

Proceedings of the International Ocean Discovery Program

Volume 367/368

South China Sea Rifted Margin

Expeditions 367 and 368 of the riserless drilling platform
from and to Hong Kong, China

Sites U1499–U1500

7 February–9 April 2017

and

Hong Kong, China, to Shanghai, China

Sites U1501–U1505

9 April–11 June 2017

and

Expedition 368X of the riserless drilling platform

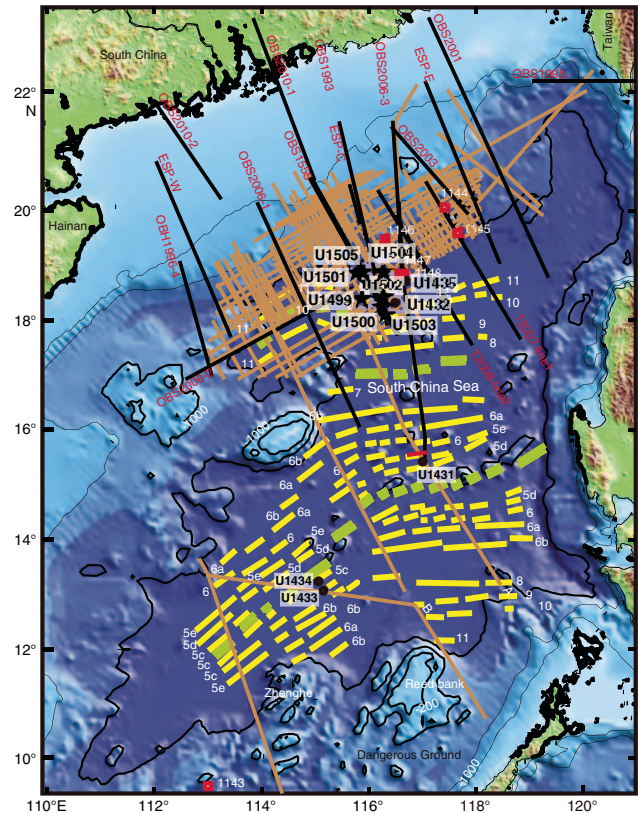
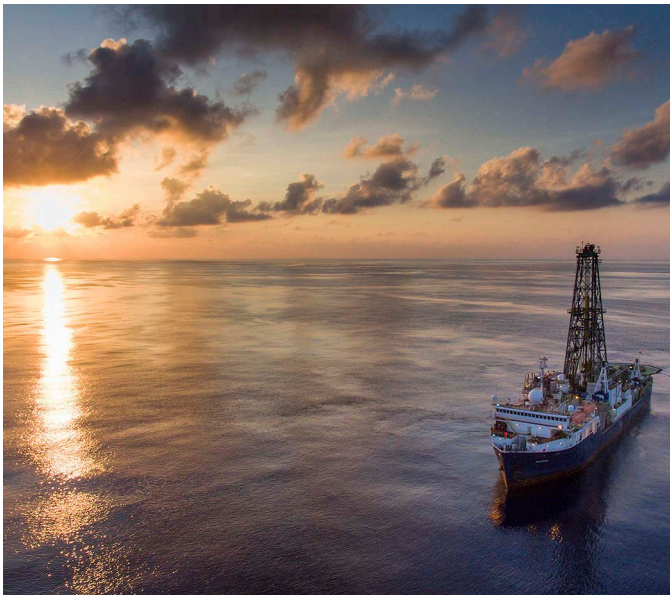
from and to Hong Kong, China

Return to Site U1503

15 November–8 December 2018

Volume authorship

Sun, Z., Jian, Z., Stock, J.M., Larsen, H.C., Klaus, A., Alvarez Zarikian, C.A., and the Expedition 367/368 Scientists



Publisher's notes

This publication was prepared by the *JOIDES Resolution* Science Operator (JRSO) at Texas A&M University (TAMU) as an account of work performed under the International Ocean Discovery Program (IODP). Funding for IODP is provided by the following international partners:

National Science Foundation (NSF), United States
Ministry of Education, Culture, Sports, Science and Technology (MEXT), Japan
European Consortium for Ocean Research Drilling (ECORD)
Ministry of Science and Technology (MOST), People's Republic of China
Korea Institute of Geoscience and Mineral Resources (KIGAM)
Australia-New Zealand IODP Consortium (ANZIC)
Ministry of Earth Sciences (MoES), India
Coordination for Improvement of Higher Education Personnel (CAPES), Brazil

Any opinions, findings, and conclusions or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the views of the participating agencies, TAMU, or Texas A&M Research Foundation.

The bulk of the shipboard-collected core data from this expedition is accessible at <http://iodp.tamu.edu/database/index.html>. If you cannot access this site or need additional data, please contact Data Librarian, International Ocean Discovery Program *JOIDES Resolution* Science Operator, Texas A&M University, 1000 Discovery Drive, College Station TX 77845-9547, USA. Tel: (979) 845-8495; Fax: (979) 458-1617; Email: database@iodp.tamu.edu.

A complete set of the logging data collected during the expedition is available at http://mlp.ldeo.columbia.edu/logdb/scientific_ocean_drilling. If you have problems downloading the data, wish to receive additional logging data, or have questions regarding the data, please contact Database Administrator, Borehole Research Group, Lamont-Doherty Earth Observatory of Columbia University, PO Box 1000, 61 Route 9W, Palisades NY 10964, USA. Tel: (845) 365-8343; Fax: (845) 365-3182; Email: logdb@ldeo.columbia.edu.

Supplemental data were provided by the authors and may not conform to IODP publication formats.

JRSO expedition photos are the property of IODP and are public access.

Some core photographs have been tonally enhanced to better illustrate particular features of interest. High-resolution images are available upon request.

Cover photograph shows the R/V *JOIDES Resolution* on site in the South China Sea during Expedition 368. Photo credit: Shuhao Xie and IODP JRSO.

Copyright

Except where otherwise noted, this work is licensed under the Creative Commons Attribution 4.0 International (CC BY 4.0) license (<https://creativecommons.org/licenses/by/4.0/>). Unrestricted use, distribution, and reproduction are permitted, provided the original author and source are credited.



Examples of how to cite this volume or part of this volume are available at http://publications.iodp.org/proceedings/367_368/367368title.html#bib.

ISSN

World Wide Web: 2377-3189

Volume DOI

<https://doi.org/10.14379/iodp.proc.367368.2018>

Publication date

28 September 2018

Contents

Expedition reports

Chapters

[Expedition 367/368 summary](#)

H.C. Larsen et al.

[Expedition 367/368 methods](#)

Z. Sun et al.

[Site U1499](#)

Z. Sun et al.

[Site U1500](#)

J.M. Stock et al.

[Site U1501](#)

H.C. Larsen et al.

[Site U1502](#)

H.C. Larsen et al.

[Site U1503](#)

H.C. Larsen et al.

[Site U1504](#)

H.C. Larsen et al.

[Site U1505](#)

Z. Jian et al.

[Expedition 368X summary](#)

L.B. Childress et al.

[Expedition 368X methods supplement](#)

L.B. Childress et al.

[Return to Site U1503](#)

L.B. Childress et al.

Core descriptions

Visual core descriptions (VCDs) are presented in PDF files for each site. Smear slides and/or thin sections are presented in PDF and/or CSV files for each site and/or hole (CSV files are available in the CORES directory). The entire set of core images in PDF is available in the IMAGES directory.

[Expedition 367/368](#)

[Site U1499](#)

[Visual core descriptions](#) · Smear slides · [Thin sections](#)

[Site U1500](#)

[Visual core descriptions](#) · Smear slides · [Thin sections](#)

[Site U1501](#)

[Visual core descriptions](#) · Smear slides · [Thin sections](#)

[Site U1502](#)

[Visual core descriptions](#) · Smear slides · [Thin sections](#)

[Site U1503](#)

[Visual core descriptions](#)

[Site U1504](#)

[Visual core descriptions](#) · Smear slides · [Thin sections](#)

[Site U1505](#)

[Visual core descriptions](#) · Smear slides

Expedition 368X

[Return to Site U1503](#)

[Visual core descriptions](#) · Smear slides · [Thin sections](#)

Supplementary material

Supplementary material for this volume includes DESClogik workbooks and X-ray diffraction data in Microsoft Excel format, an original seismic section figure in PDF and Adobe Illustrator format, downhole measurement data in PDF, captions in Microsoft Word format, and hand-drawn barrel sheets in PDF. A full list of directories can be found in SUPP_MAT in the volume zip folder or on the [Supplementary material for Volume 367/368 expedition reports](#) web page.

Expedition research results

Data reports

Titles are available in [HTML](#).

Syntheses

Titles are available in [HTML](#).

Drilling location maps

A site map showing the drilling locations for this expedition and maps showing the drilling locations of all International Ocean Discovery Program (IODP) expeditions, produced using QGIS (<http://www.qgis.org>), and all Integrated Ocean Drilling Program, Ocean Drilling Program (ODP), and Deep Sea Drilling Project (DSDP) expeditions, produced using Generic Mapping Tools (GMT) of Paul Wessel and Walter H.F. Smith (<http://gmt.soest.hawaii.edu>), are available in PDF.

[IODP Expedition 367/368 site map](#)

[IODP map](#) (Expeditions 349–357, 359–368, and 370)

[Integrated Ocean Drilling Program map](#) (Expeditions 301–348)

[ODP map](#) (Legs 100–210)

[DSDP map](#) (Legs 1–96)

Dedication



We dedicate this volume to our good friend and colleague Dr. Kirk D. McIntosh who passed away during Expedition 368 at the age of 59. Those who worked closely with Kirk on the years-long preparations for the South China Sea expeditions learned to know him as a person of the finest qualities. His prior work in the region was crucial to the scientific foundation of the project, and the rigor that he applied in processing and interpreting the seismic data greatly helped to shape our final drilling plans. His treatment for leukemia prevented him from sailing with us, but he remained engaged in our discussions even as we sailed. We were devastated by the news of his sudden death. His contributions will not be forgotten. Photo credit: David Stephens, Bureau of Economic Geology, University of Texas at Austin.

Acknowledgments

Complementary Project Proposal (CPP) Expeditions 367 and 368 received generous funding from the Ministry of Science and Technology (MOST; China). We are grateful to the China National Offshore Oil Corporation (CNOOC) for their powerful support with the regional deep crustal seismic data on which the entire project builds and to the Guangzhou Marine Geological Survey (GMGS) for releasing high-resolution bathymetry data from around the drilling sites. The success of the expeditions, from proposal preparation to the supporting work related to the expeditions, greatly benefited from support by the IODP-China office and the major research program “The South China Sea Deep” (2011–2018) funded by the National Natural Science Foundation of China (NSFC). We express our most sincere thanks to Professor Pinxian Wang, who made it possible to develop the proposal into two CPP expeditions. Professor Chunfeng Li is also greatly appreciated for his contributions to proposal preparation and partial data support.

Foreword

The International Ocean Discovery Program (IODP) represents the latest incarnation of almost five decades of scientific ocean drilling excellence and is generally accepted as the most successful international collaboration in the history of the Earth sciences. IODP builds seamlessly on the accomplishments of previous phases: the Deep Sea Drilling Project, Ocean Drilling Program, and Integrated Ocean Drilling Program. The 2013–2023 IODP Science Plan (*Illuminating Earth's Past, Present, and Future*) defines four themes and thirteen challenges for this decade of scientific ocean drilling that are both of fundamental importance in understanding how the Earth works and of significant relevance to society as the Earth changes, at least in part in response to anthropogenic forcing. This phase of IODP represents a renewed level of international collaboration in bringing diverse drilling platforms and strategies to increasing our understanding of climate and ocean change, the deep biosphere and evolution of ecosystems, connections between Earth's deep processes and surface manifestations, and geologically induced hazards on human timeframes.

The *Proceedings of the International Ocean Discovery Program* presents the scientific and engineering results of IODP drilling projects, expedition by expedition. As in the preceding Integrated Ocean Drilling Program, expeditions in the new IODP are conducted by three implementing organizations, each providing a different drilling capability. These are the US Implementing Organization (USIO; through September 2014) and the *JOIDES Resolution* Science Operator (JRSO; as of October 2014), providing the leased commercial vessel *JOIDES Resolution* for riserless drilling operations; JAMSTEC's Center for Deep Earth Exploration (CDEX), providing the drillship *Chikyu* for riser and occasional riserless operations; and the European Consortium for Ocean Research Drilling (ECORD) Science Operator (ESO), providing "mission-specific" platforms (MSPs) for expeditions that extend the IODP operational range where neither drillship is suitable, for example, in polar environments and in shallow waters. Scheduling decisions for each capability are made by three independent Facility Boards, each of which includes scientists, operators, and platform funding partners: the *JOIDES Resolution* Facility Board (JRFB), *Chikyu* IODP Board (CIB), and ECORD Facility Board (EFB). At the beginning of the new IODP, the three Facility Boards agreed to utilize Publication Services at the USIO and now the JRSO for production of all expedition *Proceedings* volumes and reports.

The new IODP differs from prior scientific ocean drilling programs in that it has neither a central management organization nor commingled funding for program-wide activities. Yet this phase of IODP retains a fundamental integrative structural element: a "bottom-up" evaluation of all proposals for drilling expeditions by a single advisory structure composed of scientists representing all international program partners. International scientists may submit drilling proposals to the Science Support Office; all submitted proposals are then evaluated by a Science Evaluation Panel in the context of the Science Plan.

The new IODP also has a second internationally integrative level for high-level discussion and consensus-building: the IODP Forum. The Forum is charged with assessing program-wide progress toward achieving the Science Plan. At present, IODP involves 26 international financial partners, including the United States, Japan, an Australia/New Zealand consortium (ANZIC), Brazil, China, India, South Korea, and the eighteen members of ECORD (Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Israel, Italy, the Netherlands, Norway, Poland, Portugal, Spain, Sweden, Switzerland, and the United Kingdom). This enhanced membership in the new IODP represents a remarkable level of international collaboration that remains one of the greatest ongoing strengths of scientific ocean drilling.

James A. Austin Jr.
Chair, IODP Forum

International Ocean Discovery Program

JOIDES Resolution Science Operator

Website: <http://iodp.tamu.edu>

IODP JRSO

International Ocean Discovery Program
Texas A&M University
1000 Discovery Drive
College Station TX 77845-9547
USA
Tel: (979) 845-2673; Fax: (979) 845-4857
Email: information@iodp.tamu.edu

IODP JRSO Curation and Laboratories

IODP Gulf Coast Repository (GCR)
Texas A&M University
1000 Discovery Drive
College Station TX 77845-9547
USA
Tel: (979) 845-8490; Fax: (979) 845-1303
Email: curator@iodp.tamu.edu

European Consortium for Ocean Research Drilling, Science Operator (ESO)

Website: <http://www.ecord.org>

IODP ESO Coordinator: Science, Logistics, and Operations

British Geological Survey
The Lyell Centre
Research Avenue South
Edinburgh EH14 4AP
United Kingdom
Tel: (44) 131-667-1000; Fax: (44) 131-668-4140
Email: eso@bgs.ac.uk

IODP ESO Curation and Laboratories

IODP Bremen Core Repository (BCR)
Center for Marine Environmental Sciences (MARUM)
University of Bremen
Leobener Strasse
28359 Bremen
Germany
Tel: (49) 421-218-65560; Fax: (49) 421-218-98-65560
Email: bcr@marum.de

IODP ESO Petrophysics

European Petrophysics Consortium
Department of Geology
University of Leicester
Leicester LE1 7RH
United Kingdom
Tel: (44) 116-252-3611; Fax: (44) 116-252-3918
Email: sjd27@leicester.ac.uk

Japan Agency for Marine-Earth Science and Technology (JAMSTEC)

Website: <http://www.jamstec.go.jp/chikyuu/e>

IODP Japan Science Operator

Center for Deep Earth Exploration (CDEX)
Japan Agency for Marine-Earth Science and Technology
Yokohama Institute for Earth Sciences
3175-25 Showa-machi
Kanazawa-ku, Yokohama
Kanagawa 236-0001
Japan
Tel: (81) 45-778-5643; Fax: (81) 45-778-5704
Email: cdex@jamstec.go.jp

IODP Japan Curation and Laboratories

IODP Kochi Institute for Core Sample Research (KCC)
Japan Agency for Marine-Earth Science and Technology
200 Monobe Otsu
3175-25 Showa-machi
Nankoku City, Kochi 783-8502
Japan
Tel: (81) 88-864-6705; Fax: (81) 88-878-2192
Email: kcc.contact@jamstec.go.jp

Expedition 367/368 participants*

Expedition 367 scientists

Zhen Sun

Co-Chief Scientist

CAS Key Laboratory of Ocean and Marginal Sea Geology
South China Sea Institute of Oceanology
China

zhensun@scsio.ac.cn

Joann M. Stock

Co-Chief Scientist

Division of Geological and Planetary Sciences
California Institute of Technology
USA

jstock@gps.caltech.edu

Adam Klaus

Expedition Project Manager/Staff Scientist

International Ocean Discovery Program
Texas A&M University
USA

aklaus@iodp.tamu.edu

Jacopo Boaga

Petrophysics (Physical Properties) Specialist

Dipartimento di Geoscienze
Università degli Studi di Padova
Italy

jacopo.boaga@unipd.it

Anne Briais

Petrophysics (Physical Properties) Specialist

Observatoire Midi-Pyrenes
Centre National de la Recherche Scientifique
France

anne.briais@cnrs.fr

Yifeng Chen

Inorganic Geochemist

Guangzhou Institute of Geochemistry
Chinese Academy of Sciences
China

yfchen@gig.ac.cn

Michael J. Dorais

Inorganic Geochemist

Department of Geological Sciences
Brigham Young University
USA

dorais@byu.edu

Akira Furusawa

Paleontologist (foraminifers)

Department of Geoscience
Shimane University
Japan

zerozaki.1130@gmail.com

Jessica L. Hinojosa

Sedimentologist

Division of Geological and Planetary Sciences
California Institute of Technology
USA

Present affiliation (20 September 2017):

Shell International Exploration and Production
USA

j.hinojosa@shell.com

Tobias W. Höfig

Petrologist

International Ocean Discovery Program
Texas A&M University
USA

hoefig@iodp.tamu.edu

Kan-Hsi Hsiung

Sedimentologist

Japan Agency for Marine-Earth Science and Technology
Japan

hsiong@jamstec.go.jp

Baoqi Huang

Paleontologist (foraminifers)

Department of Geology
Peking University
China

bqhuang@pku.edu.cn

Xiao-Long Huang

Petrologist

Guangzhou Institute of Geochemistry
Chinese Academy of Sciences
China

xlhuang@gig.ac.cn

Benjamin G. Johnson

Sedimentologist

Geology and Geography
West Virginia University
USA

bgjohnson@mix.wvu.edu

Chao Lei

Petrophysics (Physical Properties) Specialist

Department of Marine Science
College of Marine Science and Technology
China University of Geosciences in Wuhan
China

clei@cug.edu.cn

*Affiliations at time of expedition, except where updated by participants.

Li Li

Organic Geochemist

State Key Laboratory of Marine Geology
Tongji University
China
lilitju@tongji.edu.cn

Zhifei Liu

Sedimentologist

State Key Laboratory of Marine Geology
Tongji University
China
lzhifei@tongji.edu.cn

Antonio Luna

Petrologist

Department of Geology
University of South Florida, Tampa
USA
aluna2@mail.usf.edu

Claudia Lupi

Paleontologist (nannofossils)

Department of Earth and Environmental Sciences
Università degli Studi di Pavia
Italy
claudia.lupi@unipv.it

Anders J. McCarthy

Petrologist

Institute of Earth Sciences
University of Lausanne
Switzerland
anders.mccarthy@unil.ch

Michael Nirrengarten

Structural Geologist

Institut de Physique du Globe de Strasbourg
France

Present affiliation (20 September 2017):
Laboratoire Géosciences et Environnement Cergy (GEC)
Maison Internationale de la Recherche
Université de Cergy-Pontoise
France
michael.nirrengarten@u-cergy.fr

Caroline M. Robinson

Sedimentologist

School of Earth Sciences
Ohio State University
USA
robinson.2071@osu.edu

Isabel Sauermilch

Petrophysics (Physical Properties) Specialist

Institute for Marine and Antarctic Studies (IMAS)
University of Tasmania
Australia
isabel.sauermilch@utas.edu.au

Steven M. Skinner

Paleomagnetist

Department of Geology
California State University, Sacramento
USA
steven.skinner@csus.edu

Xiang Su

Paleontologist (nannofossils)

CAS Key Laboratory of Ocean and Marginal Sea Geology
South China Sea Institute of Oceanology, Chinese Academy
of Sciences
China
suxiang@scsio.ac.cn

Rong Xiang

Paleontologist (foraminifers)

CAS Key Laboratory of Ocean and Marginal Sea Geology
South China Sea Institute of Oceanology, Chinese Academy
of Sciences
China
rxiang@scsio.ac.cn

Rajeev Yadav

Petrophysics (Physical Properties) Specialist

Department of Marine Geophysics
National Centre for Antarctic and Ocean Research (NCAOR)
India
ryadav@ncaor.gov.in

Liang Yi

Paleomagnetist

State Key Laboratory of Marine Geology
Tongji University
China
yi.liang82@gmail.com

Cuimei Zhang

Structural Geologist

CAS Key Laboratory of Ocean and Marginal Sea Geology
South China Sea Institute of Oceanology, Chinese Academy
of Sciences
China
cmzhang@scsio.ac.cn

Jinchang Zhang

Petrophysics (Physical Properties) Specialist

CAS Key Laboratory of Ocean and Marginal Sea Geology
South China Sea Institute of Oceanology, Chinese Academy
of Sciences
China
jzhang@scsio.ac.cn

Yang Zhang

Paleomagnetist

Department of Earth and Atmospheric Sciences
Purdue University
USA
zhan2214@purdue.edu

Ning Zhao

Sedimentologist

Department of Geology and Geophysics
Woods Hole Oceanographic Institution
USA

Present affiliation (20 September 2017):
Department of Geology and Geophysics
Max Planck Institute for Chemistry
Germany
ningzhao2009@hotmail.com

Expedition 367 observer

Chih-Chieh Su

Sedimentologist/Observer

Institute of Oceanography
National Taiwan University
Taiwan
donccsu@ntu.edu.tw

Expedition 367 education and outreach

Alessia Cicconi

Education/Outreach Officer

Liceo Classico "F. Stabili - E. Trebbiani" Ascoli Piceno
School of Science and Technology
Geology Division
University of Camerino
Italy
alessia.cicconi@unicam.it

Lifeng Zhong

Petrologist

School of Marine Sciences
Sun Yat-Sen University
China
zhonglf@scsio.ac.cn

Jiansong Zhang

Education/Outreach Officer

China
13311669691@163.com

Expedition 368 scientists

Zhimin Jian

Co-Chief Scientist

School of Ocean and Earth Science
Tongji University
China
jian@tongji.edu.cn

Hans Christian Larsen

Co-Chief Scientist

Geological Survey of Denmark and Greenland
Denmark
hclarseniodp@gmail.com

Also at:
Tongji University
China

Carlos A. Alvarez Zarikian

Expedition Project Manager/Staff Scientist

International Ocean Discovery Program
Texas A&M University
USA
zarikian@iodp.tamu.edu

Stephen A. Bowden

Organic Geochemist

School of Geosciences
University of Aberdeen
United Kingdom
s.a.bowden@abdn.ac.uk

Deniz Cukur

Petrophysics (Physical Properties) Specialist

Marine Geology Department
Petroleum & Marine Research Division
Korea Institute of Geoscience and Mineral Resources (KIGAM)
Republic of Korea
dcukur@kigam.re.kr

Kelsie A. Dadd

Sedimentologist

School of Geosciences
University of Sydney
Australia
kelsie.dadd@sydney.edu.au

Weiwei Ding

Structural Geologist

Key Laboratory of Submarine Geoscience
Second Institute of Oceanography (SIO), State Oceanic
Administration (SOA)
China
wwding@sio.org.cn

Eric C. Ferré

Paleomagnetist

Department of Geology
Southern Illinois University at Carbondale
USA
eferre@geo.siu.edu

Fabricio Ferreira**Paleontologist (foraminifers)**

Institute for Geosciences, Universidade Federal Fluminense
(UFF), Brazil
CAPES Foundation
Ministry of Education of Brazil
ferreira_paleo@hotmail.com

Aaron J. Gewecke**Paleontologist (diatoms)**

Earth and Atmospheric Sciences
University of Nebraska, Lincoln
USA
aarongewecke@gmail.com

Enqing Huang**Petrophysics (Physical Properties) Specialist**

School of Ocean and Earth Science
Tongji University
China
ehuang@tongji.edu.cn

Shijun Jiang**Paleontologist (nannofossils)**

College of Life Science and Technology
Jinan University
China
sjiang@jnu.edu.cn

Haiyan Jin**Paleontologist (foraminifers)**

State Key Laboratory of Marine Geology
Tongji University
China
jinhy@tongji.edu.cn

Robert M. Kurzawski**Petrologist/Structural Geologist**

GEOMAR Helmholtz Center for Ocean Research Kiel
Christian-Albrechts-Universität zu Kiel
Germany
rkurzawski@geomar.de

Baohua Li**Paleontologist (foraminifers)**

Department of Micropalaeontology
Nanjing Institute of Geology and Palaeontology
Chinese Academy of Sciences
China
bh-li@nigpas.ac.cn

Yanping Li**Inorganic Geochemist**

School of Geographical and Oceanographical Sciences
Nanjing University
China
ypli@nju.edu.cn

Jian Lin**Petrophysics (Physical Properties) Specialist**

Department of Geology and Geophysics
Woods Hole Oceanographic Institution
USA
jlin@whoi.edu

Chang Liu**Sedimentologist**

Department of Geology and Geophysics
Louisiana State University
USA
cliu14@lsu.edu

Chuanlian Liu**Paleontologist (nannofossils)**

School of Ocean and Earth Science
Tongji University
China
liucl@tongji.edu.cn

Geoffroy Mohn**Petrologist/Structural Geologist**

Laboratoire Géosciences et Environnement Cergy (GEC)
Maison Internationale de la Recherche
Université de Cergy-Pontoise
France
Geoffroy.Mohn@u-cergy.fr

Lachit Singh Ningthoujam**Petrophysics (Physical Properties) Specialist**

Department of Marine Geophysics
National Centre for Antarctic and Ocean Research (NCAOR)
India
lachit@ncaor.gov.in

Nobuaki Osono**Petrophysics (Physical Properties) Specialist**

Faculty of Science
Graduate School of Science and Technology for Innovation,
Yamaguchi University
Japan
t004dg@gmail.com

David W. Peate**Petrologist**

Earth & Environmental Sciences
University of Iowa
USA
david-peate@uiowa.edu

Patricia Persaud**Petrophysics (Physical Properties) Specialist**

Department of Geology and Geophysics
Louisiana State University
USA
ppersaud@lsu.edu

Ning Qiu**Petrophysics (Physical Properties) Specialist**

Key Laboratory of Marginal Sea Geology
Chinese Academy of Sciences
China
ningqiu@scsio.ac.cn

Sara Satolli**Paleomagnetist**

Department of Engineering and Geology
University of Chieti-Pescara
Italy
sara.satolli@unich.it

Julie C. Schindlbeck

Sedimentologist

GEOMAR Helmholtz Center for Ocean Research Kiel
Germany
jschindlbeck@geomar.de

Present affiliation (20 September 2017):
Institute of Earth Sciences
Heidelberg University
Germany

Susanne M. Straub

Sedimentologist/Petrologist

Lamont-Doherty Earth Observatory
Columbia University
USA
smstraub@ldeo.columbia.edu

Liyan Tian

Inorganic Geochemist

Institute of Deep-sea Science and Engineering
Chinese Academy of Sciences
China
lytian@idsse.ac.cn

Froukje M. van der Zwan

Petrologist

Institute of Geosciences
Christian Albrechts University Kiel
Germany
fvdz@gpi.uni-kiel.de

Shiming Wan

Sedimentologist

Institute of Oceanology
Chinese Academy of Sciences
China
wanshiming@ms.qdio.ac.cn

Huaichun Wu

Paleomagnetist

School of Ocean Sciences
China University of Geosciences
China
whcgeo@cugb.edu.cn

Guangfa Zhong

Sedimentologist

School of Ocean and Earth Science
Tongji University
China
gfg@tongji.edu.cn

Expedition 368 observers

Pai-Sen Yu

Paleontologist (foraminifers)

National Applied Research Laboratories (NARLabs)
Taiwan Ocean Research Institute (TORI)
Taiwan
epson_yu@narlabs.org.tw

Gailun Zhang

China
jyjj1234567@126.com

Expedition 368 education and outreach

Amanda M. Wolfe

Education/Outreach Officer

USA
wolfe.amanda.marie@gmail.com

Shuhao Xie

Education/Outreach Officer
China
rafaelxie@qq.com

Expedition 368X shipboard scientists

Laurel B. Childress

Expedition Project Manager/Staff Scientist

International Ocean Discovery Program
Texas A&M University
USA
childress@iodp.tamu.edu

Jia-Ming Deng

Petrophysics (Physical Properties/Downhole Measurements)

Specialist/Observer
Taiwan Ocean Research Institute
National Applied Research Laboratories
Taiwan
smilewind0601@gmail.com

Anne Briaais

Petrophysics (Physical Properties/Downhole Measurements)

Specialist
Observatoire Midi-Pyrenes
Geosciences Environnement Toulouse
Centre National de la Recherche Scientifique (CNRS)
France
anne.briaais@cnrs.fr

Jian Lin

Petrophysics (Physical Properties/Downhole Measurements)

Specialist
Department of Geology and Geophysics
Woods Hole Oceanographic Institution
USA
jlin@whoi.edu

Michael F.R. Nirrengarten

Structural Geologist

Laboratoire Géosciences et Environnement de Cergy-Pontoise
University de Cergy Pontoise
Maison International de la Recherche
France
michael.nirrengarten@u-cergy.fr

Ning Qiu

Petrophysics (Physical Properties/Downhole Measurements)

Specialist

Key Laboratory of Marginal Sea Geology
Chinese Academy of Sciences
China
ningqiu@scsio.ac.cn

Sara Satolli

Paleomagnetist

Department of Engineering and Geology
University of Chieti-Pescara
Italy
sara.satolli@unich.it

Expedition 368X shore-based scientists

Laurel B. Childress

Expedition Project Manager/Staff Scientist

International Ocean Discovery Program
Texas A&M University
USA
childress@iodp.tamu.edu

Carlos A. Alvarez Zarikian

Core Description

International Ocean Discovery Program
Texas A&M University
USA
zarikian@iodp.tamu.edu

Anne Briaes

Core Description

Observatoire Midi-Pyrenes
Centre National de la Recherche Scientifique
France
anne.briaes@cnrs.fr

Kelsie A. Dadd

Core Description

School of Geosciences
University of Sydney
Australia
kelsie.dadd@sydney.edu.au

Tobias W. Höfig

Core Description

International Ocean Discovery Program
Texas A&M University
USA
hoefig@iodp.tamu.edu

Zhen Sun

Structural Geologist

CAS Key Laboratory of Marginal Sea Geology
South China Sea Institute of Oceanology
China
zhensun@scsio.ac.cn

Liang Yi

Paleomagnetist

State Key Laboratory of Marine Geology
Tongji University
China
yi.liang82@gmail.com

Lifeng Zhong

Petrologist

School of Marine Sciences
Sun Yat-Sen University
China
zhonglf9@mail.sysu.edu.cn

Xiao-Long Huang

Core Description

Guangzhou Institute of Geochemistry
Chinese Academy of Sciences
China
xlhuang@gig.ac.cn

Baohua Li

Core Description

Department of Micropaleontology
Nanjing Institute of Geology and Palaeontology
Chinese Academy of Sciences
China
bh-li@nigpas.ac.cn

Jian Lin

Core Description

Department of Geology and Geophysics
Woods Hole Oceanographic Institution
USA
jlin@whoi.edu

Chuanlian Liu

Core Description

School of Ocean and Earth Science
Tongji University
China
liucl@tongji.edu.cn

Zhifei Liu

Sedimentologist

State Key Laboratory of Marine Geology
Tongji University
China
lzhifei@tongji.edu.cn

David W. Peate

Core Description

Earth & Environmental Sciences
University of Iowa
USA
david-peate@uiowa.edu

Ning Qiu

Core Description

Key Laboratory of Marginal Sea Geology
Chinese Academy of Sciences
China
ningqiu@scsio.ac.cn

Zhen Sun

Core Description

CAS Key Laboratory of Ocean and Marginal Sea Geology
South China Sea Institute of Oceanology
China
zhensun@scsio.ac.cn

Froukje M. van der Zwan

Core Description

Institute of Geosciences
Christian Albrechts University Kiel
Germany
fvdz@gpi.uni-kiel.de

Rong Xiang

Core Description

CAS Key Laboratory of Ocean and Marginal Sea Geology
South China Sea Institute of Oceanology
China
rxiang@scsio.ac.cn

Lifeng Zhong

Core Description

School of Marine Sciences
Sun Yat-Sen University
China
zhonglf@scsio.ac.cn

Operational and technical staff

SIEM Offshore AS officials

Expedition 367

Terry Skinner

Master of the Drilling Vessel

Expedition 368

Steve Bradley

Master of the Drilling Vessel

Expedition 368X

Jake Robinson

Master of the Drilling Vessel

Sam McLelland

Offshore Installation Manager

Wayne Malone

Offshore Installation Manager

Mark Robinson

Drilling Supervisor

JRSO shipboard personnel and technical representatives

Expedition 367

Robert Aduddell

Engineer

Alexis Armstrong

X-Ray Laboratory

Heather Barnes

Assistant Laboratory Officer

Chad Broyles

Curatorial Specialist

Michael Cannon

Marine Computer Specialist

Etienne Claassen

Marine Instrumentation Specialist

Ty Cobb

Physical Properties Laboratory

William Crawford

Senior Imaging Specialist

Benjamin Daniel

Core Laboratory

Roy Davis

Laboratory Officer

David Fackler

Applications Developer

Seth Frank

Thin Section Laboratory

Edwin Garrett

Paleomagnetism Laboratory

Rachael Gray

Core Laboratory

Jan Jurie Kotze
Marine Instrumentation Specialist

Zenon Mateo
Underway Geophysics Laboratory/Downhole Tools Laboratory

Stephen Midgley
Operations Superintendent

Erik Moortgat
Chemistry Laboratory

Chieh Peng
Assistant Laboratory Officer

Expedition 368

Susan Boehm
Thin Section Laboratory

Lisa Brandt
Chemistry Laboratory

Lisa Crowder
Assistant Laboratory Officer

Aaron de Loach
Core Laboratory

Keith Dupuis
Underway Geophysics Laboratory

Sheryl Frazier
Physical Properties Laboratory

Timothy Fulton
Senior Imaging Specialist

Clayton Furman
Logging Engineer

Randy Gjesvold
Marine Instrumentation Specialist

Kevin Grigar
Operations Superintendent

Sandra Herrmann
Assistant Laboratory Officer

Michael Hodge
Marine Computer Specialist

Expedition 368X

Timothy Blaisdell
Applications Developer

Susan Boehm
Thin Section Laboratory

Inva Braha
Curatorial Specialist

Lisa Brandt
Chemistry Laboratory

Vincent Percuoco
Chemistry Laboratory

Alyssa Stephens
Publications Specialist

Kerry Swain
Logging Engineer

Steven Thomas
Marine Computer Specialist

Rui Wang
Applications Developer

Minh Nhut Huynh
Marine Computer Specialist

Nicolette Lawler
X-Ray Laboratory

Brittany Martinez
Curatorial Specialist

Aaron Mechler
Chemistry Laboratory

Mike Meiring
Engineer

William Mills
Laboratory Officer

Algie Morgan
Applications Developer

Beth Novak
Paleomagnetism Laboratory

Garrick Van Rensburg
Marine Instrumentation Specialist

Jean Wulfson
Publications Specialist

Hai (James) Zhao
Applications Developer

James Brattin
Applications Developer

Ty Cobb
Physical Properties Laboratory

Lisa Crowder
Laboratory Officer

Aaron De Loach
Assistant Laboratory Officer

Seth Frank
Physical Properties Laboratory

Tim Fulton
Senior Imaging Specialist

Clayton Furman
Logging Engineer

Randy Gjesvold
Marine Instrumentation Specialist

Margaret Hastedt
Core Laboratory

Sandra Herrmann
Assistant Laboratory Officer

Michael Hodge
Marine Computer Specialist

Nicolette Lawler
X-Ray Laboratory

Aaron Mechler
Chemistry Laboratory

IODP Publication Services staff*

Douglas Cummings
Graphics Specialist II

Gudelia (“Gigi”) Delgado
Publications Coordinator

Ekanta Desai
Graphics Specialist II

Patrick H. Edwards
Production Editor IV

Jaime A. Gracia
Supervisor of Production and Graphics

Jenni Hesse
Editor III

Rhonda Kappler
Graphics Specialist III

Shana C. Lewis
Editor III

Ginny Lowe
Reports Coordinator

Michael Meiring
Engineer

Stephen Midgley
Operations Superintendent

Beth Ann Novak
Paleomagnetism/Physical Properties Laboratory

Vincent Percuoco
Chemistry Laboratory

Alyssa Stephens
Publications Specialist

Sheryl Templeton
Physical Properties Laboratory

Steven Thomas
Marine Computer Specialist

Garrick Van Rensburg
Marine Instrumentation Specialist

Hai (James) Zhao
Applications Developer

Amy McWilliams
Supervisor of Editing

Julie Myers
Production Editor II

Lorri Peters
Manager of Publication Services

Sandi Sherar Ruddick
Editor II

Kenneth Sherar
Production Editor III

Alyssa Stephens
Graphics Specialist III

Crystal Wolfe
Production Editor III

Jean Wulfson
Graphics Specialist III

Ann Yeager
Distribution Specialist

*At time of publication.

Expedition-related bibliography*

IODP publications

Scientific Prospectus

Sun, Z., Stock, J., Jian, Z., McIntosh, K., Alvarez-Zarikian, C.A., and Klaus, A., 2016. *Expedition 367/368 Scientific Prospectus: South China Sea Rifted Margin*. International Ocean Discovery Program.

<https://doi.org/10.14379/iodp.sp.367368.2016>

Sun, Z., Stock, J., Jian, Z., Larsen, H.-C., Alvarez-Zarikian, C.A., and Klaus, A., 2016. *Expedition 367/368 Scientific Prospectus Addendum: South China Sea Rifted Margin*. International Ocean Discovery Program.

<https://doi.org/10.14379/iodp.sp.367368add.2016>

Preliminary Report

Sun, Z., Stock, J., Klaus, A., and the Expedition 367 Scientists, 2018. *Expedition 367 Preliminary Report: South China Sea Rifted Margin*. International Ocean Discovery Program.

<https://doi.org/10.14379/iodp.pr.367.2018>

Jian, Z., Larsen, H.C., Alvarez-Zarikian, C.A., and the Expedition 368 Scientists, 2018. *Expedition 368 Preliminary Report: South China Sea Rifted Margin*. International Ocean Discovery Program.

<https://doi.org/10.14379/iodp.pr.368.2018>

Childress, L., and the Expedition 368X Scientists, 2019. *Expedition 368X Preliminary Report: South China Sea Rifted Margin*. International Ocean Discovery Program. <https://doi.org/10.14379/iodp.pr.368X.2019>

Proceedings volume

Sun, Z., Jian, Z., Stock, J.M., Larsen, H.C., Klaus, A., Alvarez-Zarikian, C.A., and the Expedition 367/368 Scientists, 2018. *South China Sea Rifted Margin*. Proceedings of the International Ocean Discovery Program, 367/368: College Station, TX (International Ocean Discovery Program).

<https://doi.org/10.14379/iodp.proc.367368.2018>

Expedition reports

Larsen, H.C., Sun, Z., Stock, J.M., Jian, Z., Alvarez-Zarikian, C.A., Klaus, A., Boaga, J., Bowden, S.A., Briais, A., Chen, Y., Cukur, D., Dadd, K.A., Ding, W., Dorais, M.J., Ferré, E.C., Ferreira, F., Furusawa, A., Gewecke, A.J., Hinojosa, J.L., Höfig, T.W., Hsiung, K.-H., Huang, B., Huang, E., Huang, X.-L., Jiang, S., Jin, H., Johnson, B.G., Kurzawski, R.M., Lei, C., Li, B., Li, L., Li, Y., Lin, J., Liu, C., Liu, C., Liu, Z., Luna, A., Lupi, C., McCarthy, A.J., Mohn, G., Ningthoujam, L.S., Nirrengarten, M., Osono, N., Peate, D.W., Persaud, P., Qiu, N., Robinson, C.M., Satolli, S., Sauermilch, I., Schindlbeck, J.C., Skinner, S.M., Straub, S.M., Su, X., Tian, L., van der Zwan, F.M., Wan, S., Wu, H., Xiang, R., Yadav, R., Yi, L., Zhang, C., Zhang, J., Zhang, Y., Zhao, N., Zhong, G., and Zhong, L., 2018. Expedition 367/368 summary. *In* Sun, Z., Jian, Z., Stock, J.M., Larsen, H.C., Klaus, A., Alvarez-Zarikian, C.A., and the Expedition 367/368 Scientists, *South China Sea Rifted Margin*. Proceedings of the International Ocean Discovery Program, 367/368: College Station, TX (International Ocean Discovery Program). <https://doi.org/10.14379/iodp.proc.367368.101.2018>

Sun, Z., Jian, Z., Stock, J.M., Larsen, H.C., Klaus, A., Alvarez-Zarikian, C.A., Boaga, J., Bowden, S.A., Briais, A., Chen, Y., Cukur, D., Dadd, K.A., Ding, W., Dorais, M.J., Ferré, E.C., Ferreira, F., Furusawa, A., Gewecke, A.J., Hinojosa, J.L., Höfig, T.W., Hsiung, K.-H., Huang, B., Huang, E., Huang, X.-L., Jiang, S., Jin, H., Johnson, B.G., Kurzawski, R.M., Lei, C., Li, B., Li, L., Li, Y., Lin, J., Liu, C., Liu, C., Liu, Z., Luna, A., Lupi, C., McCarthy, A.J., Mohn, G., Ningthoujam, L.S., Nirrengarten, M., Osono, N., Peate, D.W., Persaud, P., Qiu, N., Robinson, C.M., Satolli, S., Sauermilch, I., Schindlbeck, J.C., Skinner, S.M., Straub, S.M., Su, X., Tian, L., van der Zwan, F.M., Wan, S., Wu, H., Xiang, R., Yadav, R., Yi, L., Zhang, C., Zhang, J., Zhang, Y., Zhao, N., Zhong, G., and Zhong, L., 2018. Expedition 367/368 methods. *In* Sun, Z., Jian, Z., Stock, J.M., Larsen, H.C., Klaus, A., Alvarez-Zarikian,

C.A., and the Expedition 367/368 Scientists, *South China Sea Rifted Margin*. Proceedings of the International Ocean Discovery Program, 367/368: College Station, TX (International Ocean Discovery Program).

<https://doi.org/10.14379/iodp.proc.367368.102.2018>

Sun, Z., Stock, J.M., Klaus, A., Larsen, H.C., Jian, Z., Alvarez-Zarikian, C.A., Boaga, J., Bowden, S.A., Briais, A., Chen, Y., Cukur, D., Dadd, K.A., Ding, W., Dorais, M.J., Ferré, E.C., Ferreira, F., Furusawa, A., Gewecke, A.J., Hinojosa, J.L., Höfig, T.W., Hsiung, K.-H., Huang, B., Huang, E., Huang, X.-L., Jiang, S., Jin, H., Johnson, B.G., Kurzawski, R.M., Lei, C., Li, B., Li, L., Li, Y., Lin, J., Liu, C., Liu, C., Liu, Z., Luna, A., Lupi, C., McCarthy, A.J., Mohn, G., Ningthoujam, L.S., Nirrengarten, M., Osono, N., Peate, D.W., Persaud, P., Qiu, N., Robinson, C.M., Satolli, S., Sauermilch, I., Schindlbeck, J.C., Skinner, S.M., Straub, S.M., Su, X., Tian, L., van der Zwan, F.M., Wan, S., Wu, H., Xiang, R., Yadav, R., Yi, L., Zhang, C., Zhang, J., Zhang, Y., Zhao, N., Zhong, G., and Zhong, L., 2018. Site U1499. *In* Sun, Z., Jian, Z., Stock, J.M., Larsen, H.C., Klaus, A., Alvarez-Zarikian, C.A., and the Expedition 367/368 Scientists, *South China Sea Rifted Margin*. Proceedings of the International Ocean Discovery Program, 367/368: College Station, TX (International Ocean Discovery Program).

<https://doi.org/10.14379/iodp.proc.367368.103.2018>

Stock, J.M., Sun, Z., Klaus, A., Larsen, H.C., Jian, Z., Alvarez-Zarikian, C.A., Boaga, J., Bowden, S.A., Briais, A., Chen, Y., Cukur, D., Dadd, K.A., Ding, W., Dorais, M.J., Ferré, E.C., Ferreira, F., Furusawa, A., Gewecke, A.J., Hinojosa, J.L., Höfig, T.W., Hsiung, K.-H., Huang, B., Huang, E., Huang, X.-L., Jiang, S., Jin, H., Johnson, B.G., Kurzawski, R.M., Lei, C., Li, B., Li, L., Li, Y., Lin, J., Liu, C., Liu, C., Liu, Z., Luna, A., Lupi, C., McCarthy, A.J., Mohn, G., Ningthoujam, L.S., Nirrengarten, M., Osono, N., Peate, D.W., Persaud, P., Qiu, N., Robinson, C.M., Satolli, S., Sauermilch, I., Schindlbeck, J.C., Skinner, S.M., Straub, S.M., Su, X., Tian, L., van der Zwan, F.M., Wan, S., Wu, H., Xiang, R., Yadav, R., Yi, L., Zhang, C., Zhang, J., Zhang, Y., Zhao, N., Zhong, G., and Zhong, L., 2018. Site U1500. *In* Sun, Z., Jian, Z., Stock, J.M., Larsen, H.C., Klaus, A., Alvarez-Zarikian, C.A., and the Expedition 367/368 Scientists, *South China Sea Rifted Margin*. Proceedings of the International Ocean Discovery Program, 367/368: College Station, TX (International Ocean Discovery Program).

<https://doi.org/10.14379/iodp.proc.367368.104.2018>

Larsen, H.C., Jian, Z., Alvarez-Zarikian, C.A., Sun, Z., Stock, J.M., Klaus, A., Boaga, J., Bowden, S.A., Briais, A., Chen, Y., Cukur, D., Dadd, K.A., Ding, W., Dorais, M.J., Ferré, E.C., Ferreira, F., Furusawa, A., Gewecke, A.J., Hinojosa, J.L., Höfig, T.W., Hsiung, K.-H., Huang, B., Huang, E., Huang, X.-L., Jiang, S., Jin, H., Johnson, B.G., Kurzawski, R.M., Lei, C., Li, B., Li, L., Li, Y., Lin, J., Liu, C., Liu, C., Liu, Z., Luna, A., Lupi, C., McCarthy, A.J., Mohn, G., Ningthoujam, L.S., Nirrengarten, M., Osono, N., Peate, D.W., Persaud, P., Qiu, N., Robinson, C.M., Satolli, S., Sauermilch, I., Schindlbeck, J.C., Skinner, S.M., Straub, S.M., Su, X., Tian, L., van der Zwan, F.M., Wan, S., Wu, H., Xiang, R., Yadav, R., Yi, L., Zhang, C., Zhang, J., Zhang, Y., Zhao, N., Zhong, G., and Zhong, L., 2018. Site U1501. *In* Sun, Z., Jian, Z., Stock, J.M., Larsen, H.C., Klaus, A., Alvarez-Zarikian, C.A., and the Expedition 367/368 Scientists, *South China Sea Rifted Margin*. Proceedings of the International Ocean Discovery Program, 367/368: College Station, TX (International Ocean Discovery Program).

<https://doi.org/10.14379/iodp.proc.367368.105.2018>

Larsen, H.C., Jian, Z., Alvarez-Zarikian, C.A., Sun, Z., Stock, J.M., Klaus, A., Boaga, J., Bowden, S.A., Briais, A., Chen, Y., Cukur, D., Dadd, K.A., Ding, W., Dorais, M.J., Ferré, E.C., Ferreira, F., Furusawa, A., Gewecke, A.J., Hinojosa, J.L., Höfig, T.W., Hsiung, K.-H., Huang, B., Huang, E., Huang, X.-L., Jiang, S., Jin, H., Johnson, B.G., Kurzawski, R.M., Lei, C., Li, B., Li, L., Li, Y., Lin, J., Liu, C., Liu, C., Liu, Z., Luna, A., Lupi, C., McCarthy, A.J., Mohn, G., Ningthoujam, L.S., Nirrengarten, M., Osono, N., Peate, D.W.,

*The Expedition-related bibliography is continually updated online (http://publications.iodp.org/proceedings/367_368/367368title.html#bib). Please send updates to PubCrd@iodp.tamu.edu.

- Persaud, P., Qiu, N., Robinson, C.M., Satolli, S., Sauermilch, I., Schindlbeck, J.C., Skinner, S.M., Straub, S.M., Su, X., Tian, L., van der Zwan, F.M., Wan, S., Wu, H., Xiang, R., Yadav, R., Yi, L., Zhang, C., Zhang, J., Zhang, Y., Zhao, N., Zhong, G., and Zhong, L., 2018. Site U1502. *In* Sun, Z., Jian, Z., Stock, J.M., Larsen, H.C., Klaus, A., Alvarez Zarikian, C.A., and the Expedition 367/368 Scientists, *South China Sea Rifted Margin*. Proceedings of the International Ocean Discovery Program, 367/368: College Station, TX (International Ocean Discovery Program). <https://doi.org/10.14379/iodp.proc.367368.106.2018>
- Larsen, H.C., Jian, Z., Alvarez Zarikian, C.A., Sun, Z., Stock, J.M., Klaus, A., Boaga, J., Bowden, S.A., Briais, A., Chen, Y., Cukur, D., Dadd, K.A., Ding, W., Dorais, M.J., Ferré, E.C., Ferreira, F., Furusawa, A., Gewecke, A.J., Hinojosa, J.L., Höfig, T.W., Hsiung, K.-H., Huang, B., Huang, E., Huang, X.-L., Jiang, S., Jin, H., Johnson, B.G., Kurzawski, R.M., Lei, C., Li, B., Li, L., Li, Y., Lin, J., Liu, C., Liu, C., Liu, Z., Luna, A., Lupi, C., McCarthy, A.J., Mohn, G., Ningthoujam, L.S., Nirrengarten, M., Osono, N., Peate, D.W., Persaud, P., Qiu, N., Robinson, C.M., Satolli, S., Sauermilch, I., Schindlbeck, J.C., Skinner, S.M., Straub, S.M., Su, X., Tian, L., van der Zwan, F.M., Wan, S., Wu, H., Xiang, R., Yadav, R., Yi, L., Zhang, C., Zhang, J., Zhang, Y., Zhao, N., Zhong, G., and Zhong, L., 2018. Site U1503. *In* Sun, Z., Jian, Z., Stock, J.M., Larsen, H.C., Klaus, A., Alvarez Zarikian, C.A., and the Expedition 367/368 Scientists, *South China Sea Rifted Margin*. Proceedings of the International Ocean Discovery Program, 367/368: College Station, TX (International Ocean Discovery Program). <https://doi.org/10.14379/iodp.proc.367368.107.2018>
- Larsen, H.C., Jian, Z., Alvarez Zarikian, C.A., Sun, Z., Stock, J.M., Klaus, A., Boaga, J., Bowden, S.A., Briais, A., Chen, Y., Cukur, D., Dadd, K.A., Ding, W., Dorais, M.J., Ferré, E.C., Ferreira, F., Furusawa, A., Gewecke, A.J., Hinojosa, J.L., Höfig, T.W., Hsiung, K.-H., Huang, B., Huang, E., Huang, X.-L., Jiang, S., Jin, H., Johnson, B.G., Kurzawski, R.M., Lei, C., Li, B., Li, L., Li, Y., Lin, J., Liu, C., Liu, C., Liu, Z., Luna, A., Lupi, C., McCarthy, A.J., Mohn, G., Ningthoujam, L.S., Nirrengarten, M., Osono, N., Peate, D.W., Persaud, P., Qiu, N., Robinson, C.M., Satolli, S., Sauermilch, I., Schindlbeck, J.C., Skinner, S.M., Straub, S.M., Su, X., Tian, L., van der Zwan, F.M., Wan, S., Wu, H., Xiang, R., Yadav, R., Yi, L., Zhang, C., Zhang, J., Zhang, Y., Zhao, N., Zhong, G., and Zhong, L., 2018. Site U1504. *In* Sun, Z., Jian, Z., Stock, J.M., Larsen, H.C., Klaus, A., Alvarez Zarikian, C.A., and the Expedition 367/368 Scientists, *South China Sea Rifted Margin*. Proceedings of the International Ocean Discovery Program, 367/368: College Station, TX (International Ocean Discovery Program). <https://doi.org/10.14379/iodp.proc.367368.108.2018>
- Jian, Z., Larsen, H.C., Alvarez Zarikian, C.A., Sun, Z., Stock, J.M., Klaus, A., Boaga, J., Bowden, S.A., Briais, A., Chen, Y., Cukur, D., Dadd, K.A., Ding, W., Dorais, M.J., Ferré, E.C., Ferreira, F., Furusawa, A., Gewecke, A.J., Hinojosa, J.L., Höfig, T.W., Hsiung, K.-H., Huang, B., Huang, E., Huang, X.-L., Jiang, S., Jin, H., Johnson, B.G., Kurzawski, R.M., Lei, C., Li, B., Li, L., Li, Y., Lin, J., Liu, C., Liu, C., Liu, Z., Luna, A., Lupi, C., McCarthy, A.J., Mohn, G., Ningthoujam, L.S., Nirrengarten, M., Osono, N., Peate, D.W., Persaud, P., Qiu, N., Robinson, C.M., Satolli, S., Sauermilch, I., Schindlbeck, J.C., Skinner, S.M., Straub, S.M., Su, X., Tian, L., van der Zwan, F.M., Wan, S., Wu, H., Xiang, R., Yadav, R., Yi, L., Zhang, C., Zhang, J., Zhang, Y., Zhao, N., Zhong, G., and Zhong, L., 2018. Site U1505. *In* Sun, Z., Jian, Z., Stock, J.M., Larsen, H.C., Klaus, A., Alvarez Zarikian, C.A., and the Expedition 367/368 Scientists, *South China Sea Rifted Margin*. Proceedings of the International Ocean Discovery Program, 367/368: College Station, TX (International Ocean Discovery Program). <https://doi.org/10.14379/iodp.proc.367368.109.2018>
- Childress, L.B., Alvarez Zarikian, C.A., Briais, A., Dadd, K.A., Deng, J.-M., Höfig, T.W., Huang, X.-L., Li, B., Lin, J., Liu, C., Liu, Z., Nirrengarten, M.F.R., Peate, D.W., Qiu, N., Satolli, S., Stock, J.M., Sun, Z., van der Zwan, F.M., Xiang, R., Yi, L., and Zhong, L., 2020. Expedition 368X summary. *In* Sun, Z., Jian, Z., Stock, J.M., Larsen, H.C., Klaus, A., Alvarez Zarikian, C.A., and the Expedition 367/368 Scientists, *South China Sea Rifted Margin*. Proceedings of the International Ocean Discovery Program, 367/368: College Station, TX (International Ocean Discovery Program). <https://doi.org/10.14379/iodp.proc.368X.101.2020>
- Childress, L.B., Alvarez Zarikian, C.A., Briais, A., Dadd, K.A., Deng, J.-M., Höfig, T.W., Huang, X.-L., Li, B., Lin, J., Liu, C., Liu, Z., Nirrengarten, M.F.R., Peate, D.W., Qiu, N., Satolli, S., Stock, J.M., Sun, Z., van der Zwan, F.M., Xiang, R., Yi, L., and Zhong, L., 2020. Expedition 368X methods supplement. *In* Sun, Z., Jian, Z., Stock, J.M., Larsen, H.C., Klaus, A., Alvarez Zarikian, C.A., and the Expedition 367/368 Scientists, *South China Sea Rifted Margin*. Proceedings of the International Ocean Discovery Program, 367/368: College Station, TX (International Ocean Discovery Program). <https://doi.org/10.14379/iodp.proc.368X.102.2020>
- Childress, L.B., Alvarez Zarikian, C.A., Briais, A., Dadd, K.A., Deng, J.-M., Höfig, T.W., Huang, X.-L., Li, B., Lin, J., Liu, C., Liu, Z., Nirrengarten, M.F.R., Peate, D.W., Qiu, N., Satolli, S., Stock, J.M., Sun, Z., van der Zwan, F.M., Xiang, R., Yi, L., and Zhong, L., 2020. Return to Site U1503. *In* Sun, Z., Jian, Z., Stock, J.M., Larsen, H.C., Klaus, A., Alvarez Zarikian, C.A., and the Expedition 367/368 Scientists, *South China Sea Rifted Margin*. Proceedings of the International Ocean Discovery Program, 367/368: College Station, TX (International Ocean Discovery Program). <https://doi.org/10.14379/iodp.proc.368X.103.2020>
- Supplementary material**
- Sun, Z., Jian, Z., Stock, J.M., Larsen, H.C., Klaus, A., Alvarez Zarikian, C.A., and the Expedition 367/368 Scientists, 2018. Supplementary material, <https://doi.org/10.14379/iodp.proc.367368supp.2018>. *Supplement to Sun, Z., Jian, Z., Stock, J.M., Larsen, H.C., Klaus, A., Alvarez Zarikian, C.A., and the Expedition 367/368 Scientists, South China Sea Rifted Margin*. Proceedings of the International Ocean Discovery Program, 367/368: College Station, TX (International Ocean Discovery Program). <https://doi.org/10.14379/iodp.proc.367368.2018>