

EPSP 2102 Meeting Minutes

Meeting Introduction

Meeting called to order on February 23, 2021, at 10:02 via zoom by Chair Barry Katz.

Self introductions were conducted.

Members of the panel present - Earl Doyle, Brandon Dugan, Toby Harrold, Lisa Hawkins, Martin Hovland, Barry Katz (Chair), Philippe Lapointe, Jacek Lupa, Jino Park, Ingo Pecher, Donald Potts, Dieter Strack, Jiangong Wei, Sun Zhen

Liaisons and proponents present - James Allan, Peter Blum, Stefan Bunz, Laurel Childress, Gail Christeson, Dru Clark, Brad Clement, Neal DeSilva, Ferran Estrada, Rachel Flecker, Kevin Grigar, Javier Hernandez-Molina, Tobias Hoefig, Leah Levay, Filomena Loreto, Renata G. Lucchi, Mitch Malone, Andrew McCaig, Tim McHargue, Charna Meth, Clive Neal, Katerina Petronotis, Cesar Ranero, Brittany Stockmaster, Trevor Williams, Michiko Yamamoto, Alan Yang, and Nevio Zitellini.

Dru Clark presented an overview Zoom tools that will be available to meeting participants.

Prior meeting minutes were approved as modified. Latitude and longitude positions were corrected as reported by JRSO. (Shot point positions had incorrect latitude and longitudes assigned.)

Barry Katz reminded all that the purpose of a preview is to identify potential issues with sites and the presentation material that should be resolved prior to the final review. Participants were also advised that during the reviews the panel options are: 1- recommend approval as requested; 2- recommend approval with depth modification; and 3- decline. The panel if not being able to approve at a requested location may suggest an alternate location.

Proposals Reviewed

IODP ID	Short Title	Submitted	Summary Result
937-SRR	Deepening Hole U1309D	2021-01-17 08:39:41	Reviewed; changes requested
985-SRR	Eastern Fram Strait Paleo Archive	2021-01-21 16:30:17	Reviewed; changes requested
927-SRR	Tyrrhenian Continent-Ocean Transition	2021-01-22 07:26:09	Reviewed; changes requested
895-SRR	Mediterranean-Atlantic Gateway Exchange	2021-01-20 13:13:49	Reviewed; changes requested

Summary Remarks

Mitch Malone updated the panel on key issues associated with JR operations since the panel last met. A number of mechanical, COVID-related activities, and problems with obtaining Brazilian permits, resulted in multiple changes to the JR's schedule. Furthermore, science travel was not permitted. Operational progress was made where the ship could operate (international waters) without science parties onboard. The program includes Expedition 384 where three drilling bits were tested for hard rock drilling. No game changers were identified. Expedition 390C also sailed with objective to occupy sites to install reentry systems. Installation was completed at 3 of the 6 sites.

A discussion once again was held on the nature of the presentations. Improvements were noted but there were still issues identified. Vertical exaggeration and the limited length of the seismic presented were problematic. The panel decided that previews of the safety package will be requested.

The following timeline for the next EPSP Meeting was decided on. The selection of proposals to be reviewed or previewed will be made so that notification of participation will be made in Early to Mid-August. Proponents will provide preview packages by early December. The EPSP Chair will ask from members of the panel to review the material. EPSP will meet in College Station, February 22-23 (24).

The meeting was adjourned at 13:30 On February 25, 2021.

EPSP Proposal Summary

Proposal Review

Deepening Hole U1309D - Review - Donna Blackman presented an overview of prior IODP work, the planned program, and the proposal's objectives. The plan included the deepening of Site U1309D by about 600 meters to temperatures approaching 200 C. The second primary site will have a reentry cone set. The primary objective of the proposal is to examine the role of processes at the Mid-Atlantic Ridge (e.g., hydrothermal circulation, serpentinization) that may influence the formation of prebiotic chemistry and their potential impact on the formation of reaction porosity. This will be accomplished, in part, through the sampling of downhole fluids. The program will also provide an opportunity to test drilling and logging capabilities at temperatures beyond that of "standard" hard rock drilling. And finally, the program will provide an opportunity to compare the processes and structure of the Southern Ridge and Central Dome. A site by site discussion was conducted.

Proposed Sites

Site Name	Position (Lat, Lon)	Water Depth (m)	Requested Drilling Depth (m)	Approved Depth (m)	EPSP Decision	Remarks
AMDH-01A (Primary)	30.1687 -42.1186	1656	660	2100	Approved	Discretion of the shipboard party to deepen the hole if time is available.
AMDH-02A (Primary)	30.1317 -42.1202	825	203	800	Approved	Discretion of the shipboard party to deepen the hole if time is available.
AMDH-03A (Alternate)	30.1389 -42.1455	1275	205	800	Approved	Discretion of the shipboard party to deepen the hole if time is available.

New Sites

Site Name	Position (Lat, Lon)	Water Depth (m)	Requested Drilling Depth (m)	Approved Depth (m)	EPSP Decision	Remarks
AMDH-04A-new (Alternate)	30.1389 -42.1455	1275	205	205	Approved	Discretion of the shipboard party to deepen the hole if time is available. Vertices of the approved polygon are required. Drilling approved within region bounded by: (northern latitude), (southern latitude), (eastern longitude), (western longitude).

Additional Remarks (optional)

All sites can be deepened further into basement without requesting further approval from EPSP.
Proponents will need to provide the vertices of the polygon approved by the panel for site AMDH-04A-new.

EPSP Proposal Summary

Proposal Review

Eastern Fram Strait Paleo-archive - Preview - Renala Lucchi and Stefan Buenz provided a science overview, including the proposal's objectives and a site-by-site review. The objective of the proposal is the reconstruction of the West Spitsbergen Current and its influence on climate changes, particularly during periods of climate transitions, including glaciation and episodes of sea ice. Fundamental is the question, was the West Spitsbergen Current the main factor for initiating glaciation and controlling heat and salt transport. This would be accomplished by high resolution sampling of a number of sediment drifts. Another objective is how large-scale environmental changes may have influenced microbial populations.

Proposed Sites

Site Name	Position (Lat, Lon)	Water Depth (m)	Requested Drilling Depth (m)	Approved Depth (m)	EPSP Decision	Remarks
BED-01A (Primary)	76.521597 12.738673	1647	397		Other	
BED-02A (Alternate)	76.5290 12.5522	1805	365		Other	
ISD-02A (Alternate)	77.52639 9.82167	1665	381		Other	
ISD-03A (Alternate)	77.497322 9.702931	1734	387		Other	
ISD-04A (Alternate)	77.531608 9.603071	1713	402		Other	Consider relocation to shot point 4551 on Line CAGE20_15.
VRE-01B (Alternate)	79.03208272 7.057734589	1293	618		Other	
VRE-03A (Primary)	78.94844856 7.473105204	1201	738		Other	
VRE-04A (Alternate)	78.99280404 7.275998559	1252	730		Other	Consider locating to CDP 7937 on Line CAGE20-5-HH-01-2D.
VRW-02B (Alternate)	79.15870357 4.621647776	1607	677		Other	
VRW-03A (Primary)	79.15984991 4.488738388	1681	696		Other	Needs to be relocated taking into consideration the distribution of hydrates and possible gas indicators.
VRW-04A (Alternate)	79.15592813 4.49752965	1690	740		Other	Should be relocated to avoid fault zones and up-dip pinch-outs.
VRW-05A (Alternate)	79.14326611 4.729996632	1621	669		Other	

EPSP Proposal Summary

Additional Remarks (optional)

Vertical exaggeration was problematic in the presentation material. Better images were observed when using the live seismic project.

In general, the panel requests that the proponents reexamine site locations. Proponents should take into consideration the distribution of hydrates and possible gas accumulations. Furthermore, faults and up-dip pinch-outs should be avoided.

EPSP Proposal Summary

Proposal Review

Tyrrhenian Magmatism and Mantle Exhumation - Review - Nevio Zitellini and Cesar Ranero presented the scientific overview and site-by-site review. The objective of the program is to examine the evolution of the continent-ocean transition (COT) from breakup to mantle exhumation through time and space. Specifically, the drilling program will provide information on: 1- the kinematics of deformation; 2- heterogeneity of the mantle source and the origin of associated magmatism; 3- establish deformation patterns and timing of mantle exhumation; 4- character of rock-fluid interactions within the peridotite basement; and 5- test the different rifting and COT formation models.

Proposed Sites

Site Name	Position (Lat, Lon)	Water Depth (m)	Requested Drilling Depth (m)	Approved Depth (m)	EPSP Decision	Remarks
TYR-01A (Alternate)	40.00085 10.994272	2675	234	234	Approved	Discretion of the shipboard party to deepen the hole if time is available.
TYR-02A (Primary)	40.00036 13.407784	2813	632	632	Approved	Discretion of the shipboard party to deepen the hole if time is available.
TYR-03A (Alternate)	40.18388 12.6413	3533	360	360	Approved	Discretion of the shipboard party to deepen the hole if time is available.
TYR-04A (Alternate)	40.18402 12.72801	3546	548	438	Approved	Discretion of the shipboard party to deepen the hole if time is available.
TYR-05A (Alternate)	40.26609 12.69432	3530	228	228	Approved	Can be deepende. Less than 100 meters of sediment at crest of feature.
TYR-06A (Alternate)	40.41593 12.72474	3592	628		Declined	
TYR-07A (Primary)	40.00097 10.98622	2700	265	265	Approved	Discretion of the shipboard party to deepen the hole if time is available.
TYR-08A (Alternate)	40.00036 13.400467	2837	752	752	Approved	Discretion of the shipboard party to deepen the hole if time is available.
TYR-09A (Primary)	40.18388 12.63243	3533	418	418	Approved	Discretion of the shipboard party to deepen the hole if time is available.
TYR-10A (Primary)	40.18398 12.70826	3544	435	435	Approved	Discretion of the shipboard party to deepen the hole if time is available.
TYR-11A (Primary)	40.26614 12.70529	3538	342	342	Approved	Discretion of the shipboard party to deepen the hole if time is available.
TYR-12A (Primary)	40.4159 12.7076	3590	723	723	Approved	Discretion of the shipboard party to deepen the hole if time is available.

EPSP Proposal Summary

Proposed Sites - Continued

Site Name	Position (Lat, Lon)	Water Depth (m)	Requested Drilling Depth (m)	Approved Depth (m)	EPSP Decision	Remarks
TYR-13A (Alternate)	40.00102 10.94422	2696	301	1277	Approved (to revised location)	Move on MEDOC 6 to CDP48400
TYR-14A (Alternate)	39.71273 13.31500	3381	566	566	Approved	Discretion of the shipboard party to deepen the hole if time is available.
TYR-15A (Alternate)	40.18420 12.56710	3600	291	291	Approved	Discretion of the shipboard party to deepen the hole if time is available.
TYR-16A (Alternate)	40.18387 12.67717	3578	341	341	Approved	Discretion of the shipboard party to deepen the hole if time is available.
TYR-17A (Alternate)	40.33121 12.67304	3600	681	602	Approved	Discretion of the shipboard party to deepen the hole if time is available.
TYR-18A (Alternate)	40.41600 12.74424	3600	691	691	Approved	Discretion of the shipboard party to deepen the hole if time is available.
TYR-19A (Alternate)	40.38562 12.74428	3601	1285	1133	Approved	Discretion of the shipboard party to deepen the hole if time is available.
TYR-20A (Alternate)	39.999778 13.5958344	2698	470	470	Approved	Discretion of the shipboard party to deepen the hole if time is available.
TYR-21A (Alternate)	40.0011633 11.6250879	3366	520	339	Approved	Discretion of the shipboard party to deepen the hole if time is available.

New Sites

Site Name	Position (Lat, Lon)	Water Depth (m)	Requested Drilling Depth (m)	Approved Depth (m)	EPSP Decision	Remarks
TYR-13B-new (Alternate)		2696	301	1277	Approved (to revised location)	

Additional Remarks (optional)

EPSP Proposal Summary

Proposal Review

Mediterranean-Atlantic Gateway Exchange - Review - Rachel Flecher, Ferran Estrada, and Javier Hernandez-Molina presented the scientific overview and site-by-site reviews. This proposal was the marine portion of an amphibious proposal. The panel was introduced to the marine gateway concept and that by drilling the associated marginal basins an amplified climatic signal would be observed. The Atlantic-Mediterranean Gateway is the connection that links African monsoon precipitation from the South Atlantic with high latitudes. The specific aim of the drilling program is to document the timing of the overflow of the Mediterranean into the Atlantic and assess its role in climate change. A secondary objective is to recover complete record of the Messinian Salinity crisis. The third objective is to examine the behavior of oceanic overflow during a period of extreme exchange.

Proposed Sites

Site Name	Position (Lat, Lon)	Water Depth (m)	Requested Drilling Depth (m)	Approved Depth (m)	EPSP Decision	Remarks
ALM-01A (Primary)	37.4317 -9.5767	1567	990	990	Approved	
ALM-02A (Alternate)	36.8359 -9.7481	2265	1640	1640	Approved	
EAB-02A (Alternate)	35.75518251 -2.43956525	845	1277	1277	Approved	
EAB-03A (Alternate)	35.750427 -2.431305	838	1277	1277	Approved	
GUB-01A (Alternate)	36.5256 -7.6059	637	921		Declined	More information on possible overpressure is required. Modeling of potential overpressure should be conducted. Consider alternative locations positioned on a crossing line.
MOM-01A (Primary)	35.240956 -6.747839	555	1470		Declined	Localized amplitude anomalies were observed. There appears to be a possibility of overpressure. It is difficult to relocate without a crossing line. Site will need to be repositioned.
MOM-02A (Alternate)	35.107278 -6.818264	712	1007		Declined	Possible gas present. Better to use a cross-line for positioning.
WAB-03A (Primary)	36.312544 -4.571213	800	1700	1700	Approved	

New Sites

Site Name	Position (Lat, Lon)	Water Depth (m)	Requested Drilling Depth (m)	Approved Depth (m)	EPSP Decision	Remarks
GUB-03A-new (Alternate)	36.700975 -7.411174	540	1650		Other	Will need to be reviewed by EPSP
GUB-02A-new (Alternate)	36.699683 -7.431424	547	1464		Other	Needs to be reviewed by EPSP.

EPSP Proposal Summary

Additional Remarks (optional)

Proponents should consider obtaining supplemental funds for LWD operations to monitor pressure during drilling.