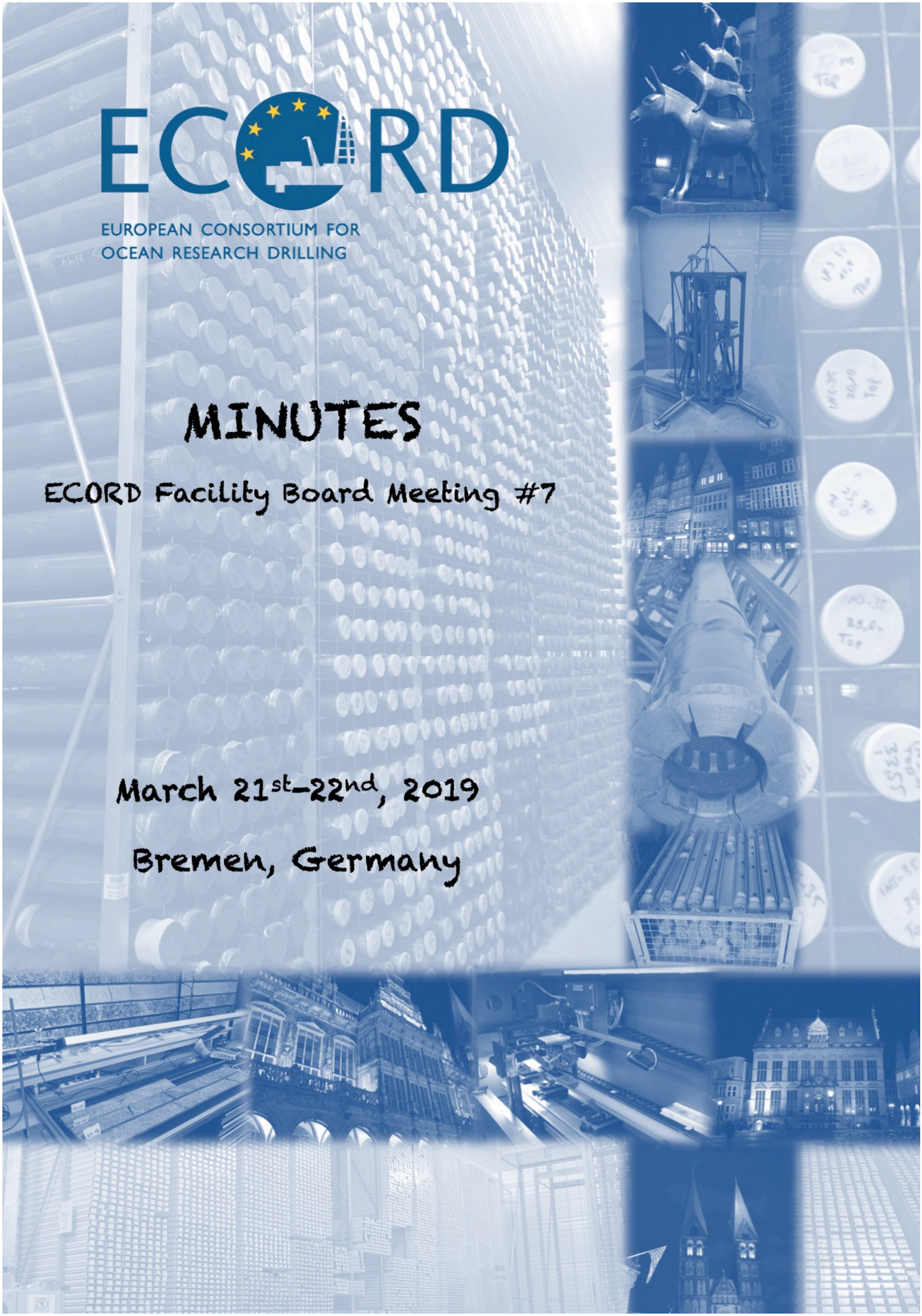

ECORD

EUROPEAN CONSORTIUM FOR
OCEAN RESEARCH DRILLING

MINUTES

ECORD Facility Board Meeting #7

March 21st–22nd, 2019

Bremen, Germany

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ROSTER

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* *Apologies*

March 21th, 2019

1. Introduction

1.1 Welcome, opening remarks and rules of engagement (G. Uenzelmann-Neben)

1.2 Welcome and meeting logistics (M. Schulz/U. Röhl)

(9:04)

G. Uenzelmann-Neben welcomed the participants and opened the meeting. Michael Schulz, director of the MARUM, presented in his opening remarks news concerning the MARUM. U. Röhl presented the logistical information.

G. Uenzelmann-Neben presented the rules of engagement:

Confidentiality:

- All participants agree to follow the IODP *Confidentiality Policy* on all discussion items and information from meeting and related communication

Conflict of Interest:

- Any COI must be announced by participants before proposals are discussed
- Direct COI (proponent/co-proponent): participants have to leave room
- Indirect COI (institution/colleague): participants can stay in room, but do not enter discussion unless asked

Decisions:

- Vote by hand or nodding of EFB members
- Reaching consensus on actions and decisions (avoiding formal motions)
- In case of dissent, only Science Board members vote
- In case of dissent of Science Board members, Chair makes decision

1.3 Introduction of participants (All)

(9:13)

G. Uenzelmann-Neben let all the participants begin self-introductions.

1.4 Meeting agenda approval (G. Uenzelmann-Neben)

(9:18)

G. Uenzelmann-Neben presented the agenda and the EFB approved the agenda.

ECORD FB Consensus 19-03-01:
The ECORD Facility Board approves the agenda of the ECORD FB Meeting #7.

2. Brief reports of ECORD Facility Board (EFB) and other ECORD entities

Reports were presented for the EFB (G. Uenzelmann-Neben), EMA (G. Camoin), ESO (D. McInroy), the BCR (U. Röhl), the EPC (S. Davies), ESO outreach (C. Cotterill) and ESSAC (A. Morris).

2.1 EFB: Membership and main activities since last meeting (G. Uenzelmann-Neben)

(9:19)

G. Uenzelmann-Neben gave an update on the ECORD Facility Board (EFB) activities.

The EFB members with voting rights are 1) the six Science Board members: EFB Chair Gabriele Uenzelmann-Neben (GER), Gilles Lericolais (FRA), Gretchen Früh-Green (CHE), Ellen Thomas (USA), Yasuhiro Yamada (JPN), and Fengping Wang (CHN); 2) the members of the ECORD Executive Bureau: ECORD Council core members, EMA, ESO and ESSAC; and 3) NSF and MEXT with one representative each. The three-years term of the EFB Chair Gilles Lericolais (FRA) ended on 31 December 2018 and Gabriele Uenzelmann-Neben (GER) became EFB Chair on 1 January 2019. Stephen Gallagher (AUS) and Fumio Inagaki (JPN) rotated off the Science Board at the end of 2018. New Science Board members since 2019 are Yasuhiro Yamada (JPN) and Fengping Wang (CHN). Gretchen Früh-Green (CHE) and Ellen Thomas (USA) will rotate off the Science Board on 31 December 2019.

ECORD FB Action Item 1: ESSAC

To issue a call for applications to fill two positions at the EFB Science Board to replace Ellen Thomas and Gretchen Früh-Green, preferably from the US and an ECORD member country, and covering the Climate and Ocean Change and Earth Connections themes.

G. Uenzelmann-Neben gave an overview of MSP proposals at the EFB:

Proposal	Type	Short Title	PI	Country	Exp.
637	Full2	New England Shelf Hydrogeology	Person	USA	
708	Full	Central Arctic Paleoceanography	Stein	ECORD (Germany)	377
716	Full2	Hawaiian Drowned Reefs	Webster	ANZIC (Australia)	389
730	Full2	Sabine Bank Sea Level	Taylor	USA	
813	Full	Antarctic Cenozoic Paleoclimate	Williams	USA	373
866	Full2	Japan Trench Paleoseismology	Strasser	ECORD (Switzerland)	386
887	CPP2	Gulf of Mexico Gas Hydrates	Flemming	USA	

637-Full2 'New England Shelf Hydrogeology': in the EFB waiting room.

Expedition 377 'Arctic Ocean Paleoceanography': in the EFB waiting room, scheduled and postponed.

Expedition 389 'Hawaiian Drowned Reefs': in the EFB waiting room, scheduled and postponed.

730-Full2 'Sabine Bank Sea-Level': in the EFB waiting room.

Expedition 373 'Antarctic Cenozoic Paleoclimate': in the EFB waiting room, scheduled and postponed.

Expedition 386 'Japan Trench Paleoseismology': scheduled in 2020.

887-CPP2 'Gulf of Mexico Gas Hydrates': the JRFB forwarded this proposal in May 2018 to the EFB; will not be implemented by ECORD.

IODP Expedition 381 'Corinth Active Rift Development': The offshore phase took place from 23 October to 18 December 2017. A total of 1645 m of core was recovered from three sites over a 1905 m cored interval. The OSP was held from 31 January to 28 February 2018 at the BCR in Bremen. Expedition 381 was reviewed on 6 November 2018 in The Hague.

G. Uenzelmann-Neben summarized MSP proposals at the SEP:

Proposal	Type	Short Title	PI	Country	
796	ADP	NADIR: Nice Amphibious Drilling	Kopf	ECORD (Germany)	Revise @SEP
863	MDP	ISOLAT Southern Ocean Paleoclimate	Peterson	USA	Revise @SEP
915	Pre (MSP or JR)	North Atlantic Fjord Sediment Archives	Giraudeau	ECORD (France)	Develop Full @SEP
931	Pre	East Antarctic Ice Sheet Evolution	Shevenell	USA	Develop Full @SEP

796-ADP 'NADIR: Nice Amphibious Drilling': needs to be revised.

863-MDP 'ISOLAT Southern Ocean Paleoclimate': needs to be revised.

915-Pre 'North Atlantic Fjord Sediment Archives': needs to be developed as full proposal.

931-Pre 'East Antarctic Ice Sheet Evolution': needs to be developed as full proposal.

2.2 ECORD News and Budget (G. Camoin/D. McInroy)

(9:24)

G. Camoin presented the ECORD news, the budget situation for FY19 (Tables 1 and 2), budget projections until FY23 (Table 3) and scientific ocean drilling post 2023.

There are following changes in the ECORD structure:

1) E. Humler (FRA) is ECORD Council Chair since 1 January 2019. G. Lüniger (GER) is the outgoing Vice-Chair from 1 January 2019 until 30 June 2019 and will be replaced on 1 July 2019 by an incoming Vice-Chair.
2) A. Morris (UK) is ESSAC Chair until 31 December 2019. J. Behrmann (GER) was outgoing Vice-Chair until December 2018.
3) P. Maruéjol (FRA) will rotate off on 30 June 2019 and will be replaced by the new EMA Outreach Officer Malgorzata Bednarz (FRA) who started her term on 1 January 2019.
4) G. Uenzelmann-Neben (GER) is EFB Chair since 1 January 2019 and Gilles Lericolais (FRA) is Vice-Chair. New Science Board members since 2019 are Yasuhiro Yamada (JPN) and Fengping Wang (CHN).

ECORD 2019-23 Memorandum of Understanding (MoU):
In November-December 2017 the new ECORD MoU was finalized by the ECORD Executive Group and sent to the ECORD funding agencies for approval. In early 2018 the ECORD MoU was sent to the CNRS Legal Department for a final check. The final version of the ECORD MoU from the CNRS should be received by the end of June 2019. The ECORD MoU will be distributed as soon as possible for approval and signature by the ECORD funding agencies. The FY19 member contributions can be paid during the second half of 2019. The current ECORD MoU is still active until the end of the programme in 2023 and will be replaced by the new ECORD MoU as soon as it is finalized.

G. Camoin continued to summarize ECORD's partnership with the US and Japan. ECORD contributes $7M USD to the annual funding of the *JOIDES Resolution* and about $1M USD to the annual funding of the *Chikyu*.

The NSF-ECORD MoU will be effective until 30 September 2019. The ECORD-NSF MoU was revisited and is still at the CNRS Legal Department. The new ECORD-NSF MoU will be in place on 1 October 2019 until 30 September 2023. ECORD and the NSF agree that for the new programme phase ECORD will continue contributing $7M USD per year to the *JOIDES Resolution*. There will only be a change in the number of ECORD scientists on *JR* expeditions. Seven instead of eight ECORD scientists will sail on each *JR* expedition. In the new phase Co-chief Scientists and Education/Outreach Officers will be counted against participation levels on *JR* expeditions. One ECORD member is member of the JR Facility Board. The estimated number of ECORD berths for the 2019-2023 period is of 140 based on the implementation of four *JR* expeditions per year.

The ECORD-JAMSTEC MoU was not revisited as it is valid until 30 September 2023. Usually at least three ECORD scientists are sailing on a *Chikyu* expedition. Co-chief Scientists and Education/Outreach Officers will not be counted against participation levels on *Chikyu* expeditions. One ECORD member is member of *Chikyu* IODP Board. The estimated number of ECORD berths for the 2019-2023 period is of 12-28 based on the implementation of four *Chikyu* expeditions.

Concerning the MSP expeditions, 8 US and 5 associated members, 4 Japanese and at least 10 ECORD scientists are sailing. In addition, 1-3 berths are reserved for co-funded projects. In the new phase Co-chief Scientists and Education/Outreach Officers will not be counted against participation levels on MSP expeditions. One NSF and one MEXT representative are members of the ECORD Facility Board. The estimated number of ECORD berths for the 2019-2023 period is of 40-60 based on the implementation of four MSP expeditions. Overall, the estimated number of ECORD berths for the 2019-2023 period is of 192 to 228.

G. Camoin presented the content of the ECORD Annual Report 2018, which was published in March 2019: http://www.ecord.org/resources/reports/activities/ The latest issue of the ECORD Newsletter was also published in March 2019: http://www.ecord.org/resources/ecord-newsletter/

Post 2023 scientific ocean drilling:
In 2019 various workshops will be organized with the aim of preparing a future scientific ocean drilling programme beyond 2023:

- 2-3 April: Scientific Ocean Drilling beyond 2023, Yokohama, Japan;
- 6-7 April: PROCEED – Ex**p**anding F**ro**ntiers of S**cie**ntific Oc**e**an **D**rilling – Austrian Academy of Sciences, Vienna, Austria;
- 14-16 April: OCEAN Planet, Canberra, Australia;
- 6-7 May: NEXT: Scientific Ocean Drilling beyond 2023, Denver, CO, USA.

G. Camoin summarized the ECORD budget situation for FY19 (Tables 1, 2). At the moment ECORD has 15 member countries. France, Ireland and Spain are paying in euros, Denmark in krones and the UK in pounds. FY18 ended with a positive balance of $15.8 M USD, which was carried over to FY19. Together with the assumed FY19 member contributions of $17.2 M USD (Table 1), the FY19 income will yield $33.0 M USD. The expenses will be of $12.1 M USD without the implementation of an MSP expedition in 2019. The ESO FY19 budget still needs to be confirmed. The FY19 budget includes the 3-year payment (2017-2019) for the *Chikyu*. About 95.2% of the FY19 ECORD budget will be spent on IODP expeditions. The IODP publication support includes the special *Oceanography* issue to celebrate 50 years of scientific ocean drilling (see ECORD Council consensus 17-10-17 and 18-06-07). FY19 should finish with a positive balance of $20.9 M USD (Table 2). Potential additional contributions (cash, IKCs) are not considered in this calculation.

Table 1: FY19 member contributions.

FY19 Contributions (US$)	
Germany	5,600,000
France *	4,258,000
UK *	3,330,000
Norway	1,100,000
Switzerland	600,000
Sweden	528,000
Italy	500,000
Netherlands	600,000
Spain *	168,000
Denmark *	152,000
Ireland *	114,000
Austria	100,000
Portugal	90,000
Finland	80,000
Canada	7,000
TOTAL	17,227,000

** Contributions in other currencies*

Table 2: ECORD FY19 budget.

	FY19 Income (USD)	FY19 Expenses (USD)
FY 18 balance	15,792,091	
FY 19 contributions	17,227,000	
ECORD-NSF MoU		7,000,000
ECORD-JAMSTEC MoU		3,000,000 *
ESO		2,000,000 **
EMA		356,700
MagellanPlus		81,326
IODP Chairs Support		144,000
IODP publ. Support		15,000
ESSAC		315,606
BCR		353,109
Outreach basic		66,400
Outreach exhibitions		50,000
Outreach stakeholders		11,200
Outreach expeditions		30,000
ECORD database		18,000
TOTAL	33,019,091	12,088,232 **
Expected FY19 balance	20,930,859 **	

** Payments 2017 – 2019* *** To be confirmed*

G. Camoin continued to present the predictions for the ECORD FY19 to FY23 budgets (Table 3). The contributions are based on the 2019 ECORD member contributions, and additional cash and in-kind contributions are not considered in this calculation. This projection also includes the deferred payments to JAMSTEC to be paid in FY19. The calculation includes an annual 1.5% increase of the ECORD fixed costs. The projected FY23 budget is of about $45.5 M USD, on average $11.3 M USD per year (FY20-23), without the implementation of any MSP expedition.

Table 3: ECORD budget projections for FY19 to FY23.

	FY 19 (MUS$)	FY 20 (MUS$)	FY 21 (MUS$)	FY 22 (MUS$)	FY 23 (MUS$)
Contributions	17.227	17.25	17.25	17.25	17.25
Total income	33.019	38.18	44.33	50.38	56.63
Fixed costs	12.09	11.1	11.2	11	11.15
MSP expeditions					
Balance	20.93	27.08	33.13	39.38	45.48

(9:40)
D. McInroy summarized the ESO activities since the EFB 2018 meeting and provided an update concerning Expedition 389 'Hawaiian Drowned Reefs'.

EFB March 2018	EFB Sep 2018	Council Nov 2018	Council Mar 2019
18-03-03 X373 Antarctica in 2019/20 X389 Hawaii in 2020 Low cost in 2021 *or* 18-03-04 X389 Hawaii in 2019 X373 Antarctica in 2020/21 Low cost in 2021	P866 Japan Trench in 2020 X386 Gulf of Mexico in 2021	18-11-05 P866 Japan Trench in 2020 18-11-06 X377 ArcOP in 2021 18-11-07 X386 Gulf of Mexico not scheduled 18-11-08 X373 Antarctica in 2022/23	X389 Hawaii in 2019
ESO activity focus X373 Antarctica X389 Hawaii Others: X377 ArcOP P866 Japan Trench X386 Gulf of Mexico	**ESO activity focus** X389 Hawaii X386 Gulf of Mexico P866 Japan Trench Others: X377 ArcOP X373 Antarctica	**ESO activity focus** X389 Hawaii P866 Japan Trench X377 ArcOP X373 Antarctica Others	**ESO activity focus (current)** P866 Japan Trench X377 ArcOP X373 Antarctica Others: X389 Hawaii

Expedition 389 'Hawaiian Drowned Reefs' was the alternative expedition for Expedition 373 'Antarctic Cenozoic Paleoclimate' and the two expeditions were switched in June 2018 after an unsuccessful outcome of the Expedition 373 contract notice. In July 2018 a contract notice for Expedition 389 was issued, and bids were received and assessed in October 2018. A preferred bidder was identified and ESO had negotiations with the preferred bidder throughout November 2018. However, in December 2018 the preferred bidder left negotiations purely due to a business decision. In contrast to other clients, the ECORD schedule was fixed. Compared to industry, ECORD's work is less flexible (timing) and the contracts are low value. In December 2018 an alternative bidder was immediately engaged. However, they were more costly and not wholly technically compliant. Negotiations were held throughout January 2019 to devise a plan

with the alternative bidder to conduct a trial borehole. The alternative bidder could not hold a trial within the window needed for ESO to assess capabilities. Without a test, Expedition 389 would carry significant risks as well as additional cost. In February 2019 the risks were presented to the ECORD Council and the EFB. In March 2019 the ECORD Council decided to postpone the expedition until further notice. The risk of losing a preferred bidder before signing a contract has always been a risk, and is present regardless of the platform. The implementation of Expedition 389 in 2019 is no longer possible. There is not enough time to re-run a contract notice and to leave time for planning with a new contractor. The permitting paperwork will not be submitted, but the contacts with cultural groups will be maintained. ESO's preferred option for implementing Expedition 389 would be April-May 2022.

DISCUSSION on MSP proposals and their implementation:

A different look has to be taken at the MSP concept in the way how proposals are requested (C. Neal). The proposal pressure for MSPs can be increased by maybe saying that a particular platform is available and proposals for this type of platform should be submitted in order to improve the long-term planning for MSP expeditions (C. Neal). Proponents should understand the platforms and tools used, i.e. it might be helpful that proponents work closer with the MSP operators to mitigate the risk (J. Allan). Narrowing down the platform, i.e. ECORD can offer a certain type of platform, and getting this out to the community could help to receive more MSP proposals (C. Neal). Mission-specific means that a different platform is needed for each mission, which is always identified in relation to the proposed science (G. Uenzelmann-Neben). Saying that a certain platform is available would not be a mission-specific approach anymore (G. Uenzelmann-Neben). Stating that more rockdrills will be used for MSP expeditions may limit science and only relatively short cores could be obtained (G. Uenzelmann-Neben). The Artcic expedition is also mission-specific because several vessels are needed (G. Uenzelmann-Neben). It could be stated that ECORD is looking for MSP proposals to work in the Arctic, Antarctic or in shallow water environments during a certain time period (C. Neal). The community would respond with certain types of proposals (C. Neal). This would be important for getting commercial contracts in place and for increasing the proposal pressure (C. Neal). ECORD does not want to reduce the science by saying that only rock drills will be used (G. Uenzelmann-Neben). The best IODP proposals are those for which the proponents are working closely together with the operators (K. Miller). It is important that future proponents have interactions with the operators (K. Miller). ECORD needs more proposals (G. Camoin). Having more MSP proposals in the system would allow ESO to send a call for applications, not only for one, but maybe for two expeditions in a couple of years (G. Camoin). A contract could be signed with one platform provider for two or three expeditions, however, at the moment there are not enough MSP proposals (G. Camoin). D. Kroon asked about the chance that a bidder leaves. The first and last time that a contractor left was in 2004 (D. McInroy). It is important to get the message out for more MSP proposals to get a bigger pool (D. Kroon). The community will not submit new MSP proposals seeing that no MSP expeditions are

implemented (E. Thomas). Proponents are responding to the JR ship track with the submission of respective proposals (R. Coggon). Such an approach, following a platform track, could be discussed at the upcoming PROCEED workshop (G. Uenzelmann-Neben). The problem is that industry does not want to commit too soon (D. Smith). The contractors want to keep their flexibility and will not commit too early (D. McInroy). The offshore science party could be even smaller to be even more flexible (R. Gatliff). A last minute cancellation of MSP expeditions damages the science community as people already applied for a respective expedition (A. Morris).

2.3 ESO: Curation activities and update on policies (U. Röhl)

(10:15)

U. Röhl gave an update on the Bremen Core Repository (BCR). Core curation includes the documentation, preservation and protection of the cores as well as the promotion of the responsibility of taking samples from the cores for scientific puposes.

25th Anniversary of the BCR:

A symposium was held on 12 March 2019 in the House of Science in Bremen to celebrate the 25th anniversary of the BCR. The BCR was founded in 1994 and moved to the MARUM building in 2005. During the DSDP/ODP core redistribution project in 2006-2008 the collection grew from 75 km to 140 km of cores. The BCR currently archives 155 km of cores from the Atlantic Ocean, Arctic Ocean, Mediterranean Sea, Black Sea and Baltic Sea. Since 1969 about 1.7M samples have been taken from BCR cores. Gerold Wefer received the ECORD Award in recognition of his achievements and support for IODP and ECORD.

Curation and sampling: Since March 2018 33,998 samples have been. In September 2018 the IODP Curatorial Meeting was hosted. The BCR continued to acquire digital overview scans of the BCR thin section collection.

IODP Expedition 364 'Chicxulub Impact Crater': In May 2018 all materials from Expedition 364 were shipped to the Gulf Coast Repository where they arrived on 8 June 2018.

IODP Expedition 381 'Corinth Active Rift Development': During the post-OSP sampling 537 samples were taken for 7 sample requests. XRF scanning was done on 597 archive half sections (shipboard data).

IODP Expedition 382 'Iceberg Alley and Subantarctic Ice and Ocean Dynamics': The BCR is registering incoming sample requests and the investigators/science party members in the DIS. The sampling party will be hosted in November 2019. XRF scanning (shipboard data) is planned for the pre-sampling party.

IODP Expedition 389 'Hawaiian Drowned Reefs': In preparation for this expedition permits for exporting microbiological samples and corals were assessed, possible container shipping schedules were investigated and upgraded ESO mobile lab containers are planned. Planning and preparation for the offshore phase started.

Cores from the Kochi Core Center arrived at the MARUM for an intense XRF scanning campaign.

A new research building – Center for Deep Sea Research – is planned. Funds were approved and planning is ongoing. The construction will probably start in 2020 and the building should be ready in 2023.

Data management: The Repository Database 'CurationDIS' version 6.3 is currently used. The long-term storage of Expedition 364 'Chicxulub Impact Crater' data in PANGAEA has been finalized. Data storage for Expedition 381 'Corinth Active Rift Development' started in early March 2019. For Expedition 389 'Hawaiian Drowned Reefs' an ExpeditionDIS389 version will be configurated. An update of the DIS is planned.

Education & Outreach: Tours and live events (Geoshows, Science Nights) were organised at the BCR. The blogger Joel Lander visited the BCR: https://blogs.uni-bremen.de/eule/2018/05/15/steine-die-die-welt-bedeuten/. A German TV team was filming at the BCR (ZDF show Terra X): https://www.zdf.de/dokumentation/terra-x/das-ende-der-dinosaurier-102.html. A Dutch film team was also filming at the BCR for a documentary on the discovery of Azolla fern in the Eocene Arctic Ocean.
From 25-29 March 2019 the fifth ECORD Training Course will be held at the MARUM with 30 participants from numerous countries. The participants will be prepared for future IODP expeditions. This year is the 13th year of the Bremen ECORD Summer School. In 2019 the topic of the Summer School will be "Subduction Zone Processes: Magma, Volcanoes, Ore Deposits, Geohazards". The application deadline is June 2019. The Summer School combines lectures and interactive discussions on the main themes of IODP with practical 'shipboard' methodologies.

Milestones in 2019: In fall 2019 the BCR will host a JR Sampling Party for IODP Expedition 382 'Iceberg Alley and Subantarctic Ice and Ocean Dynamics'. According to the current JR schedule, at least five more Sampling Parties will be held at the BCR in 2020 and 2021.

Update on Policies: The IODP Curatorial Meeting was held on 26-27 September 2018. A new version of the IODP Sample, Data, and Obligations Policy was discussed. The new version of this policy doculent needs to be approved by all three IODP Facility Boards. Currently, there is no policy available for cores, samples and data acquired between 1968 and 2013.

The BCR team comprises Ursula Röhl (Curation and BCR Manager), Holger Kuhlmann (BCR Superintendent), Alex Wülbers (Curation and Logistics), Patrizia Geprägs (Assistant Lab Manager), Luzie Schnieders (Sample Curation), Vera Bender (Data Management), Ulrike Prange (Outreach and Media Relations), Volker Diekamp (Photographer) and Vera Lukies (Petrophysics).

DISCUSSION on core repositories:
In the past there was a policy on the website on how to manage, archive and preserve US government owned collections (J. Allan). In the new IODP there were efforts to come up with a common policy (J. Allan). Communication between the curators is important and this policy will be discussed at the upcoming JRFB meeting (C. Neal). In contrast to IODP-1, IODP-2 is a collaborative, dispersed programme (J. Allan). Curators of all three core repositories are doing an impressive work (J. Allan). From the beginning of IODP there was a joint sampling policy, which significantly facilitated the work (U. Röhl).
D. Kroon highlighted the importance of scanning the cores from paleoceanographic legs and asked about capacity limits for scanning as it would be important to scan cores from old paleoceanographic legs. Practically this works out as College Station and the BCR have two scanners each and this work is extended over a longer time window (U. Röhl). At the BCR there is no waiting time (U. Röhl). There is no problem of machine time, but the biggest challenge is to find people for scanning the cores as nobody is funded (M. Malone). All these acquired data are shipboard data, i.e. scientists are not scanning for their own projects, but for the whole science party (U. Röhl).
H. Given asked if it would be possible to organise more than one ECORD Training Course a year. The availability of staff needs to be checked first (U. Röhl).
According to the current JR schedule, several Sampling Parties will be held at the BCR (C. Neal). The BCR is ready for the cores. There could be only a constrain for requesters for archive samples during these busy times (U. Röhl).

(10:40)
coffee break
(11:05)

2.4 ESO: Downhole logging data and core petrophysic measurements (S. Davies)

(11:05)
S. Davies presented the activities of the European Petrophysics Consortium (EPC): equipment & measurements, post-expedition activities, preparation for upcoming expeditions, education and outreach.

The EPC comprises the University of Leicester and Géosciences Montpellier. The EPC provides petrophysics staff scientists and petrophysicists, and expertise in downhole logging and core petrophysics programmes. The EPC has dedicated equipment for core logging and discrete measurements. Furthermore, the EPC is involved in data calibration, quality control, evaluation and interpretation of these data. As part of ESO, the EPC is involved in post-expedition activities, the preparation of upcoming expeditions, capability development and training for IODP MSP expeditions and other key activities, including education and training.

Personnel changes since EFB 2018: Sally Morgan left in August 2019 and Johanna Lofi is on maternity leave since February 2019. Since February 2019 Katharina Hochmuth is IODP Research Associate. Laurent Brun is Logging Engineer and Simon Draper is Project Manager.

IODP Expedition 389 'Hawaiian Drowned Reefs': In preparation for the upcoming MSP operation, EPC investigated permitting requirements for the utilisation of the OD551 radioactive source. The feasibility and costings for additional MSCL sensors on the basis of Co-chief Scientist requests was investigated.

IODP Expedition 386 'Gulf of Mexico Methane Hydrates': In 2018 EPC were involved in discussions with the proponents.

Proposal 915-Pre FANA workshop: EPC personnel attended a pre-EGU workshop on 7-8 April 2018.

IODP Expedition 373 'Antarctic Cenozoic Paleoclimate': EPC clarified that there remained no permitting requirements for the OD551 source to be mobilised/demobilised in Hobart with Tasmanian authorities.

Expedition planning: Changes in regulations require a new MSCL container. EPC reviewed the regulations and met with the DNV personnel and ESO Operations Manager. A tender has been developed and reviewed by the University of Leicester's Purchasing Office. A final review by the ESO Operations Manager is required and the tender will be publsihed shortly.

Equipment and measurements: There are new standalone Techlog licences from Schlumberger and a new dedicated computer area with Techlog workstations for training and for visiting researchers. EPC-owned equipment will be housed in a new combined lab and storage room.

IODP Expedition 381 ‘Corinth Active Rift Development’: A Petrophysics Staff Scientist from Leicester attended the Editorial Meeting in July 2018 at College Station. The EPC

worked together with the MARUM on QA/QC reports on core physical properties datasets. EPC contributed to the expedition review document and attended the Expedition 381 Review Meeting in November 2018.

Education, training & outreach: In 2018, EPC hosted the third Petrophysics Summer School in Leicester. Twenty-one participants from five countries by institution and ten countries by nationality attended the Petrophysics Summer School. The fourth Petrophysics Summer School will be held from 29 June to 5 July 2019. The application window for the upcoming Petrophysics Summer School is 8 February to 22 April 2019. EPC will also be involved in the fifth ECORD Training Course, which will be held from 25-29 March 2019 at the MARUM. EPC staff was present at the UK-IODP 50th Anniversary Meeting and a talk about downhole logging, petrophysics and IODP was given at the London Petrophysical Society. Furthermore, EPC gave talks at the University of Leicester at the seminar 'Geology Under the Sea'.

EPC is present on the Social Media and has its own blog.

EPC produces an Annual Report and has a website (http://www.le.ac.uk/epc).

2.5 ESO: Outreach activities on MSP expeditions (C. Cotterill/U. Prange)

(11:18)

C. Cotterill presented post-March 2018 outreach activities on MSP expeditions and proposed 2019 activities.

2018/19 outreach activities: A session was organised at the EGU in the Education and Outreach Symposium. A pre-cruise flyer, a logo and a detailed media contact list were prepared for Expedition 389 'Hawaiian Drowned Reefs'. A Communications Plan was drafted for Expedition 389. Contact was made with native communities in Hawaii. C. Cotterill gave a keynote on ECORD Innovation and Technology and participated at the booth at the Australian Geoscience Council Convention (AGCC) in October 2018. There is ongoing work on an ECORD image film and brochure. A session in the Education and Outreach Symposium on what Geoscience Outreach means to different groups and a talk on ECORD Innovation and Technology were accepted for the EGU 2019. Advances were made with links to a production company interested in doing documentaries. A press release was published on 28 February 2019 on the first Expedition 381 'Corinth Active Rift Development' paper.

AGU Centennial Grant: A series of four graphic style books/e-books, one on each scientific theme of IODP, was suggested. This involves participation from alloperators and key scientists involved in the thematic research.

ECORD film and brochure: Final revisions to both are ongoing. The final versions should be available for the EGU 2019.

Core replicas: The creation of the Chicxulub cores is ongoing. The first core replicas are going into exhibitions from April 2019 onwards. A representative set is being funded by ESO for donation to the Impact Crater museum wing in Merida. Core replicas are continuously used, specifically from March to June 2019 at the Lapworth Museum and the Imperial College in London. There is potential for the development of a small touring exhibition in collaboration with ANZIC highlighting the importance of coral reef coring in palaeoclimate reconstruction. A potential showcase could be at the ICP in September 2019 in Sydney.

Puffersphere: The work with the Pufferfish software designers has been started. The four IODP science themes will be presented and the IODP sites will be colour-coded according to the IODP science theme. A base map of ocean currents will be displayed. A core photo, a video, three key facts and basics statistics will be presented for each expedition. Different filters can be applied to the whole globe (core repositories, ECORD and IODP member countries). Infographics will be developed and the range of IODP vessels will be displayed (size, number of people onboard, duration of offshore phase, water depths, etc.).

Proposed 2019 outreach activities: ECORD will organise a joint booth with ICDP, an ECORD-ICDP Townhall Meeting, a joint ICDP-IODP session, an outreach poster session on IODP activities and a mentoring programme at the EGU 2019. A potential participation at the ICP in September 2019 and a touring exhibition on Expeditions 310 'Tahiti Sea Level' and 325 'Great Barrier Reef Environmental Changes' will be discussed. A booth will be organised together with ICDP, USSSP and CDEX-JAMSTEC at the AGU 2019. ECORD will continue with the development of the Puffersphere software and the first installations of the Puffersphere at museums are planned. The AGU Grant proposal will be prepared and submitted.

2.6 ESSAC: Staffing, courses and other activities (A. Morris)

(11:30)

A. Morris gave an overview of the staffing, the ECORD Summer Schools, the ECORD Training Course, the ECORD Research Grants and the Distinguished Lecturer Programme (DLP) 2018/19.

Staffing of ECORD scientists on IODP Expeditions (see agenda book pages 36-37:

Expedition 379 (Amundsen Sea West Antarctic Ice Sheet History): Nine ECORD scientists plus one German Co-chief Scientist and one ECORD Outreach Officer are currently sailing.

Expedition 382 (Iceberg Alley Paleoceanography & South Falkland Slope Drift): Staffing is completed. Eight ECORD scientists plus one German Co-chief Scientist are ready to sail.
Expedition 383 (Dynamics of Pacific Antarctic Circumpolar Current): Staffing is completed. Eight ECORD scientists plus one German Co-chief Scientist are ready to sail.
Expedition 385 (Guaymas Basin Tectonics and Biosphere): Staffing is completed. Nine ECORD scientists are ready to sail.
Expedition 378 (South Pacific Paleogene Climate): Staffing is completed. Eight ECORD scientists plus one German Co-chief Scientist are ready to sail.

Staffing is in progress for Expeditions 387 'Amazon Margin' and 389 'Hawaiian Drowned Reefs'.

There is an open call for Expedition 388 'Equatorial Atlantic Gateway', which will close on 1 April 2019.

A Special Call for Expedition 358 'NanTroSEIZE Plate Boundary Riser 4' (Nannofossil Specialist) recently closed. A Special Call for Expedition 378 'South Pacific Paleogene Climate' (Stratigraphic Correlator) will close on 10 April 2019.

ECORD Summer Schools and ECORD Training Course:
The ECORD Training Course 2019 "The Virtual Drillship Experience" will be held at MARUM on 25-29 March and will receive a direct support of 6,500 €.
The 2019 Petrophysics Summer School will be held in Leicester from 29 June to 5 July and will receive a direct support of 10,000 € plus scholarships to be determined and awarded.
The 2019 ECORD Urbino Summer School in Paleoclimatology will be held from 10 to 26 July and will receive a direct support of 10,000 € plus scholarships to be determined and awarded.
The 2019 ECORD Bremen Summer School with the topic "Subduction Zone Processes: Magma, Volcanoes, Ore Deposits, Geohazards" will be held at MARUM from 16 to 27 September and will receive a direct support of 10,000 € plus scholarships to be determined and awarded.

ECORD Research Grants: Fifteen high-quality proposals from young scientists to work on DSDP-ODP-IODP cores or data were received from all sciences and topics relevant for IODP and from a large spread of ECORD member countries. The total budget is 18,000 € and top-ranked research grants will be funded with up to 3,000 €. The selection process is still under way and the awards will be announced in May 2019.

Distinguished Lecturer Programme (DLP): A. Morris presented the four DLP lecturers for the 2018/19 time period. Four speakers who cover the themes of the Science Plan were selected: Luc Beaufort (FRA) for 'Climate and Ocean Change', Verena Heuer (GER) for 'Biosphere Frontiers', Rebecca Bell (UK) for 'Earth in Motion' and Margot Godard (FRA) for 'Earth Connections' were selected. Overall, 27 applications for hosting a Distinguished Lecturer were received. The requests for hosting a lecture came from nine ECORD nations, two IODP nations and two non-IODP nations. On average, each DLP lecturer will give six lecturers. The annual DLP budget is of 13,000 €.

3. Brief reports of other IODP facility boards and entities on recent activities

There were reports on the *JOIDES Resolution* Facility Board (C. Neal), the *JOIDES Resolution* Science Operator (M. Malone), the *Chikyu* IODP Board and CDEX (N. Eguchi), the Science Support Office (H. Given), the Science Evaluation Panel (K. Miller) and the IODP Forum (D. Kroon).

3.1 *JOIDES Resolution* Facility Board (C. Neal)

(11:41)

C. Neal presented the outcomes of the JRFB 2018 meeting concerning IODP policies and proposals, new JRFB members, the long-term JR track, the future of the programme beyond 2023 and the Special Oceanography Volume on scientific ocean drilling.

JRFB 1805: The IODP Standard Confidentiality Policy and the IODP Sample, Data and Obligation Policy were approved at the last JRFB meeting (JRFB 1805 Consensus Statement 3), but need to be revised. The JRFB requests from the SEP/EPSP, and in consultation with the JRSO representation at their meetings, to ensure that the proponents provide sufficient alternate sites and strategies in IODP proposals in order to increase operational flexibility and decrease risk during implementation of the project at sea (JRFB 1805 Consensus Statement 12).

JRFB members: New JRFB members are Leanne Armand (ANZIC), Steve Bohaty (ECORD) and Larry Krissek (USA). The new JRFB Chair Clive Neal started on 1 October 2018. The new SEP Co-chair for Science is Lisa McNeill (ECORD).

Scheduling the JR: The JR will start to operate in the general area of the Equatorial and North Atlantic, Gulf of Mexico, Mediterranean, Caribbean and the Arctic in FY21 and through FY22, and should complete its global circumnavigation in the Indo-Pacific region in FY23 (JRFB 1805 Consensus Statement 8). The JRFB in exceptional circumstances on a case-by-case basis will consider to keep unimplemented sites on the board for potential completion at a later date during the current programme (JRFB 1805 Consensus Statement 9).

Proposal 874 'Newfoundland Oligo-Miocene sediment drifts' was forwarded to the JRFB from the 1806 SEP meeting and proposal 910 'Continental Margin Methane Cycling: Rio Grande' was forwarded to the JRFB from the 1901 SEP meeting. These two proposals will be scheduled at the upcoming JRFB meeting.

The long-term JR cruise track will follow a path from the Southern Ocean along the west coast of South America to the Caribbean (Figure 1). Then the JR will go back south along the east coast of South America reaching the South Atlantic in 2020, and working in the South Atlantic in 2020 and 2021. Finally, the JR will go north again in 2021 along the West African Coast to reach the North Atlantic in 2022 and finally through the Panama Canal into the Western Pacific Ocean. The JRFB expects that the JR will complete its global circumnavigation in the Indo-Pacific in FY23 (JRFB 1805 Consensus Statement 8). There is good proposal pressure in the South Atlantic, North Atlantic and Mediterranean.

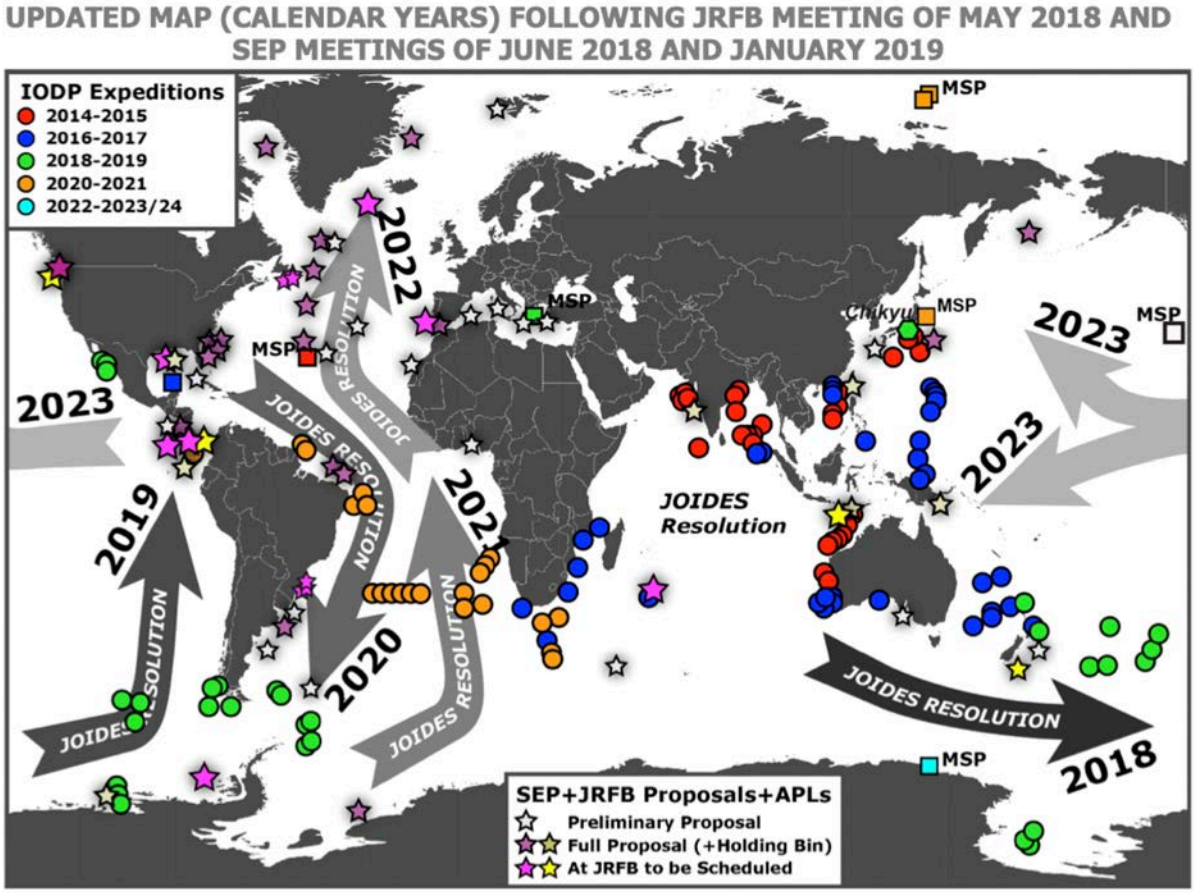

Figure 1: Long-term JR cruise track and proposal pressure.

Renewal: In February 2019 the National Science Board approved the next five years of the US involvement in IODP. Various workshops will be organized in 2019 with the aim of preparing a future scientific ocean drilling programme beyond 2023:

- 2-3 April: Scientific Ocean Drilling beyond 2023, Yokohama, Japan;

- 6-7 April: PROCEED – Ex**p**anding F**ro**ntiers of S**cie**ntific Oc**e**an **D**rilling – Austrian Academy of Sciences, Vienna, Austria;
- 14-16 April: OCEAN Planet, Canberra, Australia;
- 6-7 May: NEXT: Scientific Ocean Drilling beyond 2023, Denver, CO, USA.

New drilling vessel: NSF is in agreement with exploring possibilities for a modern drilling vessel to open up new possibilities. A new drill ship will cost more than the JR, but increased efficiencies will allow more science. The day rate would increase. The increased cost borne will be proportionally across the JR partners, i.e. the MoUs need to be updated.

Special Oceanography Volume: The Oceanography Society published the Special Issue "Scientific Ocean Drilling: Looking to the Future": https://tos.org/oceanography/issue/volume-32-issue-01. The overall goal of this special issue is to provide the scientific basis for continuation of scientific ocean drilling into the future and post-2023. The guest editors are Anthony Koppers, Carlota Escutia, Fumio Inagaki, Heiko Pälike, Demian Saffer and Debbie Thomas.

COMMENT by J. Allan on a new US drilling vessel:
The new MoUs include an optional year for 2024 because the JR renewal was for five years (2020-2024) as a renewal for four years (2020-2023) would have been more complicated. The advantage is that if the JR partners do not agree to extend for one more year, JR operations can be done until FY23, but there is also the opportunity to schedule until FY24. Beyond FY24 a new MoU for a new programme with a new Science Plan is needed. NSF needs a new Science Plan before deciding on the support of facilities to conduct analyses. The operation costs will increase for both keeping the JR or having a new vessel. There are preliminary ideas of a design of a new ship as well as the day rate. NSF would entertain this if the partners would keep the same proportion of contributions. About 20-25% of operating costs needs to be maintained by the JR partners so that NSF can consider a new vessel. This is the only globally ranging vessel that the programme has and it can only be operated if the partners maintain their contributions. The annual NSF operational budget is of 48M USD and adding 14.5M USD base contributions from the JR partners equals an annual budget of 62.5M USD. The FY19 budget is about 68M USD, but usually the annual budget is of 65M USD. The total costs are of about 67.5M USD, but the annual budget is only of 62.5M USD, i.e. there is a minus of 5M USD. The CPPs helped to buffer this minus. Problems may occur around FY22 as the NSF budget of 48M USD will not increase. Operational complexity needs to be reduced and maybe even the amount of operations.

3.2 *JOIDES Resolution* Science Operator (M. Malone)

(12:01)

M. Malone presented the revised JR schedule:

Expedition	Exp #	Ports (Start/End)	Dates
		Subic Bay/Hong Kong	5 July–15 November 2018
Return to Hole U1503A (South China Sea)	368X	Hong Kong/Hong Kong	15 November-8 December 2018
Transit		Hong Kong/Punta Arenas	8 December–18 January 2019
Amundsen Sea West Antarctic Ice Sheet History	379	Punta Arenas/Punta Arenas	18 January–20 March 2019
Iceberg Alley and Subantarctic Ice and Ocean Dynamics	382	Punta Arenas/Punta Arenas	20 March–20 May 2019
Dynamics of Pacific Antarctic Circumpolar Current	383	Punta Arenas/Punta Arenas	20 May–20 July 2019
Non-IODP (JR100)	379T	Punta Arenas/Antofagasta, Chile	20 July–18 August 2019
Panama Basin Crustal Architeture (504B) and Restoring Hole 896A	385T	Antofagasta/San Diego	18 August–16 September 2019
Guaymas Basin Tectonics and Biosphere	385	San Diego/San Diego	16 September– 16 November 2019
Transit		San Diego/Fiji[4]	16 November 2019–3 January 2020
South Pacific Paleogene	378	[4]Fiji/Papeete	3 January–4 March 2020
Engineering Testing	384	Papeete/Barbados	4 March–26 April 2020
Amazon Margin	387	Barbados/Recife	26 April–26 June 2020
Equatorial Atlantic Gateway	388	Recife/Recife	26 June–26 August 2020
Non-IODP		Recife/Rio de Janeiro	26 August–5 October 2020
South Atlantic Transect 1	390	Rio de Janeiro/Cape Town	5 October–5 December 2020
Walvis Ridge Hotspot	391	Cape Town/Cape Town	5 December 2020–4 February 2021
Agulhas Plateau Cretaceous Climate	392	Cape Town/Cape Town	4 February–6 April 2021
South Atlantic Transect 2	393	Cape Town/Rio de Janeiro	6 April–6 June 2021

Expedition 379 'Amundsen Sea West Antarctic Ice Sheet History' was just completed. M. Malone presented the scientific objectives and the ice conditions. Additional sites were added and the JRFB approved the Ross Sea and Antarctic Peninsula sites as additional contingency. A huge amount of icebergs interrupted drilling.

M. Malone continued to present the JRSO updates. The facility will be funded until 2024. The FY18 Co-chief Review meeting (Expeditions 369, 372, 374-376) was held on 25-26 February 2019. The NSF FY18 Annual Review is postponed to August due to the government shutdown. Katerina Petronotis replaces Adam Klaus as Supervisor of Science Support. Emily Estes is the new Expedition Project Manager/Staff Scientist and will start in June 2019.

3.3 *Chikyu* IODP Board (Y. Tatsumi/N. Eguchi)

(12:16)

The last CIB meeting was held on 19-20 March 2018 in Kobe. N. Eguchi presented four out of 13 CIB Consensus Items (see agenda book pages 40-42):

- CIB Consensus 0318-06 on new riser projects
- CIB Consensus 0318-07 on updates of the riser proposals CRISP/IBM/Hikurangi

- CIB Consensus 0318-08 on the deactivation of IODP pre-proposal 925
- CIB Consensus 0318-13 on Addendum 2 of IODP proposal 871

The next CIB meeting will be held on 11-12 June 2019 in Kobe, Japan.

3.4 CDEX (N. Eguchi)

(12:22)

Chikyu IODP Expedition 358 'NanTroSEIZE Plate Boundary Deep Riser 4' was implemented from 7 October 2018 to 21 March 2019. The aim was to access a subduction plate boundary fault system and its wall rocks at likely seismogenic depths for the first time. N. Eguchi explained the actual drilling operation. Two sites were proposed as a contingency for riserless operation. On 31 March 2019 the *Chikyu* will be back to the Port of Shimizu.

CDEX is a part of JAMSTEC and was established in 2002. CDEX will disappear at the end of March 2019 and a new organisation will manage all JAMSTEC vessels. The Marine-Earth Exploration and Engineering Division (MARE^3) is responsible for safe and efficient operation of scientific research platforms. MARE^3 develops state-of-the-art research platforms, promotes new scientific measurement systems and expands drilling capabilities. International usage of research platforms is promoted. MARE^3 contributes to build the next generation of researchers and engineers. MARE^3 has a Director General and is composed of three departments: Planning and Coordination Department, Engineering Department and Operation Department. N. Eguchi will be the head of the Operation Department. Shinichi Kuramoto will be the Director General.

(12:44)
lunch break
(13:35)

3.5 Science Support Office (H. Given)

(13:35)

SSO Cooperative Agreement Status: NSF extended the SSO Cooperative Agreement through September 2023. The task work is essentially the same, but a refreshment of the SSDB is anticipated. The tasks of the IODP Science Support Office (SSO) are: 1) to support the JRFB and its advisory panels; 2) to manage the IODP proposal submission/review process; 3) to manage the Site Survey Data Bank (SSDB); and 4) to maintain the IODP website. The new PI team includes Jeff Gee.

Proposal submission history: At the last submission deadline in October 2018 seven new and nine revised proposals have been received. Since the start of the International Ocean Discovery Program in 2013, 118 new proposals have been received. Of those, 47% have been deactivated, 33% are still under active review and 20% were forwarded to the Facility Boards (18 are scheduled or have been drilled). An additional 36 proposals carried over from the Integrated Ocean Drilling Program are still active in the review system.

H. Given summarized the proposal outcomes since the last two SEP meetings. Two proposals were sent to the Facility Boards (1 JRFB, 1 EFB); five proposals were sent to external review (all JR); thirteen revisions were requested (12 JR, 1 *Chikyu*); four were invited to develop full proposals (all JR) and ten proposals were deactivated (2 MSP).

H. Given summarized the proposal statistics (see agenda book pages 49-53 or iodp.org). At the moment there are 89 active IODP proposals in the system: 61 JR, 12 *Chikyu*, 10 MSP and 6 Multiple proposals. Of those, 44 are at the Facility Boards and 41 are at SEP (4 are in the holding bin). The proposals target mainly the Pacific (34) and the Atlantic (23) Oceans. ECORD and the USA are nearly equal in the number of lead proponents (ECORD: 38, US: 32, Others: 19). ECORD has the highest number of unique proponents (ECORD: 494, US: 347, Others: 287). Of the 89 active proposals, 51 are full proposals and 19 are pre-proposals, plus 11 APL and 8 umbrella proposals.

H. Given presented the evolution of proposals. Since IODP-2 the proposals need significantly less time from a pre-proposal to a full proposal and finally to the facility boards and a potential implementation. The reasons are that proposals can only be revised once and that all site survey data have to be in the SSDB before a proposal is forwarded to the facility boards.

The next submission deadline for scientific ocean drilling proposals is 1 April 2019.

COMMENT on proposal pressure:
The need for proposals should be highlighted (A. Morris). To the next call for submission of scientific ocean drilling proposals it should be added that proposals are being accepted for an implementation beyond 2023 in the anticipation of a new ocean drilling programme (C. Neal).

3.6 Science Evaluation Panel (K. Miller)

(13:54)
K. Miller gave a panel update. SEP reports to the JRFB and services the EFB and the CIB. There are good communications and relations with SSO, the JRFB and the IODP Forum. SEP has been operating as a single panel for ten meetings. In January 2019 SEP met at

the Scripps Institution of Oceanography (SIO) in La Jolla, USA and the next meetings will be held on 25-27 June 2019 in Edinburgh, UK, and on 7-9 January 2020 at the SIO. It is extremely effective and efficient to have both types of expertise, science and data, in the same room along with the operators. Five watchdogs with expertise in science, site survey data and operation are responsible for the evaluation of an IODP proposal.

SEP Terms of Reference: SEP is responsible for the selection of the best and most relevant proposals to be forwarded to the Facility Boards. SEP also advises the Facility Boards and the IODP Forum on any shortcomings of the proposal pool with respect to themes and challenges of the IODP Science Plan and makes suggestions for stimulating proposal pressure in those areas.

Characterizing the Site Survey Data: SEP advises proponents on data that are deemed necessary, reviews all data in the Site Survey Data Bank (SSDB), advises the proponents on the adequacy of the drill site characterisation package and provides an assessment of whether or not the scientific objectives can be accomplished based on the proposal and data package.

At the June 2018 SEP meeting (GeoForschungsZentrum (GFZ), Potsdam, Germany), 18 proposals have been reviewed, of which two were MSP (full2-866 and pre-938) and one *Chikyu* (APL-939) proposals (Table 4). Two proposals came back from external review, seven proposals have been revised and nine new proposals were received (Table 4). The result of the June 2018 SEP meeting (Table 4) is that the two proposals, which came back from external review, were forwarded to the JRFB (full2-874) and EFB (full2-866). Four of the seven revised proposals need to be developed as full2 proposals and three were deactivated. Of the nine new proposals, four proposals need to be developed as full proposals, two need to be revised and three proposals were deactivated. MSP proposal pre-938 was deactivated and the proponents were encouraged to organize a workshop.

Table 4: Outcomes from the June 2018 SEP meeting. Proposals submitted for the April 2018 deadline. Green: back from external review, orange: revised, blue: new proposals.

ID	Type	Name	Title	Ship		Outcome
814	Full	Joseph Stoner	Greenland Ice Sheet	JR	CO	Revise. Delete East Greenland
866	Full2	Michael Strasser	Japan Trench Paleoseismology	MSP	EM	Forward to EFB as Excellent; offer to evaluate ADD new data
874	Full2	Oliver Friedrich	Neogene Newfoundland Sedimen	JR	CO	Forward to JRFB as Excellent
895	ADP	Rachel Flecker	Mediterranean-Atlantic Gateway	JR	CO	Revise, with very strong encouragement and paragraph lauding science
910	Full	Alberto Malinver	Continental Margin Methane Cyc	JR	EM	Revise and prepare for EPSP pre-review in Sept. 2018
914	Full2	Luigi Jovane	Brazilian Equatorial Margin Paleo	JR	CO	Deactivate. Perhaps a long letter from the co-chairs detailing needed changes
922	Full	Hugh Daigle	W Atlantic Cenozoic Slope Stabilit	JR	EM	Deactivate. Strongly worded encouragement resubmit, merging with 930?
929	Full	Steven D'Hondt	Blake Nose Subseafloor Life	JR	BF	Revise. Link methods to hypotheses, paleocean table/figure of previous work
930	Full	Derek Sawyer	W Atlantic Passive M. Landslide	JR	EM	Deactivate. Strongly worded encouragement resubmit, merging with 922?
932	Pre	Timothy Druitt	Hellenic Arc Volcanic Field	JR	EC	Develop Full. refine scope
933	Pre	Torsten Bickert	NW African Continental Margin C	JR	CO	Develop Full. Slide objective may be too much
934	Full	Wolfram Geissler	Arctic Atlantic Gateway Climate	JR	CO	Revise, improve locations, age control?, interact with JRSO
935	Pre	Stefan Bünz	Arctic Fluid Flow Systems	JR	CO	Develop Full. with refined scope, paleocean deleted, consider CPP
936	APL	Ann Cook	Mississippi Fan Velocity Pull-Ups	MSP	EM	Deactivate. Possible CPP?? But seems to have been done
937	Pre	Andrew McCaig	Deepening Hole U1309D	JR	EC	Develop Full
938	Pre	Jeffrey McGuire	Cascadia Paleoseismic Record	MSP	EM	Deactivate, encourage a workshop
939	APL	Asuka Yamaguchi	Tohoku Petit-Spot Magmatism	CH	EC	Revise
940	Full	Paola Vannucchi	Brazilian Equatorial Margin Tecto	JR	EC	Deactivate

At the January 2019 SEP meeting (Scripps Institution of Oceanography (SIO), La Jolla, CA, USA), 17 proposals have been reviewed (Table 5). Proposal 910-Full2 'Continental Margin Methane Cycling: Rio Grande' will have fast-tracked reviews and the anticipated delivery to the JRFB is May 2019. Of the 7 new proposals, one was sent out for external review, four proposals need to be revised and two proposals were deactivated. Overall, four North Atlantic proposals were sent out for external review and revisions were suggested to five proposals that will likely go to review in June 2019. That means, by January 2020 SEP anticipates to forward up to nine new North Atlantic-Mediterranean proposals to the JRFB.

Table 5: Outcomes from the January 2019 SEP meeting. Proposals submitted for the October 2018 deadline. Orange: revised, blue: new proposals.

ID	Type	Name	Short title	Ship	Them	destination	Result
814	Full2	Joseph Stoner	Greenland Ice Sheet	JR	CO	Deactivate /External	Deactivate
851	Full	Mitchell Lyle	Cenozoic Nortwest Atlantic Transect	JR	CO	Deactivate /Revise/External	External Review
857C	Full	Claudia Bertoni	DREAM: Lago-Mare Deposits	JR	CO	Deactivate /Revise/External	Revise
888	Full2	Robert Stern	Aleutian Basin Formation	JR	EC	Deactivate /External	Deactivate
909	Full2	Paul Knutz	NW Greenland Glaciated Margin	JR	CO	Deactivate /External	External Review
910	Full2	Alberto Malinverno	Continental Margin Methane Cycling: Rio Grande	JR	EM	Deactivate /External	External Review
929	Full2	Steven D'Hondt	Blake Nose Subseafloor Life	JR	BF	Deactivate /External	External Review
933	Full	Torsten Bickert	NW African Continental Margin Climate	JR	CO	Deactivate /Revise/External	Revise
937	Full	Andrew McCaig	Deepening Hole U1309D	JR	EC	Deactivate /Revise/External	Revise
941	Full	Yasuhiko Ohara	Godzilla Megamullion Lithosphere Architecture	JR/Ch	EC	Deactivate /Revise/External	Revise
942	APL	Ian Hall	Site 1089 Reoccupation	JR	CO	Deactivate/Revise/HB/JRFB	Deactivate
943	Full	Tim Reston	Galicia Margin Rifting	JR	EC	Deactivate /Revise/External	External Review
944	Full	Ritske Huismans	Mid-Norwegian Continental Margin Magmatism	JR	EC	Deactivate /Revise/External	Revise
945	Full	Luigi Jovane	Brazilian Equatorial Margin Paleoceanography	JR	CO	Deactivate /Revise/External	Revise
946	Full	Henry Dick	Kane Megamullion Lower Crust	JR	EC	Deactivate /Revise/External	Deactivate
947	Pre	William Wilcock	Cascadia Borehole Observatories	JR	EC	Deactivate /Full	Revise
866	Full2	Michael Strasser	Japan Trench Paleoseismology	MSP	EM	Stay at EFB	Stay at EFB

Seven proposals are currently at the EFB:

637-Full2 'New England Shelf Hydrogeology'
708-Full 'Arctic Ocean Paleoceanography' (Expedition 377)
716-Full2 'Hawaiian Drowned Reefs' (Expedition 389)
730-Full2 'Sabine Bank Sea Level'
813-Full 'Antarctic Cenozoic Paleoclimate' (Expedition 373)
866-Full2 'Japan Trench Paleoseismology' (Expedition 386)
887-CPP2 'Gulf of Mexico Gas Hydrates'

Two pre-proposals and two full proposal are currently at SEP:

796-ADP 'NADIR - Nice Amphibious Drilling'
863-MDP 'ISOLAT Southern Ocean Paleoclimate'
915-Pre 'North Atlantic Fjord Sediment Archives'
931-Pre 'East Antarctic Ice Sheet Evolution'

The proposal pressure in the North Atlantic and the Mediterranean is solid. MSP proposal pressure is weak.

Residence time of proposals was shortened from seven years to five years, with some proposals drilled in less than three years. The current 5-year plan may continue through FY24, which could mean that about 12 JR expeditions could be scheduled. A seamless

transition in 2024 to a new programme requires proposal pressure. Scheduling beyond 2023-24 is planned in anticipation of a new programme. SEP and the JRFB strongly encourage proposals for the 2019 April and October deadlines, expecially pre- und full proposals for the Indo-Pacific.

3.7 IODP Forum (D. Kroon)

(14:05)

Following a reply by the ANZIC Governing Council, the IODP Forum should have following tasks:

- to organise the decadal science plan;
- to report on movement towards the science plan aims;
- to coordinate disparate efforts and to identify future directions;
- to take leadership in strategic directions;
- to continue as an early warning system;
- to be more agile compared to the facility boards and the SEP;
- to coordinate community needs;
- to identify gaps.

In 2019 various workshops will be organized with the aim of preparing a future scientific ocean drilling programme beyond 2023:

- 2-3 April: Scientific Ocean Drilling beyond 2023, JAMSTEC, Yokohama, Japan;
- 6-7 April: PROCEED – Ex**p**anding F**ro**ntiers of S**cie**ntific Oc**e**an **D**rilling – Austrian Academy of Sciences, Vienna, Austria;
- 14-16 April: OCEAN Planet, ANU, Canberra, Australia;
- 6-7 May: NEXT: Scientific Ocean Drilling beyond 2023, Denver, CO, USA.

The NEXT workshop is organized by a 15-member Steering Committee co-chaired by Anthony Koppers and Jim Wright. About 140 participants are expected, including international observers. This workshop will address the following issues: 1) seek broad input from the community for general post-2023 planning; 2) discuss strategies for obtaining a modern successor platform to the JR; 3) continue and broaden partnerships with international IODP partners and other scientific programmes/entities.

ANZIC 'Ocean Planet' workshop: About 150 scientists from the Australian and New Zealand Geosciences and Biogeosciences community will discuss themes/challenges, platform capabilities and legacy reuse. The aim is to produce a White Paper for inclusion in the future IODP strategic planning.

The main objective of the PROCEED workshop will be to produce a White Paper, which will summarize the scientific, technological and programmatic goals for ECORD beyond 2023. A special emphasis will be on science frontiers and technical developments.

The JAMSTEC workshop will be organised by the J-DESC governing board. This workshop will address the following issues:

- What are the key scientific challenges for a future international scientific ocean drilling programme beyond 2023?
- How can the Japanese community contribute to the programme?
- How can tie-ups and cooperative work between IODP and ICDP be promoted in a future programme?

The workshop outcomes will be presented at the 2019 IODP Forum meeting. New science ideas are needed to build a new post-2023 Science Plan. New science ideas could lead to new science themes or to new challenges under the current themes. Current science challenges may also be upgraded into themes. Further discussion topics will be future facilities, the societal impact, industry liaison and outreach. The current structure will probably change as new consortia and IODP partners could join, new facility boards may be added and links with ICDP and NASA could be included.

The workshops will be evaluated during the first days of the next IODP Forum meeting. The IODP Forum Chair will invite two reporters on each workshop as well as ICDP and NASA representatives. In addition, representatives from Korea, China and Brazil will attend the IODP Forum meeting. The goal is to decide on a new Science Plan post-2023. The question is if a new Science Plan is needed. If so, approaches towards a next Science Plan need to be discussed. Furthermore, a deadline for the new Science Plan needs to be set.

DISCUSSION on the new IODP Science Plan post-2023:
An example for a drillship, which could replace the JR exists (J. Allan). A new (draft) Science Plan should be delivered by summer 2020 so that NSF can make a decision on which facility is needed (J. Allan). The time NSF would need to consider assessing what the community needs based on the new Science Plan are is unknown (J. Allan). The Co-chairs of the U.S. planning workshop post-2023 aim summer 2020 for a draft plan (C. Brenner). The earlier NSF receives the new Science Plan, the better the process will move forward as NSF cannot move forward without a new Science Plan, (C. Neal). An effective international community document is needed (C. Neal). In contrast to the past, there are now three chains of command at NSF. A panel needs to look at the new Science Plan and to determine what the basic needs are before getting any solicitation (J. Allan). A strong draft Science Plan might be sufficient to create such a panel (J. Allan). A community discussion at the IODP Forum meeting is needed regarding an approach for a new Science Plan (D. Kroon).

4. Reviews of recent MSP Expeditions

G. Uenzelmann-Neben summarized the review of MSP Expedition 381 'Corinth Active Rift Development' and reported on post-MSP expedition assessments.

4.1 381 – Corinth Active Rift Development (G. Uenzelmann-Neben)

(14:36)

The offshore phase was accomplished from 23 October to 18 December 2017. Four sites were drilled: M0078A (534 m), M0078B (52 m), M0079A (611 m) and M0080A (449 m) with the drillship *Fugro Synergy*. A total of 1645 m of core was recovered from three sites over a 1905 m cored interval (86% recovery). The OSP was held in February 2018 and the expedition was reviewed on 6 November 2018 in The Hague. Two external reviewers were invited to the Operational Review Committee meeting: François Cornet and Alastair Robertson (declined at the last moment). EFB reviewers were Stephen Gallagher and Ellen Thomas. The expedition faced following challenges: a short leading time frame, territorial waters permitting issues, the short time between offshore and onshore phases and problems with the timing of access to logging data. The review panel proposed six (five regarding the offshore phase and one regarding the onshore phase) recommendations to improve next equivalent expeditions. For further details see the Expedition 381 Review Report.

DISCUSSION on Expedition 381 'Corinth Active Rift Development':

Communication problems are common and efforts have already been made to improve communication (G. Lericolais). A second recurrent problem is the length of the OSP as scientists always request more time (G. Lericolais). Sailing scientists have to know in advance that not all scientific measurements can be done offshore in contrast to the other IODP platforms (G. Lericolais). Recommendations from the MSP Operational Review Committee meetings help to improve all future MSP planning/implementing processes (G. Lericolais). There are always unrealistic expectations concerning the length of the OSP (E. Thomas). Concerning the communication problem, there were major complains by the Co-chief Scientist about the chain of command on the expedition (E. Thomas). Sometimes there are complains on the same expedition that the OSP is too long or too short (D. McInroy). It is important to talk ahead of time to the participants and to better prepare them for the OSP (D. McInroy). The different expectations of a big science party are a huge challenge, but the biggest challenge on the JR is for high sediment recovery cruises where a compromise between high resolution sampling and time left onboard has to be found (M. Malone). The advantage for an OSP is that the total length of cores is known (A. Morris). The duration of the OSP has to be prognosed months before (U. Röhl).

4.2 Post-MSP expedition assessments (G. Uenzelmann-Neben)

(14:46)

Post-expedition assessments are based on reports by the Co-chief Scientists of each MSP expedition summarizing the performances regarding each scientific objective of the relevant expedition. This assessment gives a better idea on achievements and impact of an MSP expedition. Co-chief Scientists of Expedition 357 'Atlantis Massif' and Expedition 364 'Chixculub Impact Crater' should be invited to the next ECORD Council-ESSAC meeting, which will be held in November in Dublin, to report on the achievements of their expedition.

DISCUSSION on post-expedition assessments:

The focus should be on the new knowledge that has been gained (J. Allan). Comparing the results to the initial objectives is often based on wrong assumptions (J. Allan). The scientific results may be totally different from the expectations (J. Allan). For each expedition it should be summarized what was achieved and what we learned from this expedition (G. Uenzelmann-Neben). It has to be assessed how successful an expedition has been and what the outcomes are (G. Uenzelmann-Neben). This assessment is not against any discovery. During all 2019 planning workshops it has to be evaluated how much was achieved from the IODP Science Plan (G. Camoin). At the moment there is only one document by the IODP Forum Chair listing the scientific objectives of IODP expeditions, but not the outcomes of the expeditions (G. Camoin). For most of the IODP expeditions it has to be summarized how many of the initial objectives have been achieved and if new objectives have been reached to get a better picture of what IODP achieved so far (G. Camoin). E. Thomas asked about the time frame as sometimes it takes about 10 years after an expedition to reach an objective. Concerning MSP expeditions, at the moment only Expeditions 357 'Atlantis Massif' and 364 'Chixculub Impact Crater' are considered (G. Uenzelmann-Neben). The time frame could be something like 3-4 years after an expedition (G. Camoin). Even one year after an expedition most of the achievements may be captured (J. Allan). Co-chief Scientists have the committment to produce an expedition summary paper around this time scale (A. Morris). The EFB should underline the importance of post-expedition assessments and make a statement of how important it is to get such a expedition summary paper from the Co-chief Scientists as it frames the assessment (J. Allan). The post-expedition assessments are important to build a new Science Plan (D. Kroon).

ECORD FB Action Item 2: EMA

To invite the Co-chief Scientists of the Expeditions 357 'Atlantis Massif' and 364 'Chixculub Impact Crater' to the ECORD Facility Board meeting #8 to report on their initial scientific objectives and their scientific results (post-expedition assessment).

5. Pre-site survey data / Sample and Data Policy (C. Neal)

(14:56)

C. Neal summarized the IODP Sample, Data, and Obligations Policy and the IODP Standard Confidentiality Policy. Both policies were approved at the last JRFB meeting (JRFB 1805 Consensus Statement 3), but need to be revised. Major changes concern the moratorium and responsibilities of different entities onboard the ship or as part of an OSP.

IODP Sample, Data, and Obligations Policy

(2) Policy Implementation Guidelines

2-1 Sample and Data Requesters

Change: "Expedition samples and data are held under a moratorium, typically lasting for one year after the principal sampling effort for the project on the ship or on shore, to ensure that Science Party members receive priority access to samples and data"

2-2 Sample and Data Requests

Change: "IODP imposes a sample and data moratorium for each expedition, one year to a maximum of 18 months, from its completion, during which sample and data access is restricted to members of the expedition Science Party."

Change: "Completion of an expedition is designated as the date when the majority of sampling is completed or the ship docks"

Change: "Samples are loaned for an approved sample request that remain under the authority of the relevant IODP curator."

DISCUSSION on the moratorium period and publications in high-impact journals:

The 18 months for the moratorium are the outcome of an JRFB meeting that was held one or two years ago because sampling parties have been delayed (M. Malone). A moratorium beyond 18 months has to be discussed with the JRFB (M. Malone). In certain cases the moratorium may be modified before the expedition (C. Neal). All extensions must be communicated to the other facility boards and IODP publications (C. Neal). A preliminary report is a publication during the moratorium and comes out about six weeks after an expedition (M. Malone). At the end of the moratorium the Proceedings are published, which contain everything that was written and documented on the ship, and this is when cores and data become available to the public (M. Malone). There are issues with the high-impact journals as a preliminary report is always published (M. Malone). It has to be requested that the preliminary report can be held back until the high-impact papers are published (M. Malone). It is also important to mention that JAMSTEC and ECORD have agreements that the JRSO will provide these editing responsibilities (J. Allan).

2-3 Researcher Obligations
Science Party Members

DISCUSSION on Researcher Obligations – Science Party Members – Education and Outreach Officers:
For the JR, Education and Outreach Officers are part of the Science Party, but for other platform providers they are not (H. Given). Education and Outreach Officers are part of the Science Party, and therefore, their products are important and need to be recorded (C. Neal). At the moment there is often the problem that the produced education and outreach material cannot be found (E. Thomas). Everything produced on the ship is documented in the preliminary report (M. Malone). Scientists are also not required to put post-expedition products in the expedition report (M. Malone). Outreach and education should be documented in the preliminary report, but produced material could also be added to the Proceedings as supplementary material, which is then available on the website (C. Cotterill). There is no requirement for scientists to put post-expedition material in the Proceedings (A. Morris). Any post-cruise activities by the Education and Outreach Officers could be written as an article for the 'Scientific Drilling' journal (A. Morris). Shipboard education and outreach activities should be documented in the preliminary report and be separated from post-cruise education and outreach activities (C. Neal). It is not required to put a product in the preliminary report (H. Given). A description of what was done by the Education and Outreach Officers onboard is sufficient (H. Given). Scientists have to publish their results in a peer-reviewed journal, i.e. the Education and Outreach Officers could also publish their work in a journal, for example in 'Geoscience Communication' (C. Cotterill). Scientists do have to deposit their findings into the Proceedings volume, but they do it in reference to their work which is in the expedition-related bibliography (D. McInroy). Expedition-related outreach products just need a reference in the bibliography (D. McInroy). An extra-line in the expedition bibliography may provide links to documentaries, videos, etc. (A. Morris). Education products produced on JR expeditions can be found on the JOIDESResolution.org website (C. Brenner). In terms of products, it is important to consider that Science Party Members (researchers) are virtually given post-expedition funding, but Outreach Officers are not necessarily, i.e. the same level of expectations is not fair (C. Brenner).

Post-moratorium Researchers
Change: "are asked to make data and results, obtained from samlpes (or data), publicly available within 36 months or return samples to the requisite core repository"

Return of sample material

DISCUSSION on Researcher Obligations – Return of sample material:
It is important for all returned samples to send them along with a description on how the samples were processed (U. Röhl). If a sample is returned a document needs to be completed describing how the sample was processed, stored and impacted, and therefore if

the sample can be still used (C. Neal). Sometimes it takes a very long time to process samples (D. Kroon). It can be added to the policy that in communication with the relevant curator an extension for the loaned samples may be allowed (C. Neal).

IODP Standard Confidentiality Policy

Issue: "all data files flagged hold will become publicly available when the proposal is scheduled" The term 'publicly available' is critical and needs to be changed to 'becomes available to the expedition' to conduct science and to publish the results. Proponents put the Site Characterization Data on hold because they do not want to share them. The Site Characterization Data need to be available on the ship in order to make drilling decisions. The proponents need to provide sufficient alternate sites and strategies in their proposal in order to increase the operational flexibility. A potential solution is that the Facility Board Chair includes in the letter to the proponents when an expedition is scheduled that all data will now be released to the Science Party and maybe included in the Proceedings and other publications when useful to provide context to the drilling site. In the letter the Facility Board Chair should underline the requirement that the proponents assemble and provide a minimum data package that could go out to the ship. Data are on hold and when an expedition is scheduled all data are released to the expedition. The consequences of not having all available data on the ship have to be made clear to the proponents in the letter by the Facility Board Chair.

DISCUSSION on IODP Standard Confidentiality Policy:

A letter to all proponents would be required (M. Malone).

D. Kroon asked if in the Facility Board Chair letter to the proponents it says that data which are going to be released to the shipboard party means for a couple of years and then they become available to the general public. For example, data collected with NSF funds are eventually going to be released, but German funding agencies do not obligate the release of the data, but they can stay with the Principal Investigator (H. Given). Data from all these sources are in the SSDB (H. Given). The data owners are informed that the price for scheduling their expedition is that the data are released for the use of this expedition including publications (H. Given).

(15:37)

coffee break

(16:03)

6. Review of MSP proposals @ EFB

Six MSP proposals that are currently at the ECORD Facility Board were reviewed and discussed: 1) #716 Hawaiian Drowned Reefs (Expedition 389); 2) #708 Arctic Ocean Paleoceanography (Expedition 377); 3) #813 Antarctic Cenozoic Paleoclimate (Expedition 373); 4) #730 Sabine Bank Sea Level; 5) #866 Japan Trench Paleoseismology (Expedition 386) and 6) #637 New England Shelf Hydrogeology.

6.1 Expedition 389 Hawaiian Drowned Reefs

6.1.1 Summary of objectives, SSD and previous EFB decision (G. Früh-Green)

(16:03)

G. Früh-Green summarized the scientific objectives, the drilling plan and the proposal history. Co-chief Scientists are Jody Webster and Christina Ravelo. Eleven primary sites and nine alternate sites were proposed. This proposal was submitted for the first time in 2007. A revised full proposal was submitted in 2008. In 2014 the proposal was reviewed by the EFB and placed in the EFB waiting room. In 2016 the proposal was ranked as a high-priority, mid-cost proposal. An addendum was submitted in early March, 2017. In the addendum, the proponents added new high-resolution multi-beam bathymetric data for some of the proposed sites, updated references specific to the four main scientific objects, and showed results of PROD drilling from NW Australia, to document the high quality of the recovered reef core. The PIs said that both MeBo200 and PROD have the capability to drill to the required depth (150 m; at 10 sites). The weather conditions and the presence of whales allow drilling only in March-April and September-October time windows. In 2018 the EFB scheduled the expedition for September-October 2019. In March 2019 the postponement was anounced.

6.1.2 Drilling operations and costs (D. McInroy)

(16:19)

P716 / X389 Hawaiian Drowned Reefs
Co-chief Scientists: Jody Webster and Christina Ravelo

Water depths:	134-1154 m	Timing:	Apr-May or Sep-Oct, year TBD
Penetration:	55-170 mbsf (4 are >= 120 mbsf)	Constraints:	Whale season, weather (swell)
Lithologies:	Carbonates, minor volcanics	Permitting:	US Federal and State
# of sites	11 primary, 9 alternate	IKC Potential	Research vessel, none arranged

The water depths range from 134 to 1154 m. Penetration depths are 55-170 mbsf with four holes at >= 120 mbsf. A geotechnical ship with coring rig, a research vessel as IKC with a seafloor drill or a hired vessel with a commercial seafloor drill could be used. The deepest proposed penetration is 170 mbsf. Seafloor drill limitations mean sites < 120 mbsf are now targeted. A geotechnical vessel is not recommended due to permitting

issues. Permitting work was well progressed for 2019 implementation. D. McInroy presented cost estimates for four different options.* ESO considered following rescheduling options: 1) 2020, before or after X386, is unlikely due to a possible timing overlap; 2) April-May 2021 before ArcOP, but an OSP 7-9 months after the offshore phase would be required; 3) 2022 is currently empty; and 4) April-May 2023 if there are no platform options for X373, or possibly September-October.

DISCUSSION on Expedition 389 'Hawaiian Drowned Reefs':
E. Thomas asked if the scientific objectives would have been met if the contractor would not have left negotiations. ESO was confident and the contractor had a good track record for these kind of lithologies (D. McInroy). What would be the time window for an implementation in 2022 (G. Uenzelmann-Neben)? Expedition 389 could be implemented in the April-May time window as X373 is planned for implementation in early 2023 (G. Uenzelmann-Neben). The beginning of Expedition 373 should be December 2022 (D. McInroy). K. Miller asked if the University of Hawaii was contacted for a vessel. Their vessel is not big enough to carry a seafloor drill (D. McInroy). The contractors need their flexibility so that they can explore several opportunities (D. McInroy). Is the cost estimate still realistic in two years (G. Lüniger)? Prices will increase as the market started to recover and the day rates will go up (D. McInroy). Maybe the initial bidder is interested in carrying out Expeditions 389 and 373. The seafloor drill could have been used in Hawaii and Antarctica, but the vessel from the initial bidder must have been changed (D. McInroy). These two expeditions could be implemented within one year using the same general technology and contractors could be more ready to sign up for two expeditions (D. McInroy). There is potential that the MeBo200 is available in 2022 and it will be tested in 2020 on carbonates during an expedition in the Indian Ocean (D. McInroy). A. Morris asked if staffing recommendations by ESSAC were passed to the Co-chief Scientists. D. McInroy confirmed that the nominations were forwarded to the Co-chief Scientists.

6.2 Expedition 377 Arctic Ocean Paleoceanography (ArcOP)

6.2.1 Summary of objectives, SSD and previous EFB decision (E. Thomas)

(16:37)

E. Thomas summarized the scientific objectives, the proposal history and the drilling plan. The overall goal is to recover a complete (composite) stratigraphic sedimentary record on the southern Lomonosov Ridge in order to reconstruct the Cenozoic climate history of the central Arctic Ocean. A secondary objective is to perform high-resolution studies of the Arctic climate (Pleistocene and Neogene).

SEP reviewed proposal 708-Full in January 2014. In March 2015 Expedition 377 was scheduled for summer 2018. In April 2016 seven alternate sites were added and the drilling strategy was discussed. The expedition was cancelled in September 2017. The

* See confidential annex.

RV Polarstern will implement an expedition in the ArcOP area from 5 September to 16 October 2018 to record new seismic lines and to perform piston-gravity coring down to 15 m. In November 2018 the expedition was rescheduled for late summer/early autumn 2021.

6.2.2 Drilling operations and costs (D. McInroy)

(16:52)

P708 / X377 Arctic Ocean Paleoceanography (ArcOP) Co-chief Scientists: Rüdiger Stein and Kristen St. John			
Water depths:	779 – 1458 m (priority sites)	Timing:	Aug – Oct 2021
Penetration:	250 - 970 mbsf (priority sites)	Constraints:	Minimum ice season
Lithologies:	Clay, ooze, siltstone, claystone, IRD	Permitting:	International waters
# of sites	2 primary, 9 alternate	IKC Potential	Icebreaker *Oden*, verbally committed

D. McInroy summarized the operational planning and the costs. Expedition 377 has to be a three/four-ship operation with at least one vessel as IKC. The water depths range from 779 to 1458 m at the two primary sites. The drilling plan includes two primary sites at 970 mbsf (LR-06A) and 250 mbsf (LR-02A). D. McInroy presented the cost estimate*. The costs assume the 2 x part hole strategy. Single hole options are available, but are scientifically not optimal. The *RV Oden* is provisionally booked, but costs need to be negotiated (no full IKC). AWI is not in the position to offer financial support to ArcOP.

DISCUSSION on Expedition 377 'Arctic Ocean Paleoceanography':

This expedition is an example for the high risk for planning MSP expeditions and a reasonable assumption would be to plan the worst-case scenario (J. Allan). J. Allan suggests that this is the highest priority MSP expedition and that it should be implemented. The other MSP expeditions will not deliver the science like ArcOP (J. Allan). It is important to mention that not all ECORD member countries have the same objectives and priorities (G. Camoin). ArcOP is not the highest priority for all ECORD countries (G. Früh-Green). One of the priorities based on 'Sea Change: Decadal Survey of Ocean Sciences' is to focus on science relative to society (J. Allan). The risk is not to get a complete section (K. Miller). Last year new seismic data were collected in the study region, but they are still being analyzed (G. Uenzelmann-Neben). The EFB will send a letter after this EFB meeting to the Co-chief Scientist and ask for a date when these new data would be available and send to SEP (G. Uenzelmann-Neben). SEP should have a look to the 2014 data (G. Uenzelmann-Neben). At least the optimum site has to be chosen (E. Thomas). The ECORD Council has to agree with the worst-case scenario concerning the expedition costs (G. Früh-Green). Somebody should contact again the Russians for an IKC as well as the Swedish (R. Gatliff). The role of ESO is to evaluate IKCs, but knowledge about funding in a country is required to

* See confidential annex.

stimulate IKCs (D. McInroy).

6.3 Expedition 373 Antarctic Cenozoic Paleoclimate

6.3.1 Summary of objectives, SSD and previous EFB decision (G. Lericolais)

(17:19)

G. Lericolais summarized the scientific objectives, the proposal history and the drilling plan.

6.3.2 Drilling operations and costs (D. McInroy)

(17:35)

P813 / X373 Antarctic Cenozoic Paleoclimate Co-chief Scientists: Trevor Williams and Carlota Escutia			
Water depths:	353 – 1407 m	Timing:	Dec 2022 – Feb 2023
Penetration:	Up to 16 x 50 mbsf	Constraints:	Minimum ice season
Lithologies:	Semi-lithified siltstone, mudstone, sandstone, conglomerate, lignite	Permitting:	Antarctic Treaty, UK FCO consulted
# of sites	16 primary, 47 alternate	IKC Potential	RSV *Nuyina*, not agreed

The water depths range from 353 to 1407 m. Penetration depths are 16 x 50 mbsf. D. McInroy presented cost estimates for three different options.* A 2018 contract notice exercise suggests that commercial vessel options are likely to be beyond budget. The *RVIB Nathaniel B. Palmer* would not be an IKC, but a contract arrangement. A promising option is the new Australian research and supply icebreaker *RSV Nuyina*. The first cruise will be in the 2020-2021 Antarctic summer season and the first science-dedicated cruises will be from 2021-2022. There are different options to get access to this vessel:

- The first option is to get ship time as an IKC, but the expedition will be treated as a research proposal, i.e. it needs to be competitively won. An Australian scientist is needed to lead the submission to the Australian Antarctic Division (AAD). However, indicative priorities for a 5-year science outlook do not include major marine paleoclimate work. A very strong application is needed and other science projects are needed who want to operate in ECORD's area of interest.
- ESO could hire the *RSV Nuyina*. The AAD likes this option, but acknowledges the limited ECORD budget. This option would offer the most flexibility and accomodation by the AAD. The costs are unknown.
- ESO could hire the *RSV Nuyina* at a reduced rate – the most promising lead. Negotiations are possible. More funding from ECORD would mean more influence on timing. The costs are unknown.

* See confidential annex.

The meeting was closed at 17:46.

March 22th, 2019

(9:03)
G. Uenzelmann-Neben opened the meeting.

6.4 730-Full2 Sabine Bank Sea Level

6.4.1 Summary of objectives, SSD and previous EFB decision (F. Wang)

(9:03)
F. Wang presented the scientific objectives, the drilling plan and the history of proposal #730. The pre-proposal was submitted in 2009 and the full proposal was submitted in 2014. This proposal was forwarded to the EFB in 2016 and since then it has been in the waiting room. It was ranked secondary priority for the sea-level studies (EFB consensus 16-06-03).

6.4.2 Drilling operations and costs (D. McInroy)

(9:43)

P730 Sabine Bank Sea Level
Lead proponent: Frederick Taylor

Water depths:	46 - 875 m	Timing:	October to December
Penetration:	6 x 80 mbsf	Constraints:	Weather (swell)
Lithologies:	Coral reefs and volcanic basement	Permitting:	Vanuatu EEZ
# of sites	6 primary, 5 alternate	IKC Potential	Research vessel, none arranged

The proposal was de-scoped in May 2017 to fewer, shallower holes, which has reduced the expedition duration. The water depths range from 46 to 875 m. Penetration depths were reduced from 11 times 150 mbsf to six times 80 mbsf. A geotechnical ship with coring rig, a research vessel as IKC with a seafloor drill or a hired vessel with a commercial seafloor drill could be used. The target depth of 80 mbsf is within the current reach of the MeBo70 and commercial systems. The weather window is from October to December. Concerning permitting, all sites are in the Vanuatu EEZ. D. McInroy presented cost estimates for four different options.*

* See confidential annex.

DISCUSSION on proposal 730 'Sabine Bank Sea Level':

The original proposal goes back to Marine Isotope Stage 11 and now the proposal is fundamentally different as it is restricted to MIS 7 and younger (K. Miller). The de-scoped proposal focuses only on Sabine Bank, but the Bougainville sites could be drilled with the JR (K. Miller). The proponents requested recovery below 80 mbsf and the question for SEP is if drilling below 80 mbsf is viable (K. Miller). The proponents now concentrate only on Sabine Bank and the question is if it is still the original proposal, i.e. the de-scoped proposal has to go back to SEP (G. Uenzelmann-Neben). Dropping half of the sites changes the scientific content of the proposal (E. Thomas). Not only the number of the sites changed, but also the target of the sites, i.e. as the proponents mentioned in their addendum no MIS beyond 7 will be reached (K. Miller). The Bougainville sites could be drilled at a later stage (J. Allan). The proponents considered this proposal as an MSP proposal because they are aware of the JR performance with drilling this kind of lithology with a typical recovery of less than 20% (M. Malone). G. Früh-Green asked if this expedition would provide the same information as Expedition 389 'Hawaiian Drowned Reefs' as Expedition 389 goes back until MIS 12 and the expedition based on proposal 730 would reach back until MIS 11. Basically this is the same kind of information, but the Hawaiian climatic record has expended sequences and would be more complete (G. Camoin). Both expeditions have similar objectives, but the Hawaiian record would be a bit more complete (E. Thomas). The tectonic history is different (E. Thomas). SEP could consider this proposal as a multi-platform proposal (G. Lericolais). In case there is a JR component, how many drilling days would be needed (G. Camoin)? The number of days, the expected recovery and the use of the JR have to be considered and evaluated (K. Miller). First, the proponent has to submit the proposal again (the addendum) and SEP will have a look at it and make a scientific decision in June (K. Miller).

ECORD FB Action Item 3: EFB
To ask SEP to review Proposal 730-Full2 'Sabine Bank Sea Level'.

ECORD FB Action Item 4: EFB
To send a letter to the proponent of Proposal 730-Full2 'Sabine Bank Sea Level' informing about the option of drilling the Bougainville sites with the *JOIDES Resolution* and asking them to submit an addendum until 1 May 2019.

6.5 Expedition 386 Japan Trench Paleoseismology

6.5.1 Summary of objectives, SSD and previous EFB decision (G. Uenzelmann-Neben)

(10:04)

G. Uenzelmann-Neben summarized the scientific objectives, the proposal history and the drilling plan. The main objective is to track past earthquakes in the sediment record along the Japan Trench. Proposal #866-Full2 was submitted for the October 2017 deadline, reviewed by SEP in January 2018 and then forwarded to the EFB.

6.5.2 Drilling operations and costs (D. McInroy)

(10:09)

P866 / X386 Japan Trench Paleoseismology
Co-chief Scientists: Michael Strasser & TBD

Water depths:	7250 – 8030 m	Timing:	March to early September
Penetration:	18 x 40 mbsf	Constraints:	Strong winds in autumn and winter
Lithologies:	Diatomaceous mud	Permitting:	Japan EEZ
# of sites	18 primary	IKC Potential	*Kaimei* & *Chikyu*, under discussion

The challenge is the ultra deep water (8 km). The water depths range from 7250 to 8030 m. Penetration depths are 18 times 40 mbsf. Co-chief scientists will be Michael Strasser and a Japanese scientist. The time window is from March to early September. Concerning permitting, all sites are in the Japan EEZ. D. McInroy presented the cost estimate*. Major expedition facilities are provided by combining IKCs from JAMSTEC with existing ESO facilities. This will be a joint JAMSTEC/CDEX-ECORD expedition. This collaboration allows operational knowledge exchange. The new Japanese vessel *R/V Kaimei* and the *D/V Chikyu* are discussed as potential IKCs. The *R/V Kaimei* is equipped with a 40 m-GPC-system and can operate in water depths of up to 12 km. There will be GPC trials in April (Nankai) and in May 2019 (Japan Trench). ESO/CDEX estimate that one day per core is a reasonable estimate at this time. The *R/V Kaimei* is fully occupied until March 2020. In May 2019 there will be a planning meeting for post-March 2020 operations. International use is considered as an important aspect for the next phase of *R/V Kaimei* operations. The *D/V Chikyu* is being proposed as the location for the OSP, as an alternative to the BCR. Elements exist for a summer 2020 expedition: the *R/V Kaimei* will be ready (pending ship time approval) and the *D/V Chikyu* will be just out of a dock period. To progress an agreement on the operational model and IKCs, ESO have produced a draft MoU and an accompanying Joint Operational Plan, which has been shared with the Japanese colleagues.

* See confidential annex.

6.6 637-Full2+Add6 New England Shelf Hydrogeology

6.6.1 Summary of objectives, SSD and previous EFB decision (Y. Yamada)

(10:20)

Y. Yamada summarized the scientific objectives, the proposal history and the drilling plan. Proposal #637-Full2 was submitted in April 2005. In March 2014 the EFB decided to keep the proposal in the waiting room because it was considered as too expensive to be implemented. In April 2015, the EFB reviewed the revised drilling plan and asked for further efforts and discussions between the PIs and ESO. In 2016, the EFB encouraged the proponents to reconsider various options and make it possible under the budgetary constrain. The proponents organized a workshop co-funded by USSSP and ICDP on 22-23 May 2017 to discuss the options and the achievable scientific objectives. The proponents collected marine electromagnetic and magnetotelluric data. They also completed a 3D fluid flow model based on the high-resolution seismic data. The proponents submitted an addendum to IODP in January 2018 to support the new drilling sites (and their number) and how they address the science objectives. Addendum 7 includes three sites with three holes (originally five sites with 15 holes). In 2019, the proponents submitted a full proposal to ICDP, as an amphibious drilling plan (1-2 onshore and 2-3 offshore wells). The proposal is in the EFB waiting room.

6.6.2 Drilling operations and costs (D. McInroy)

(10:30)

P637 New England Shelf Hydrogeology
Lead proponents: Brandon Dugan and Mark Person

Water depths:	33 – 79 m	Timing:	March - August
Penetration:	3 x 550 mbsf (1 hole at each site(	Constraints:	Avoid hurricanes and winter storms
Lithologies:	Sands, silts and clays.	Permitting:	US Federal and State
# of sites	3 primary, 1 alternate	IKC Potential	None identified to date

In fall 2017 the proponents submitted an addendum as a result of a workshop, which was held in May 2017. They reduced the number of sites from five to three at water depths of 33-79 m and penetration depths of down to 550 mbsf at each of the three sites. A geotechnical vessel or a large liftboat could be used. The descoped proposal with fewer, shallower holes and wireline logging offers a significant cost reduction compared to past versions of the proposal. The proponents still desire casing, packing and pumping. D. McInroy presented the cost estimate assuming three holes with wireline logging.* A windfarm is going to be developed in this region. The Environmental Impact Assessment decision is expected in April 2019 and the construction will continue until March 2020. There is no spatial overlap between the construction of the windfarm and

* See confidential annex.

the New England IODP expedition. There is also no temporal overlap, so there is no opportunity to take advantage of any geotechnical vessels that might already be in the working area.

DISCUSSION on proposal 637 'New England Shelf Hydrogeology':
During the 2017 workshop, the proposal was descoped to three sites and there was also a discussion on descoping it to two sites and using an ICDP site. What would be the costs for drilling only two sites (K. Miller)? This would not change the mobilisation costs (D. McInroy). A cheaper vessel with less scientists onboard would reduce the operational costs (D. Smith). The presented estimate also includes costs for a hazard site survey, which has to be done when using a lift-boat, this survey could have a potential for an IKC (D. McInroy). Woodshole is close by from a site survey perspective (D. Smith). A proposal would be needed (J.Allan). Overall, the geotechnical vessel option would be at the same rates for the size of vessel that is needed (D. McInroy). At the moment ESO does not want to dismiss the geotechnical ship as there are pros and cons for both types of platforms (D. Smith). A more powerful system would have better chances to achieve the goals (D. Smith).

(10:40)
coffee break
(11:00)

(11:00)

SCIENCE TALK: *New Caledonia Peridotite Amphibious Drilling Project* (M. Godard)

(11:26)

DISCUSSION on the New Caledonia Peridotite Amphibious Drilling Project:
If this would be an IODP proposal, the cores would go to the Kochi Core Center (C. Neal). It is unclear what would happen to the ICDP cores (M. Godard). Usually, ICDP cores stay in the country where they were drilled (G. Camoin). It would be very helpful if IODP accepts to curate all IODP and ICDP cores (M. Godard). ICDP clearly stated that it depends on the country where the ICDP cores would go, i.e. some countries allow the cores to be stored in an IODP repository, but other countries would not allow the cores leaving their country (G. Camoin). This issue should be discussed with the New Caledonian government. Some ICDP cores are stored in IODP facilities (J. Allan). JR cores are owned by the U.S. government and there will not be any negotiations as these cores have to be stored at the KCC (J. Allan). The same is valid for MSP cores, they have to be stored at the KCC. It is very important to have a consistency in the core description (J. Allan). The Oman Drilling Project gives an example

on how to process (J. Allan). M. Godard asked if the ICDP cores could be described also on the Chikyu or the JR. Potentially, the cores could be described on the JR depending on the JR schedule (J. Allan). The cores can be also described on land (J. Allan). As there are three components (JR, MSP, ICDP), J. Allan suggests to develop three well defined proposals and an umbrella proposal as this is complex drilling. In this case, the evaluation would be simpler (J. Allan). A workshop is needed to figure out the common ways to use common terminology for the description (J. Allan). G. Camoin asked if environmental issues concerning the drilling were considered. A workshop is needed to discuss the permitting issues and the New Caledonian colleagues are working on this issue (M. Godard). The working half of the core could go to the KCC and the archiving half could stay in the country (K. Miller). This happened during the Oman Drilling Project: the working half went to an IODP repository and the archiving half stayed in Oman (M. Godard).

7. Discussion of the FY 2019-23 MSP operation schedule (G. Uenzelmann-Neben/All)

(11:43)

CLOSED SESSION of EFB members and the ECORD Vision Task Force

(12:45)

ECORD FB Consensus 19-03-02:
The ECORD Facility Board supports the scheduling of Expedition 377 'Arctic Paleoceanography' in FY21, provided that the operational budget does not exceed 22M USD, as approved by the ECORD Council. The most recent cost estimates provided by ESO significantly exceed this figure. Thus, the EFB instructs the ECORD Vision Task Force (EVTF) to attempt to secure IKCs or additional cash contributions before 30 September 2019, as a final decision concerning the implementation of this expedition in FY21 must be taken at the Fall Council-ESSAC meeting.

ECORD FB Consensus 19-03-03:
The ECORD Facility Board tasks ESO to scope an expedition based on Proposal 637 'New England Shelf Hydrogeology', which could be scheduled in FY21 in case Expedition 377 'Arctic Paleoceanography' cannot be implemented.

ECORD FB Action Item 5: ECORD Vision Task Force
To identify potential IKCs or additional cash contributions for Expedition 377 'Arctic Paleoceanography', an expedition based on Proposal 637 'New England Shelf Hydrogeology', Expedition 389 'Hawaiian Drowned Reefs' and Expedition 373 'Antarctic Cenozoic Paleoclimate'.

(12:45)
lunch break
(13:50)

(13:50)
Breakout meeting of the EFB Science Board members.
(14:12)

8. Post-2023 multi-platform approach

8.1 MSPs: review of achievements and future developments (R. Gatliff/D. McInroy/D. Smith)

(14:12)
R. Gatliff reviewed the MSP achievements: 1) platform achievements (access to new geographical areas); 2) coring achievements (improved recovery in challenging lithologies) and 3) methods achievements (alternative equipment and approaches). All these achievements lead to new scientific achievements. MSPs have no fixed infrastrucure, they allow access to current capabilities and they allow tailored operational setups. Therefore, MSPs can operate in moving ice, in shallow water and they can overcome physical barriers (bridges). ECORD also operates in protected and environmentally sensitive areas, e.g. ECORD got the permit to drill the Great Barrier Reef. ECORD designed and built IODP platforms on diverse vessels and deployed shore-based mining exploration technology offshore (e.g. Expeditions 313 and 364). ECORD introduced alternative coring methods, such as gravity cores, seafloor drills, borehole plugs, tracer injection, water collection on drills and borehole fluid chemistry sensors, the *Fugro* SeaDevil seabed template and Giant Piston Coring. New methods and approaches include, for example, rhizon pore water sampling, super slimline logging tools, a microbiology container on Expedition 347, full 3D CT scanning of all Expedition 364 cores. Non-destructive XRF core scanning data were collected post-OSP as expedition data for Expedition 381.

Forward look: More collaboration between platforms would be desirable with themed series of expeditions. Drilling should be broadened with multidisciplinary work (ecosystems, oceanography) and thus maximising the use of platforms. Focus should be more on sustainable challenges (freshwater, marine minerals) and finding solutions to major global problems with a broader science and engineering approach (sea-level rise and coastal change, seismology experiments). ESO can collaborate with other platforms (Japan Trench Expedition) and partners and take opportunities for multi-platform and multi-expedition themed projects (e.g. the New Caledonian ADP project). ESO has the ability to charter a wide range of plaforms and to set up longer-term contracts with

preferred ship/drilling operators. ECORD cannot only do what the other two IODP platforms cannot do. ECORD can get science done quickly by working together with other partners, e.g. expeditions can be implemented that are not on the JR ship track. ECORD budgets have not risen. New partners could get involved and a more global approach to MSPs can be taken. In the future, the IKCs need to be further increased. Member contributions could be increased for specific geographical or scientific reasons. The ICDP funding model, i.e. co-funding from the proponents/Co-chief Scientists, should be considered. A new operational model may include new platform operators, new locations for OSPs and back-to-back expeditions (as mobilization is expensive). Smaller OSPs provide a greater opportunity to select smaller and cheaper platforms. In this case, there might be discounted rates with flexible timing and expeditions could be implemented on a shorter notice. More, high-quality applications are needed as more choice leads to a better programme. A 5-year planned MSP programme may inhibit new ideas and reduces flexibility. The forward planned schedule needs to be limited to encourage submission of new proposals. In the future, IKCs need to be maximised. Long-term contracts for two or three projects by specific platforms are desirable.

COMMENT by G. Camoin:
ECORD explored new geographical areas and new drilling environments, but in addition new science communities were attracted to the programme.

8.2 PROCEED Workshop (R. Coggon)

(14:36)

R. Coggon summarized the planning and preparation for the PROCEED – Ex**p**anding F**ro**ntiers of S**cie**ntific Oc**e**an **D**rilling – workshop. ECORD decided to organise a two-day workshop with the aim to initiate concepts and to define new goals for a future international scientific ocean drilling programme beyond 2023. This workshop will held on 6-7 April 2019 prior to the EGU at the Austrian Academy of Sciences in Vienna. The scientific and the organising committee are composed of 17 and 7 members, respectively. For further information see http://www.ecord.org/science/proceed/. A PROCEED planning meeting was held on 26 November 2018 at the Royal Astronomical Society in London. The focus during the first day of the workshop is on science, including four talks on one of the four IODP Science Themes each, followed by breakout group discussions. At the end of the first day a plenary session will be held on future platforms, technology opportunities and IODP management as an introduction to the second day of the workshop. The second day of the workshop will focus on technology and innovations (platforms, collaboration with other programmes, new science themes, new challenges). For the panel session on the second day representatives from ICDP, IPCC, JPI Oceans, research on minerals and resources and hydrocarbon exploration were invited. A pre-workshop survey was set up. First, basic information is collected (career level, sailed on an IODP Expedition, contributed as IODP proponent or served on an IODP panel). Then,

it was asked if the current Science Plan is still appropriate to guide scientific ocean srilling beyond 2023. Further questions included ideas on new scientific challenges, new drilling infrastructure, the need of the three IODP platforms, improvements in IODP management and operations. The PROCEED committees will produce a White Paper to summarize the scientific, technological and programmatic goals for ECORD beyond 2023.

8.3 US Platform Provider: review of achievements and future developments (C. Neal/M. Malone)

(14:51)

DISCUSSION on the U.S. Platform Provider:

Statement by C. Neal: The new riserless drilling vessel is meant to be the workhorse of a future programme, i.e. it will follow a ship track and it will have improved capability. Lab space may increase by up to 30% and the same number of scientists could sail. This vessel will be more expensive to run. If there will not be a new U.S. drill ship, the environmental certification of the JR will expire in 2028, i.e. there will not be an U.S. platform at this time. The community is working with NSF to look for possibilities replacing the JR. The lifetime of the JR successor will be multi-decadal and the new vessel will have capabilities to enhance core recovery and drilling depth, and it will transit faster. The new vessel would maximize science through efficiency. The proportional cost increase would be borne by everybody (the U.S. and all the partners). The contributions will not increase in a percentage-way, but in an absolute way proportionally to what is being paid right now to cover the day rate. Day rates would also increase when keeping the JR (insurance). The aim is to bring in new members and to have a multi-platform programme in the future.

Statement by J. Allan: NSF is delighted about the strong bottom-up activity by the science community. The authorisation for five more years of JR operation was just received. The day rate is defined through FY23. For the fifth year, FY24, the day rate is not defined and will hopefully increase only modestly. Day rates on the JR will increase as it is an aging vessel. An effective Science Plan is important and NSF will assess it with advice of the community. Anything beyond FY24, there would be an expectation from NSF that a similar contribution in percentage would be given by its partners. This is one of the requirements for moving forward. Options should not been cut off prematurily and one of the options is the opportunity to run the JR. The environmental impact statement allows to run the JR until 2028. A ship operator cannot build a ship with a guarantee of only five years of operation, i.e. a 10-years award with a deep mid-award review is needed. NSF needs to assess the Science Plan and insurances from the partners that they are willing to contribute are needed. The planning workshops should focus on science.

D. Smith asked about the date when the decision on a new U.S. vessel has to be done. Going back in the history of scientific ocean drilling, when the Glomar Challenger needed to be replaced there were two failed programmes (J. Allan). There was a two-year gap in operation. A gap of a few years is possible and the JR could be operated if no gap is desired (A. Allan). NSF has now a new management structure, which adds complexity (J. Allan). A Science Plan draft is needed by the end of 2020 as a basis on which to judge (J. Allan). If a decision to build a new U.S. vessel has to be done in 2020, at this time it cannot be expected from the U.S. partners to take a decision on post-2023 funding (G. Camoin). There has to be solicitation and competition (J. Allan). A decision by the U.S. partners concerning post-2023 funding cannot be expected before 2022 (G. Camoin). NSF has to conduct its own assessment with a series of steps (J. Allan). A case has to be made for a solicitation (J. Allan). This is a bottom-up approach, JRSO is exploring possibilities and NSF gets the options (C. Neal). NSF cannot do anything without a new Science Plan and the timeline on this Science Plan becomes critical in order to minimize the delay in getting a new platform (C. Neal). NSF needs quickly a new Science Plan to plan beyond 2023 and to avoid a gap at the end of the current programme (C. Neal). The current science themes are good, but maybe the challenges need to be revised (C. Neal). There should be cross-cutting themes and new communities could be brought in (C. Neal).

8.4 NEXT Workshop (C. Brenner)

(15:15)

The NEXT workshop on planning a scientific ocean drilling programme beyond 2023 will be held on 6-7 May 2019 in Denver. The planning for the future must begin now. The IODP Forum is prepared to aggregate outcomes and recommendations from the individual PMO workshops on the future of scientific ocean drilling. The U.S. has developed a bottom-up Steering Committee (SOD23+). The primary objectives are 1) to update, if necessary, the existing scientific challenges and to identify new challenges to be included in a post-2023 Science Plan; and 2) to identify and prioritize the required technologies and platform needs to enable the scientific ocean drilling research community to address those challenges in a new ocean drilling programme. The new U.S. platform should be global-ranging, host 30+ science berths, have a higher core recovery, a faster pipe tripping, increased transit speeds, improved operations in difficult environments and be energy efficient. The U.S. application deadline period for the NEXT workshop closed on 15 February. Researchers can continue to contribute input by completing an application and answering three questions concerning the current Science Plan challenges, new scientific challenges and technology needed on a new U.S. riserless drilling vessel. The anticipated attendance is 140-145 with about 115 U.S. participants. Three pre-meeting webinars will be held. Broadcasting of the breakout sessions and possibly the plenary sessions is planned. During the first day of the workshop the new ship design will be reviewed, reports from previous IODP planning workshops will be presented and there will be breakout sessions on new science

challenges. The second day includes breakout sessions on technology and platform needs and a plenary session to review the breakout sessions for both science and technology/platform needs. The third day will focus on report writing.

8.5 Japan Platform Provider: review of achievements and future developments (T. Watanabe/N. Eguchi)

(15:29)

N. Eguchi summarized the *Chikyu* Expeditions from 2007 to 2018. Overall, 18 expeditions were implemented during this time period (of those 13 NanTroSEIZE operations). Four expeditions were implemented within the current programme.

T. Watanabe summarized the JAMSTEC budget allocation since FY11 and the Japanese Renewal Plan.

JAMSTEC budget allocation: The annual JAMSTEC budget was slightly decreasing since 2011, but remained stable over the past three years. For FY19 a budget appropriation of 102% of the FY18 budget was requested.

Renewal process in Japan: In May 2018 the Basic Plan on Ocean Policy of Japan was adopted by the cabinet members and entered the 3rd term (2018-2023). Mantle drilling in the future and international collaboration through Japan's participation in IODP are important. Taking into account the 3rd Basic Plan on Ocean Policy of Japan (2018-2023), the JAMSTEC mid-term Objectives and Activities Plan was revised for seven years (April 2019 – March 2026) and will be approved soon. J-DESC is in a streamlining process and restarted in October 2018 under new executives. A workshop 'Beyond 2023' will be organised in April 2019.

8.6 J-DESC Workshop 'Scientific Ocean Drilling beyond 2023' (N. Eguchi)

(15:38)

The J-DESC workshop on scientific ocean drilling beyond 2023 will be held on 2-3 April 2019 at the JAMSTEC Yokohama Insitute. This workshop will 1) support and encourage discussion regarding new ideas about scientific goals, key concepts, and potential projects for a future international scientific drilling program; 2) examine potential problems and pitfalls; and 3) create consensus for suggestions for a new Science Plan beyond 2023. Special emphasis will be on linkage and cooperation with ICDP, interdisciplinary fusion and the effective use of the *Chikyu* and the proper role of the Japanese science community. About 100 participants of those 26 students and post-doc scientists will attend this workshop. During the first day four breakout sessions on one of the four IODP Science Themes each will be organised. On the second day a

plenary session on new methods and technologies, breakout sessions on interdisciplinary fusion and a plenary session on a new Science Plan will be organised.

8.7 ANZIC Ocean Planet Workshop (S. Gallagher)

(15:45)
S. Gallagher summarized ANZIC activitites. The new ANZIC secretary is Kelly Kenney.

ANZIC Roadshow 2019:
L. Armand gave presentations to the current 16 universities and four government reasearch agencies as well as two new, interested universities in Australaia. The new ECORD image video was used for the ANZIC roadshow and very well received.

ANZIC Renewal Strategy post 2020:
ANZIC's funding is set to end at the end of 2020 and IODP's Strategic Science Plan needs renewal for post 2024. Renewal activities are underway. In May 2019 there will be the Australian Government election. In July 2019 the funding requests have to be submitted to the Government Department with the aim for full member subscription.

ANZIC Ocean Planet 2019:
The ANZIC Ocean Planet will be held on 14-16 April 2019 at the Australian National University in Canberra with the aim of developing the new IODP Strategic Plan 2024-2034. Seventy participants registered up to date. The deadline for registrations is 25 March 2019. Day 1 is the early-mid career researcher day. An introduction and context setting will be done on the second day with the whole community and all institutions. On the third day the science themes and the challenges will be discussed. An ANZIC community White Paper will be produced for inclusion in the IODP strategic planning workshop in early 2020.

9. Procedures and issues regarding EFB activities and MSP operations

9.1 Policy regarding IKCs for MSP expeditions (D. McInroy/G. Uenzelmann-Neben)

9.2 Policy regarding CPPs for MSP expeditions (D. McInroy/G. Uenzelmann-Neben)

This agenda item was already addressed under agenda item 7.

10. Next EFB meeting (G. Uenzelmann-Neben)

(15:49)

ECORD FB Consensus 19-03-04:
The next ECORD Facility Board meeting will be held on 24 and 25 March 2020 in Aix-en-Provence, France.

11. Review of Decisions and Actions (N. Hallmann/G. Uenzelmann-Neben/All)

(15:57)

G. Uenzelmann-Neben presented the action and consensus items.

12. Any other business (G.Uenzelmann-Neben)

(16:01)

Suggestions and ideas concerning potential strategies to stimulate the submission of MSP proposals can be send to G. Uenzelmann-Neben.

ECORD FB Consensus 19-03-05:
ECORD warmly thanks our hosts, Ulla Röhl and Patrizia Geprägs, for the perfect organisation of the ECORD FB Meeting #7.

G. Uenzelmann-Neben closed the meeting at 16:02.

LIST OF ACRONYMS

AAD: Australian Antarctic Division
ADP: Amphibious Drilling Proposal
AGU: American Geophysical Union
ANU: Australian National University
ANZIC: Australian and New Zealand IODP Consortium
APL: Ancillary Project Letter
ArcOP: Arctic Ocean Paleoceanography, IODP Expedition 377
AWI: Alfred Wegener Institute, Helmholtz Centre for Polar and Marine Research, Bremerhaven, Germany
BCR: Bremen Core Repository
BF: Biosphere Frontiers – IODP Science Theme
BGS: British Geological Survey
CDEX: Center for Deep Earth Exploration
CIB: *Chikyu* IODP Board
CNRS: Centre National de la Recherche Scientifique - National Center for Scientific Research, France
CO: Climate and Ocean Change – IODP Science Theme
COI: Conflict of Interest
CPP: Complementary Project Proposal
CRISP: Costa Rica Seismogenesis Project
CT: Computed Tomography
DFG: Deutsche Forschungsgemeinschaft - German Research Foundation
DIS: Drilling Information System
DLP: Distinguished Lecturer Programme
DSDP: Deep Sea Drilling Project
EC: Earth Connections – IODP Science Theme
ECORD: European Consortium for Ocean Research Drilling
EEZ: Exclusive Economic Zone
EFB: ECORD Facility Board
EGU: European Geosciences Union
EM: Earth in Motion – IODP Science Theme
EMA: ECORD Managing Agency
EPC: European Petrophysics Consortium
EPSP: Environmental Protection and Safety Panel
ESO: ECORD Science Operator
ESSAC: ECORD Science Support and Advisory Committee
EVTF: ECORD Vision Task Force
FB: Facility Board
FCO: Foreign and Commonwealth Office
FY: Fiscal Year
GFZ: GeoForschungsZentrum - German Research Centre for Geosciences, Potsdam, Germany
GPC: Giant Piston Corer
IBM: Izu-Bonin-Mariana
ICDP: International Continental Scientific Drilling Program
ICP: International Conference on Paleoceanography
IKC: In-kind contribution
IODP: Integrated Ocean Drilling Program (2003-2013) & International Ocean Discovery Program (2013-2023)
IPCC: Intergovernmental Panel on Climate Change
ISOLAT: Integrated Southern Ocean Latitudinal Transect
JAMSTEC: Japan Agency for Marine Earth Science and Technology
J-DESC : Japan Drilling Earth Science Consortium
JOIDES: Joint Oceanographic Institutions for Deep Earth Sampling
JPI Oceans: Joint Programming Initiative Healthy and Productive Seas and Oceans
JR: *JOIDES Resolution*
JRFB: *JOIDES Resolution* Facility Board
JRSO: *JOIDES Resolution* Science Operator
KCC: Kochi Core Center
Mare^3: Marine-Earth Exploration and Engineering Division
MARUM: Zentrum für Marine Umweltwissenschaften der Universität Bremen - Center for Marine Environmental Sciences, University of Bremen
mbsf: metres below seafloor
MDP: Multi-phase Drilling Project
MeBo: Meeresboden-Bohrgerät
MEXT: Ministry of Education, Culture, Sports, Science & Technology, Japan
MIS: Marine Isotope Stage
MoU: Memorandum of Understanding
MSCL: Multi-Sensor Core Logger
MSP: Mission-specific platform
NanTroSEIZE: Nankai Trough SEIsmogenic Zone Experiment
NSF: National Science Foundation
ODP: Ocean Drilling Program
OSP: Onshore Science Party
PI: Principal Investigator
PMO: Program Member Office

PROCEED: Expanding Frontiers of Scientific Ocean Drilling
PROD: Portable Remotely Operated Drill
QA/QC: Quality Assurance/Quality Control
SEP: Science Evaluation Panel
SIO: Scripps Institution of Oceanography
SOD: Scientific Ocean Drilling
SSD: Site Survey Data
SSDB: Site Survey Data Bank
SSO: Science Support Office
USSSP: U. S. Science Support Program
XRF: X-Ray Fluorescence