



# Struttura attuale di IODP e partecipazione Italiana

*IODP structure and Italian participation:  
Italy as part of ECORD and IODP*

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ECORD  IODP-Italia



**IODP**  
INTERNATIONAL OCEAN  
DISCOVERY PROGRAM

*Exploring the Earth Under the Sea*

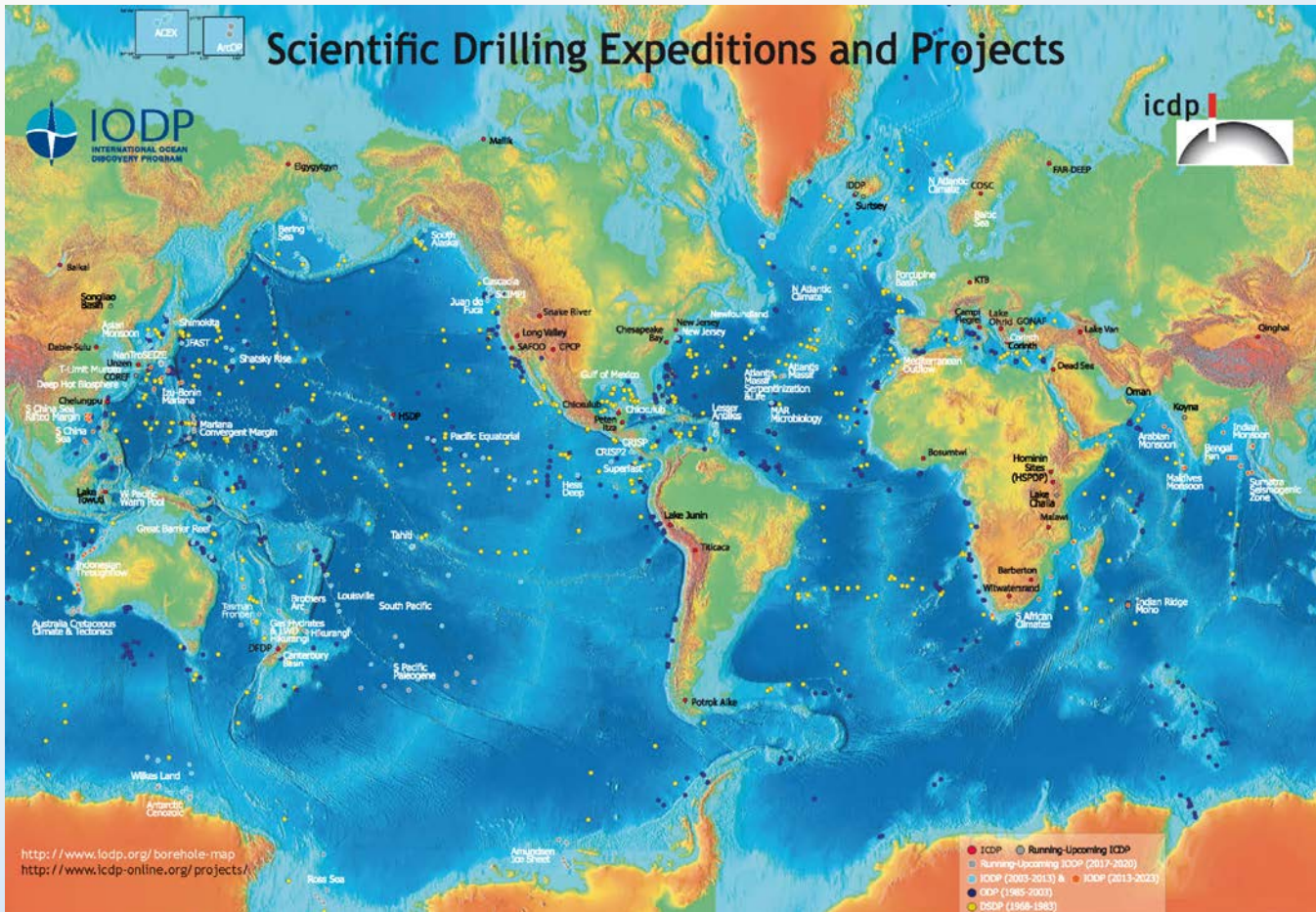
*“An international marine research collaboration that explores Earth's history and dynamics using ocean-going research platforms to recover data recorded in seafloor sediments and rocks and to monitor subseafloor environments” (iodp.org)*

*“Scientific ocean drilling is an international, multidisciplinary collaboration among scientists, students, engineers, marine technicians, and educators” (New IODP Science Plan, 2013-2023)*



# 50th anniversary of scientific ocean drilling

*The results of previous ocean drilling programs form the basis of much of our present understanding of Earth and environmental sciences*



**DSDP**  
96 leg  
(Deep Sea Drilling Project)

**ODP**  
110 leg  
(Ocean Drilling Program)

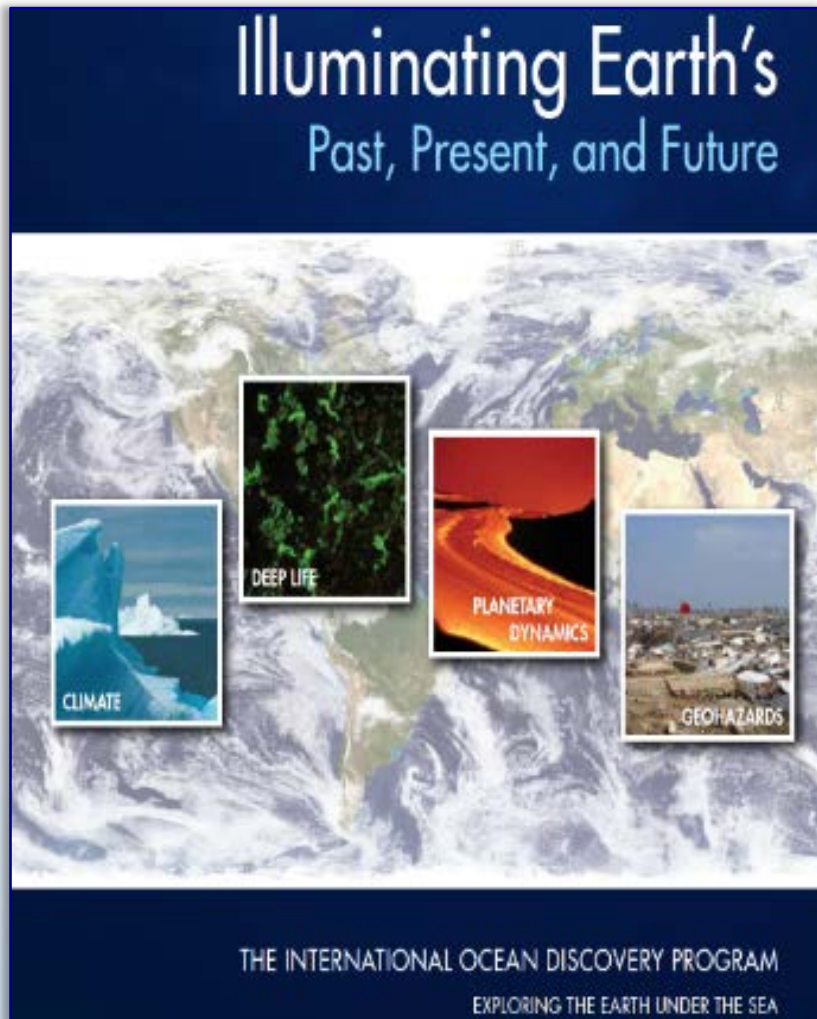
**IODP**  
51 spedizioni  
(Integrated Ocean Drilling Program)

**IODP**  
25 Exp. 2014-2017  
15 Exp. scheduled 2018-2020  
(International Ocean Discovery Program)





## 1 – New Science Plan



### **14 challenge questions - 4 areas**

- ✓ **Climate and Ocean Change -**  
*Reading the Past, Informing the Future*
- ✓ **Biosphere Frontiers -**  
*Deep Life, Biodiversity,  
Environmental Forcing of Ecosystems*
- ✓ **Earth Connections -**  
*Deep Earth Processes and Impacts*
- ✓ **Earth in Motion -**  
*Processes and Hazards on Human Time Scales*



## 2. A strong partnership



**IODP**  
INTERNATIONAL OCEAN  
DISCOVERY PROGRAM

*Exploring the Earth Under the Sea*

23 member countries



15 member countries



EUROPEAN CONSORTIUM FOR  
OCEAN RESEARCH DRILLING



**2. A strong partnership**

**3 platform providers**



*Joides Resolution*  
USA



*Chikyu*  
Japan



*Mission Specific Platforms*  
ECORD





Project Mohole  
(1958-1966)

Deep Sea  
Drilling Project  
(1968-1983 /  
96 legs)



Ocean  
Drilling Program  
(1985-2003 /  
110 legs)

Integrated Ocean  
Drilling Program  
(2003-2013 /  
51 expeditions)



Riser vessel  
*Chikyu*  
(Japan)



Drillship  
*JOIDES  
Resolution*  
(USA)



Mission Specific  
Platforms  
(ECORD)

3. The management structure

➔ Science proposals

Science Community



**JR partners**  
ECORD  
ANZIC  
Brazil  
China  
India  
Korea

NSF



ECORD



MEXT



**Chikyu partners**  
ECORD  
ANZIC

CPP  
INDUSTRY

➔ Funding

IODP members and non-IODP countries

I  
O  
D  
P  
  
F  
O  
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U  
M

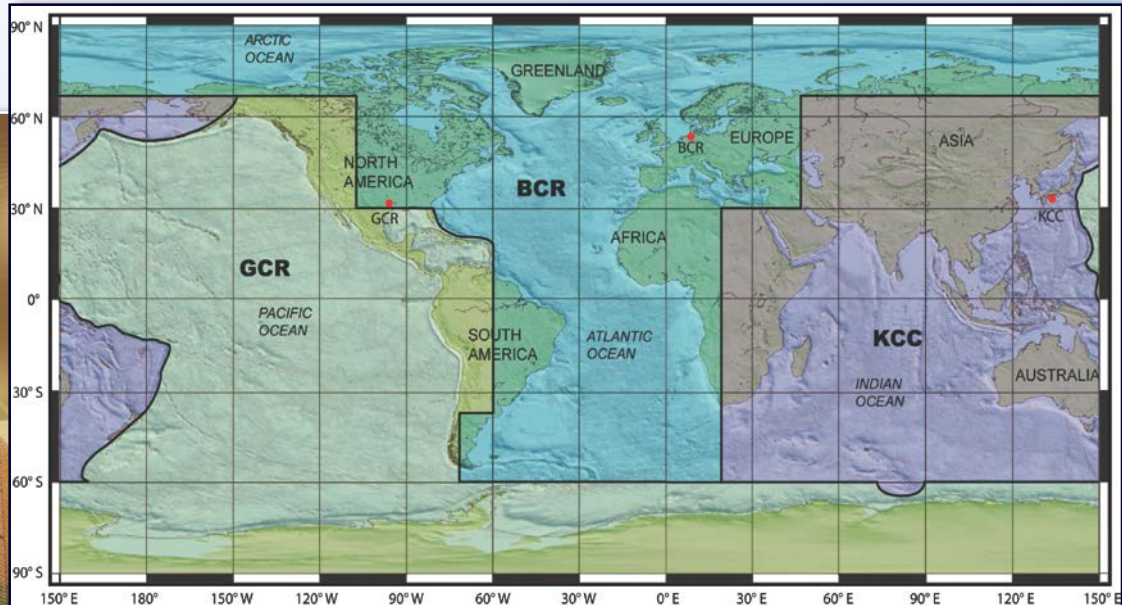
- ✓ Streamlined structure
- ✓ No central management
- ✓ Three independent platform providers
- ✓ Cost efficiency
- ✓ Operational flexibility
- ✓ Funding flexibility





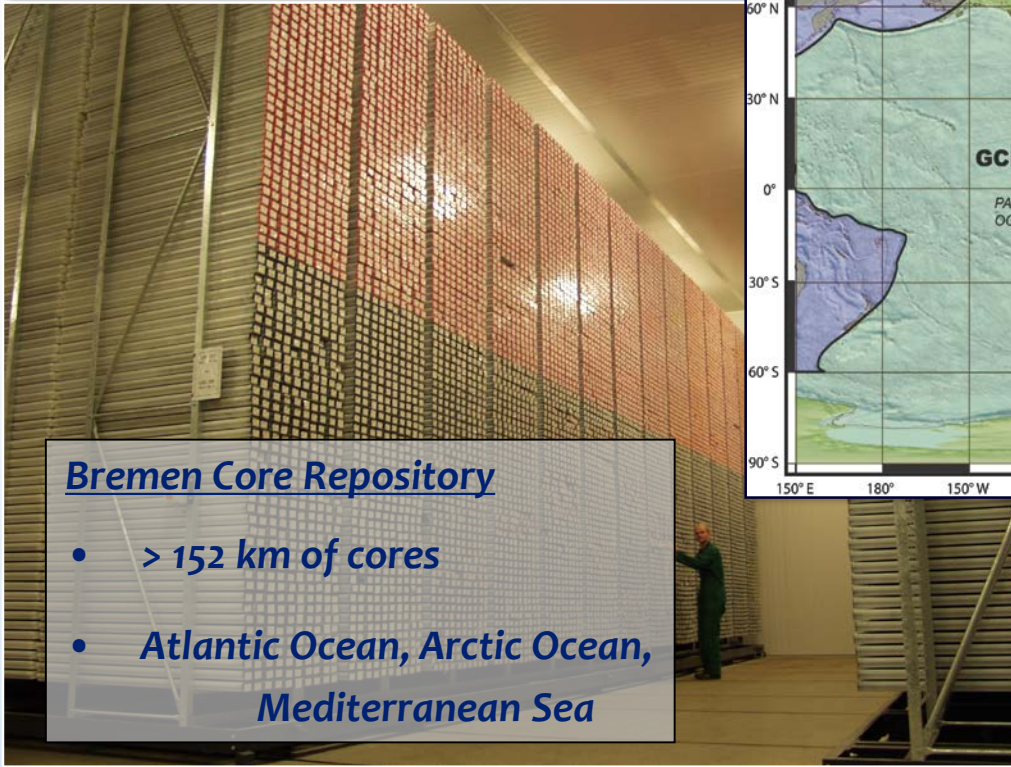
### 3. The management structure

- **Advisory panels : international staffing**
- **Standard policies and guidelines**
- **IODP publications**
- **Public access to IODP Cores & data**
- **Core curation**



#### Bremen Core Repository

- **> 152 km of cores**
- **Atlantic Ocean, Arctic Ocean, Mediterranean Sea**

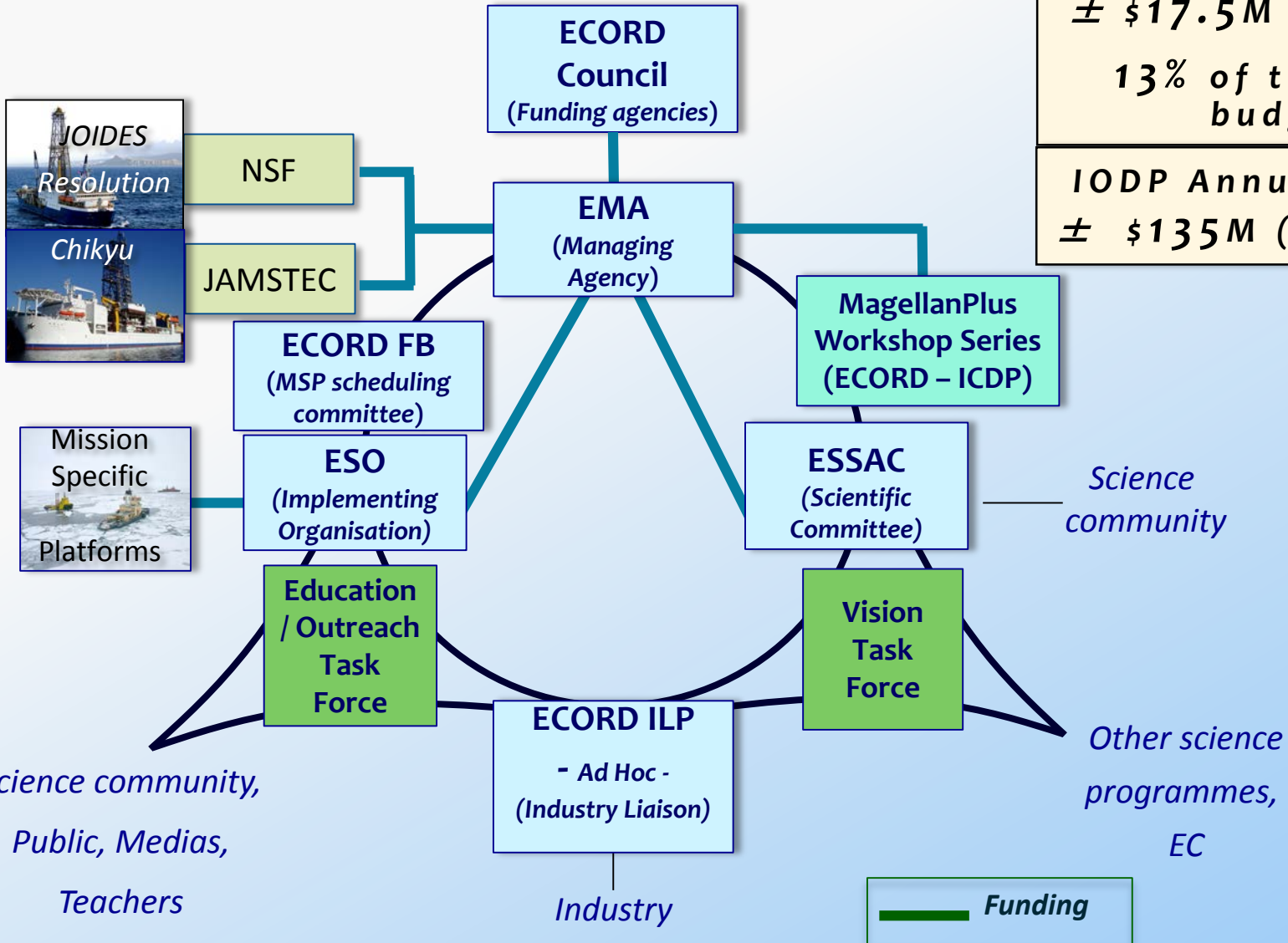




## Management structure

**ECORD Annual budget**  
 $\pm \$17.5M$  ( $\pm \$23M$ )  
 13% of the IODP budget

**IODP Annual budget**  
 $\pm \$135M$  ( $\pm \$170M$ )



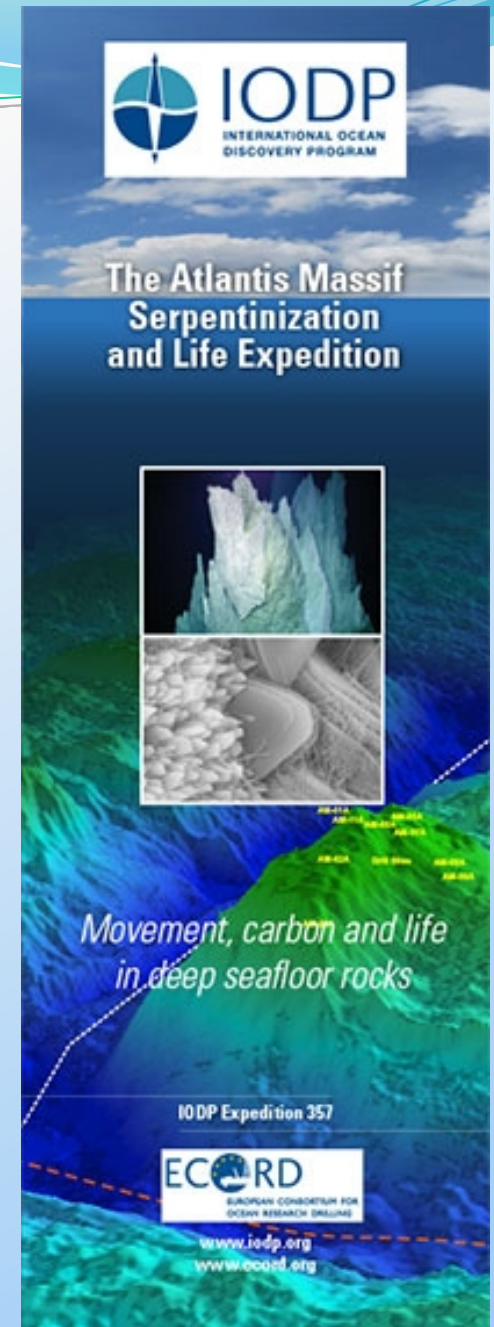


# Exp. 357 Atlantis Massif Serpentinization and Life

A prominent, nearly 4,000 m high, underwater mountain on the Mid-Atlantic Ridge



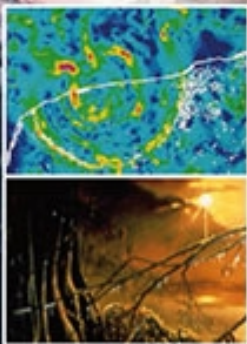
From the Earth's mantle:  
The process of serpentinization and the possible sources to fuel life in the absence of sunlight. The underwater world of 'Lost City'







## The Chicxulub K-Pg Impact Crater Expedition



*Uncovering evidence of mass extinction*

IODP Expedition 364



[www.iodp.org](http://www.iodp.org)  
[www.ecord.org](http://www.ecord.org)  
[www.icdp-online.org](http://www.icdp-online.org)

# Exp. 364 Chicxulub K-Pg Impact Crater

*Eight-week expedition onboard the Liftboat Myrtle  
Yucatán, Mexico, 5 April – 31 May 2016*



*cores of rocks from the  
Chicxulub impact crater*

*The best-preserved large impact crater on Earth,  
and the only one with an intact topographic peak  
ring (a ring of hills that stand above the  
otherwise flat crater floor)*





## Get involved

### Scientists

- Sail on an IODP Expedition
- Submit an IODP proposal
- Access all DSDP, ODP, IODP data
- Host a Distinguished Lecturer

### Early-career scientists and students

- Take part in ECORD Summer Schools and Training Courses
- Apply for an ECORD Research Grant
- Apply for an ECORD Scholarship

### Educators

- Sail on an IODP Expedition
- Access /create educational resources
- Participate in IODP portcalls, ship-to-shore events and blogs,
- Take part in a Teachers Workshop





## Early-career scientists

- ECORD Summer Schools (NEW)
- ECORD Scholarships
- ECORD Training Courses (NEW)
- ECORD Research Grants

## Scientists

- ECORD Training Courses (NEW)
- ECORD Distinguished Lecturer Programme
- MagellanPlus Workshop Series

**ECORD  
educational  
activities**

## Teachers

- ECORD School of Rock (NEW)
- JR Teachers at Sea





## MagellanPlus Workshop Series Programme

co-funded by ECORD and ICDP

### Annual call deadline on 15 January

Funds workshops and/or scientists that are expected to lead to or foster high-quality and innovative scientific drilling proposals for submission to IODP and ICDP (2018 Call for MagellanPlus proposals; Two 2018 Specials Call: Demystifying the IODP Proposal Process for Early-Career Scientists; Initiating concepts for a future scientific drilling ocean programme beyond 2023)

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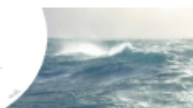
**Next Proposal Submission Deadline: April 2, 2018, 23:59 GMT**

Proposals are submitted to the IODP Science Support Office (SSO) ([www.iodp.org](http://www.iodp.org)) to two deadlines: 1 April or 1 October (23:59 GMT)

### Site Survey Data Bank (SSDB)

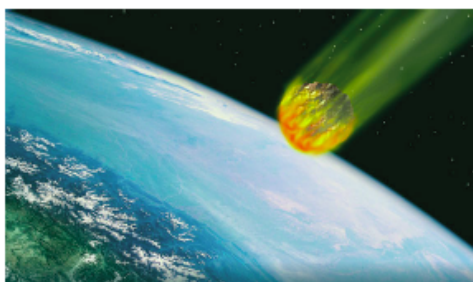
The system through which site characterization data supporting the IODP proposals, such as seismic profiles, are submitted.

Data files submitted to the deadline immediately following a proposal submission deadline are reviewed together with the proposal by the Science Evaluation Panel.



## CALL FOR APPLICATIONS - ECORD Research Grant 2018

**DEADLINE: 30 January 2018**



The European Consortium for Ocean Research Drilling (ECORD) is sponsoring merit-based awards for outstanding young scientists to conduct innovative research related to the International Ocean Discovery Program. The research may be directed toward the objective of past DSDP/ODP/IODP expeditions. Applicants should utilize available core from DSDP/ODP/IODP expeditions. ECORD Research Grants will cover travel and local approved costs related to the studies.

**Studies should be conducted in a laboratory/institution other than the applicant's; involve mobility and promote new collaborations and/or the acquisition of new scientific equipment. Budgets must not exceed 3000 €. Applicants should be enrolled in either a PhD or a postdoctoral research programme at any institution from an ECORD country.**

Applications should take the form of a mini-proposal, detailing the aims of the study and the availability of material and/or data to be worked on, the project partnership and the budget. Applications can be strengthened by including the benefits of the proposed study to the proposed institution is the most appropriate place to carry out the planned study. **including budget and some details of the anticipated results, must be completed within 30 days of the grant has been awarded.**



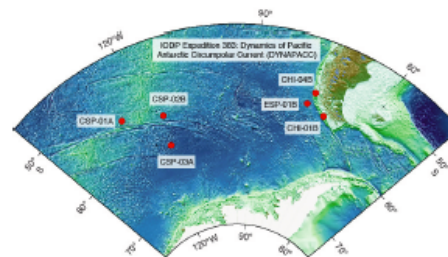
## CALL FOR APPLICATIONS

for scientists based in ECORD Member Countries to participate in *JOIDES* Resolution Expedition

## IODP EXPEDITION 383: Plio-Pleistocene Dynamics of the Pacific Antarctic Circumpolar Current

~20 May to ~20 July 2019

**Application deadline: 1 March 2018**



<http://www.ecord.org>

@ECORD\_Outreach | ESO outreach | ESOAC ECORD | ECORDESQ channel

<http://www.iodp.org>

**Scientists**

**ECORD Outreach**

**General  
Public**

**Teachers**

**ECORD  
outreach  
activities**

- Exhibition booths
- Resources

- National events
- Open days
- Science festivals
- Expedition port calls

- ECORD School of Rock
- Resources

- Press releases
- TV documentaries
- Videos
- Newspapers, magazines

**Medias**

**@ ECORD :**

- Social networks
- YouTube
- ECORD website





## Italian participation in ECORD-IODP

**Coordinates ~ Supports ~ Promotes ~ Strengthens**

*the growing IODP national community*

Renewed since 2013, based on an **annual funding** – « **ECORD** » – **allocated by MIUR**  
Supported by a national office hosted by National Research Council since Jan 2015  
Led by **IODP-Italia Advisory Committee** since July 2015

- **Facilitates and supports** participation of Italian scientists and educators in IODP expeditions, research, institutional and outreach activities (travel support for participants and panel and committee members)
- Makes Italian scientists **aware of opportunities and results** of IODP-related research
- Organizes, facilitates, and sponsors **science meetings/workshops**
- **Supports opportunities for students and young scientists**
- Regularly **publishes program literature** through mailinglist and website
- **Provides grant support** to enable Italian scientists to exploit the results of IODP drilling (**work in progress...**)

**ECORD Membership → ~70% annual funding**

Subscribe to our mailinglist [iodp-italia@cnr.it](mailto:iodp-italia@cnr.it)

Visit our website [www.iodp-italia.cnr.it](http://www.iodp-italia.cnr.it)



## ECORD-IODP national representatives

### ECORD national delegates

#### ECORD Council delegates:

*Marco Sacchi* (component and ECORD Executive member);

*Laura De Santis* (alternate)

#### ESSAC Committee delegates:

*Andrea Argnani* (component);

*Simonetta Monechi* (alternate)

### Italian IODP representatives

*Elisabetta Erba*:

member of the IODP Curatorial Advisory Board

*Michele Rebesco*:

member of the MagellanPlus Steering Committee;

member of the IODP Science Evaluation Panel (SEP) - *Site Subgroup*



## Recent research activities

**15 Italian scientists, 1 chief scientist and 1 Education Officer** selected to sail onboard/participate onshore IODP expeditions as researchers in diverse shipboard specialties since 2013 (International Ocean Discovery Program, 2013-2023)

**Italian scientists are involved in 11 active drilling proposals, as lead proponents and co-proponents**

**More than 20 IODP-related research articles per year** - authored and co-authored by Italian scientists in the most relevant international earth science journals



**2 Magellan Plus Workshops** held in Italy during 2017

**2 post-cruise meetings** hosted by Italian shipboard scientists





## 2018 - Research

### Now/soon sailing:

- **L. De Santis (OGS) – Co-Chief Exp. 374**  
Ross Sea West Antarctic Ice Sheet History
- **A. Cerchiari (Uni MO-RE) – Exp. 380**  
NanTroSEIZE Frontal Thrust LTBMS  
**CLSI@Sea** “Core-Log-Seismic-Investigation at Sea Program” (program scientist)
- **F. Meneghini (Uni PI) - Exp. 375**  
Hikurangi Subduction Margin (sedimentologist)
- **I. Raffi (Uni CH-PE) – Exp. 378** South Pacific Paleogene Climate (nannofossil micropaleontologist)



### Post-cruise meeting

**Exp. 360 SW Indian Ridge Lower Crust and Moho led by Italian shipboard scientists – A. Sanfilippo and R. Tribuzio (Uni PV) (Sicily, May 2018)**

### Post-cruise analyses

**I. Mazzini (CNR-IGAG) – Exp. 381 Corinth Active Rift Development** invited to participate in analysis of core samples for ostracods



## 2018 - Activity – Events - Targets

- **The EFB meeting in Italy** (Venice, March 2018) - organization
- **ECORD School of Rock in Pavia** (Pavia, Summer 2018) - support
- **SIG 2018 (Catania)? – Session proposal submitted:** “The role of Italian scientists and educators in the International Ocean and Continental Drilling Programs: major achievements and new perspective” – to be defined



(Foto di Alessandra Civica - CNR)

### Supporting the scientific drilling community:

- Promote a closer collaboration between **IODP and ICDP** (from the New ECORD MoU to national funding);
- Support to **post-cruise research**, including ECORD-type research grants → IODP-It Call for research proposal (postdoctoral/early career stage researchers)
- **Foster submission and progress of drilling proposals** (this event; Rebesco, 16<sup>th</sup> Jan)