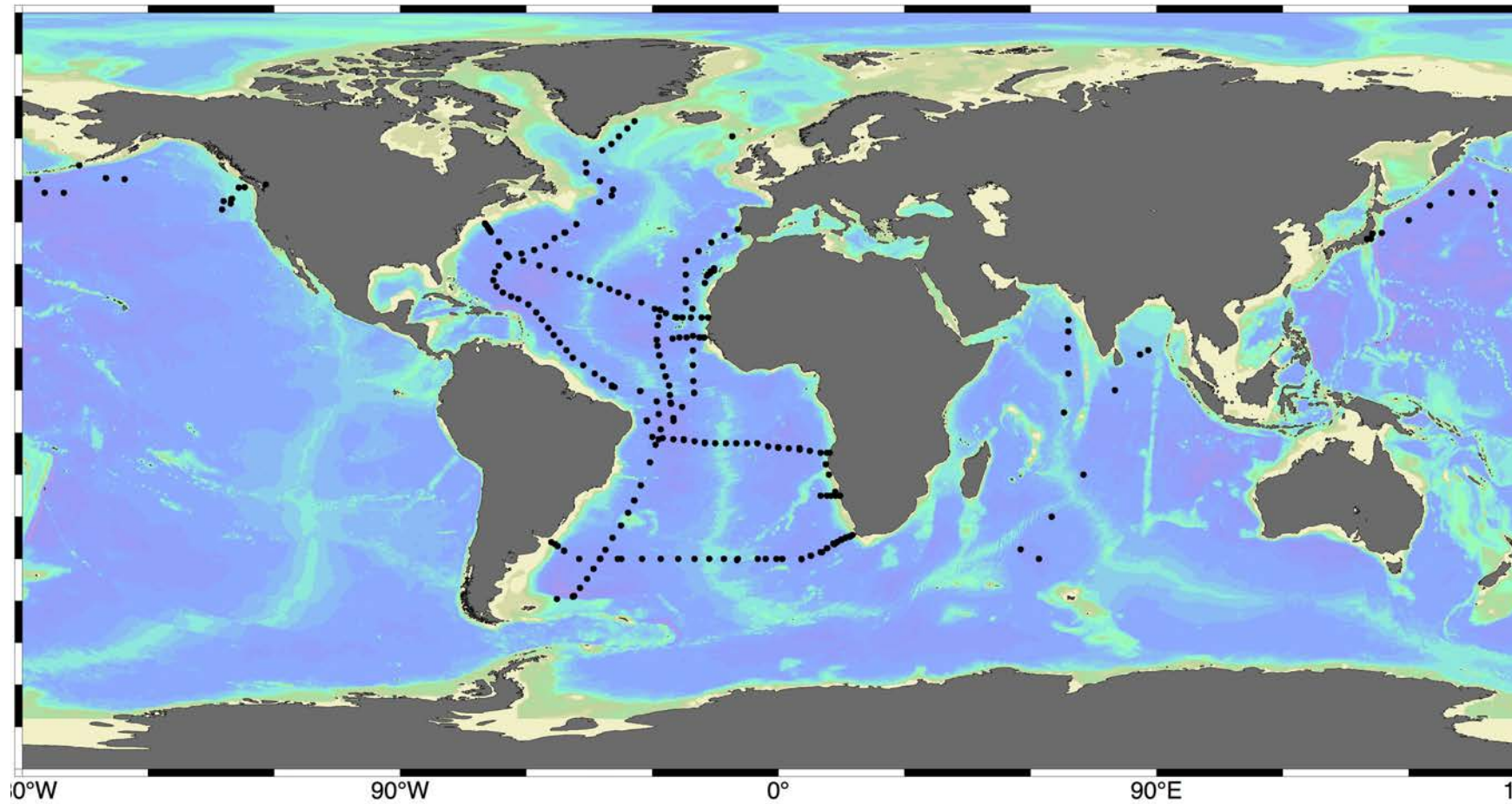
A special effort has been made to link information about data originators, original publications and analytical methods with every data value. Proper linkage to and prominent display of originator information is used throughout the IDP2014 and considered important to provide credit to data producers.

The **eGEOTRACES Electronic Atlas** (available at www.egeotraces.org) is based on the digital data package and provides section plots and animated 3D scenes for many of the parameters. The 3D scenes provide geographical context crucial for correctly assessing extent and origin of tracer plumes as well as for inferring processes acting on the tracers and shaping their distribution. The numerous links to other tracers, sections and basins found on section plots and 3D animations allow quick switching between parameters and domains and facilitate comparative studies. In addition, eGEOTRACES can help in teaching and outreach activities and can also facilitate conveying societally relevant scientific results to interested laymen or decision makers.

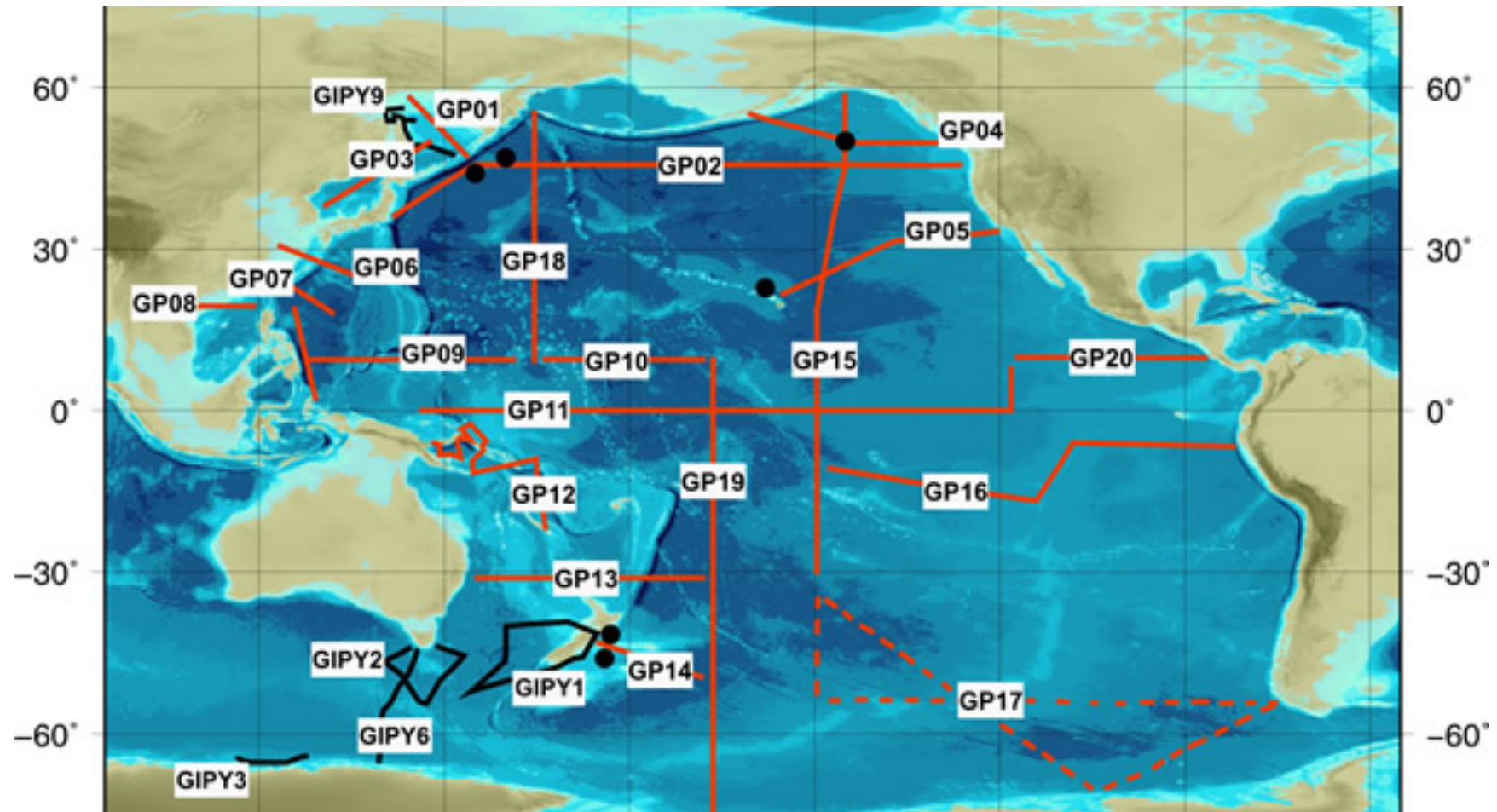
Usage: Users select parameters, cruise tracks and ocean basins using list-boxes and interactive maps. eGEOTRACES then presents parameter distributions along the selected sections, or animated 3D scenes showing parameter distributions along all available sections in the selected basin. Section plots and 3D animations contain the names of the scientists who produced or are responsible for the data. Section pages also contain a link to the original publications associated with the given parameter and cruise.



GEOTRACES stations



Sections in Pacific Ocean



Japan GEOTRACESの問題と対策_1

- SectionがGEOTRACE SSCの求める基準を満たせず、国際的に認められない恐れがある
 - 観測の分解能に問題がある。観測点の間隔が広すぎるところがある。最低5°間隔の条件を満たしていない。大陸棚や前線など、環境が急変するところではさらに密な観測が必要。
 - KH-12-4, GP-02?
 - KH-14-7, GP-18, 10, and 19?
 - super stationですべてのkey parameterを測定できるか？
 - crossover stationを設定しているか？

Japan GEOTRACESの問題と対策_2

- 情報の共有が不十分で, International GEOTRACESの要請, 疑問に迅速, 的確に対応できていない
 - International GEOTRACESに対して, 誰がどのような応答をしているのか, 情報が共有されていない. 例えば, S&IやGDACに誰からどのような情報が送られたのか, 何がまだ未対応なのかわからない. Intermediate Data Productに日本の成果が十分に反映されるか?
 - 国内の関連研究者, 論文リスト, 学会発表, 研究ハイライト, 研究費などの情報が集約されていない. National Reportに含めることができない.
 - 航海計画は, ship timeを踏まえた, 確実性の高い測点の情報を含める必要がある.
- 発信が不十分
 - GEOTRACES Japanのホームページが適切に更新されていない. 更新日: 2011年12月7日. 主な原因は, 情報が集約, 伝達されていないこと.
- 研究費がない
- 人材が足りない



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- 28 Jul-1 Aug at Royton Sapporo Hotel, Sapporo
- OS01 Trace elements and their isotopes in the ocean: GEOTRACES activities in Asia and Oceania
- Invited speakers: Andrew R Bowie (University of Tasmania, Australia), Hajime Obata (University of Tokyo, Japan)
- 22 presentations
- Conveners: Yoshiaki Sohrin (Kyoto University, Japan) , Tung-Yuan Ho (Academia Sinica, Taiwan) , Pinghe Cai (Xiamen University, China) , Man Sik Choi (Chungnam National University, Korea, South)