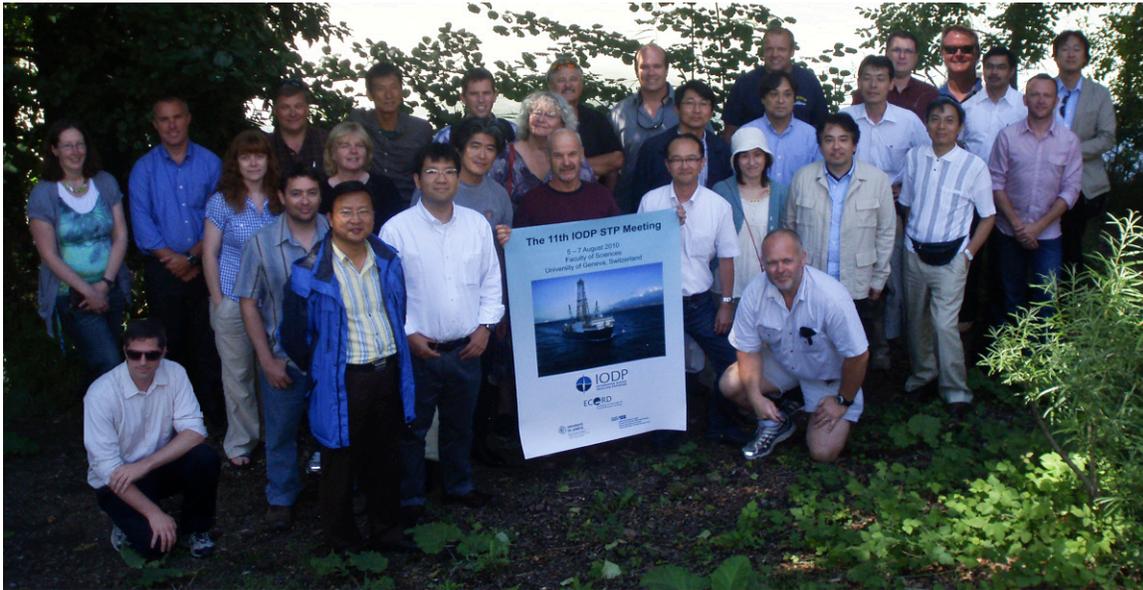


IODP Scientific Technology Panel (STP)

11th Meeting, 5 – 7 August, 2010

University of Geneva,

Geneva, Switzerland



The IODP Scientific Technology Panel met at the University of Geneva in Geneva, Switzerland with a full agenda (see attachments) for 3.0 days from 5-7 August, 2010. The meeting was expertly organized by Dr. Georges Gorin, an ECORD member of STP. The meeting resulted in 28 Consensus Statements and 12 Action Items. 17 members attended the meeting with Ken Sawada as an alternate for Toshiro Yamanaka and Tatsuhiko (Tats) Sakamoto as an alternate for Saburo Sakai. A major focus of this meeting was the IODP-MI Depth Scale Document and the STP Technology Roadmap.

No conflicts of interest were identified by the membership at the start of the meeting.

STP Consensus Statement 1008-01: IODP Depth Scale Document

The STP recommends that IODP-MI convene a Taskforce to optimize the current Depth Scale document. The product from this Taskforce should address the following items:

- Uniformity of depth scales for IODP publications;
- Reduction of confusion amongst scientists with the implementation of the IODP depth scale document;
- Tracing/managing depth scale modifications due to changing section lengths, evolving investigations, etc.;
- Write an introduction and create useful illustrations that would be included in the depth scale document;
- Give recommendations on training and education of shipboard scientists on the use of the depth scale document prior to expeditions.

The STP further recommends that the taskforce be formed as soon as possible and deliver the revised depth scale document no later than 6 months after its formation. Taskforce members should be a mixture of people who have sailed recently, have industry experience, are from outside the IODP community, and have knowledge of the problems with the current IODP Depth Scale document. The IOs, STP, and IODP-MI should each be represented in an ex-officio capacity. The STP requests an update on the progress of this taskforce at the next STP meeting.

Vote: 17 Yes, 0 No, 0 Abstentions

Priority: High

STP suggests this be forwarded to SPC, IODP-MI and the IOs.

Background to STP Consensus Statement 1008-01: Discussion of the current IODP Depth Scale document highlighted serious deficiencies in its implementation that is causing confusion among scientists and non-uniformity in representing depth in expedition publications. The STP came to the conclusion that the best way to address these issues is to form a taskforce to optimize the depth scale document, not re-invent it, and that this taskforce should have access to other ocean drilling depth scale workshop reports.

STP Consensus Statement 1008-02: Role of STP in the new SAS

The STP responds to the questions posed by SPC Chair Gabe Filippelli in his presentation to the panel at the 11th STP meeting.

1. How are current projects progressing, and how to complete them?

STP has a number of long-term projects that will not be resolved before implementation of the new SAS: STP Roadmap implementation; Cross platform QA/QC issues and consistency in methodologies (e.g., Cross Platform Formation Factor measurements - see [STP Action Item 1008-39](#); Core contamination issues for microbiological studies – see [STP Action Item 1008-33](#).

2. What are friction points in current interactions that need to be improved?

STP has developed a fast and efficient communication structure. This has reduced and eliminated many friction points. The STP recommends that the current three-year term of STP (or its successor) membership be increased to four years in the new structure in order to increase efficiency and corporate memory. [See STP Consensus Statement 1003-10 Determination of Formation Factor]

3. What are the key aspects that need to carry forward, and how best can they be carried forward?

The STP deals with many different facets of IODP including measurements, curation, and drilling technologies. These include both long-term items (see the answer to question 1 above) and quick decision items (e.g., Curation of Cuttings issue in Consensus Statement 0908-02). The STP's efficient communication structure and flexible approach to delivering advice to the IOs, IODP-MI, and other SAS panels must be carried forward to the new program. Other items that must be continued are:

- Direct science community input on emerging issues and long-term program guidance to the IOs and IODP-MI;
- Overview of QA/QC and data management on all platforms;
- Overview of expedition measurement plans;
- Overview of curation issues;
- Overview of publication issues;
- Assessment of third party tool deployment and development.

The panel recommends that the STP continues in the new Science Advisory Structure. We further recommend that the roadmaps developed by EDP and STP be provided to the committee writing the new Science/Implementation Plan.

Vote: 17 Yes, 0 No, 0 Abstentions

Priority: High

STP suggests this be forwarded to SPC and IODP-MI.

Background to STP Consensus Statement 1008-02: This recommendation results from the presentation given by the SPC Chair on the new SAS structure for the program after 2013. The sentiment of the panel is that the current STP structure is working well (in terms of regular advice and oversight) and should continue in the new Science Advisory Structure. The STP minutes contain a lot of the details behind this Consensus Statement/Recommendation.

STP Consensus Statement 1008-03: SPC Report

The STP thanks Gabriel Filippelli for his presentation on SPC activities and the planned SAS re-organization. Discussions during the presentation were useful for responding to SPC queries (see Consensus Statement 1008-02).

Vote: 17 Yes, 0 No, 0 Abstentions

Priority: Medium

STP suggests this be forwarded to SPC and IODP-MI.

Background to STP Consensus Statement 1008-03: Gabriel Filippelli participated as SPC liaison at the STP11 meeting. During its presentation he summarized the role of SPC, the latest proposal ranking by SPC, and ideas concerning the SAS restructuring. SAS restructuring is underway and is to be completed by 10/2011. The SAS restructuring was intensely discussed by the STP.

STP Consensus Statement 1008-04: STP representation at the IODP/Deep Carbon Observatory workshop, “Reaching the Mantle Frontier: Moho and Beyond”.

The STP recommends that panel member Kevin Johnson receive IODP financial support to attend the IODP/Deep Carbon Observatory workshop, “Reaching the Mantle Frontier: Moho and Beyond”, to be held in Washington, DC September 9-11, 2010 and report the proceedings of the workshop to the Panel at its next meeting.

Vote: 16 Yes, 0 No, 1 Abstentions (Johnson)

Priority: Urgent

STP suggests this be forwarded to IODP-MI.

Background to STP Consensus Statement 1008-04: This workshop follows on two recent Moho drilling workshops that focus on a longstanding goal of the ocean drilling community—to reach the mantle, and in the process, penetrate the entire ocean crust and the Mohorovicic discontinuity. The present workshop is sponsored by the newly established Deep Carbon Observatory of the Carnegie Institution of Washington.

STP Consensus Statement 1008-05: CDEX Data Error Report

The STP thanks Shigemi Matsuda and CDEX for the presentation of the errors in Chikyu shipboard data that were found for Expeditions 315, 316, 319, and 322. The STP was impressed by the honest and open presentation as well as the efforts that CDEX has gone to in order to recover as much data as possible and the measures that have been taken to ensure that this does not happen in the future. STP recommends that CDEX issue errata in the expedition publications that contain the correct data (where available) or a warning that the published data are incorrect with the reason why.

Vote: 17 Yes, 0 No, 0 Abstentions

Priority: High

STP suggests this be forwarded to SPC, IODP-MI and IOs.

Background to STP Consensus Statement 1008-05: Shigemi Matsuda presented problems associated with 6 instruments on board the Chikyu during various expeditions as well as the actions taken to correct the data (where possible) and prevent these mistakes from happening again.

STP Consensus Statement 1008-06: Smear Slide Reference Materials

The STP supports IODP-MI in its efforts to provide minimum sets of physical reference materials of smear slides as well as digital references. The STP looks forward to an update of progress at its future meetings.

Vote: 17 Yes, 0 No, 0 Abstentions

Priority: Medium

STP suggests this be forwarded to IODP-MI.

Background information to STP Consensus Statement 1008-06 is from STP Action Item 0908-21: Smear Slide Reference Materials (The STP requests IODP-MI to investigate the feasibility of providing minimum sets of physical reference materials of smear slides as well as digital references). This will close out STP Action Item 0903 Digital Resources on IODP Platforms. Currently, both physical and digital reference materials of smear slides are not available onboard, although the main microscopic means of core description are via smear slides and thin sections. There are adequate tools, including the tutorial, for thin-section description of consolidated sedimentary rocks. However, much of the work done on ship is via smear slides that are generally more complex. Shipboard sedimentologists often have no experiences on smear slides, so that tutorial material is necessary onboard. Thus, providing minimum reference set of smear slides must be quite helpful for IODP shipboard activity.

Minimum reference set of smear slides, which will be less than 20 per set, should contain common minerals (quartz, feldspar, clay minerals, volcanic glass, zeolite, mica, pyrite, etc.), microfossils (radiolaria, foraminifers, nannofossils, diatoms, sponge spicule, fish teeth, etc.) and major lithologies (calcareous and silicious ooze, mudstone, sandstone, etc.). To maintain the physical references, it is recommended to produce spare sets at the same time. IODP-MI should request IOs to report condition (lost, broken, etc.) of reference sets at the end of each expedition, and renew the reference sets if necessary.

It should be emphasized that purposes of physical and digital references are different. Physical references are significant for training onboard, and digital materials can be “encyclopedia” of smear slides. Therefore, they are complementary, and cannot completely replace each other.

STP Consensus Statement 1008-07: SCIMPI (Simple Cabled Instrument for Measuring Parameters In-situ) Deployment

The STP understands that SCIMPI will not be ready for deployment on Expedition 328: Cascadia ACORK, but endorses SCIMPI deployment at a suitable site once the tool is ready. The STP agrees with EDP Consensus 1007-23 endorsing IODP-MI allocation of at-sea engineering test time for active engineering development projects including SCIMPI. The STP looks forward to reviewing the data after the first data-recovery operation.

Vote: 17 Yes, 0 No, 0 Abstentions

Priority: Medium

STP suggests this be forwarded to IODP-MI, IOs, and EDP.

Background to STP Consensus Statement 1008-07: This builds on STP Consensus Statement 0908-06 which supported SPC’s guidelines to automatically set aside platform days during expeditions for other activities engineering development, STP Consensus Statement 1003-12 to deploy SCIMPI at Site 1245, and EDP Consensus Statement 1007-23 endorsing IODP-MI allocation at-sea engineering test time for SCIMPI and MDHDS engineering development.

The original plan to deploy SCIPMI at Site 1245 during Exp. 328: Cascadia ACORK is not feasible because SCIMPI will not be fully tested and ready in time for the expedition. During the JR maintenance period, the SCIMPI development team met with the USIO in Victoria to develop an at-sea testing and deployment plan. The STP still supports the development, testing, and deployment of SCIMPI, looks forward to seeing the test data, and encourages engineering development time be set aside for deployment once SCIMPI is ready to be deployed.

STP Consensus Statement 1008-08: Approval of Expedition Measurement Plans for IODP Expeditions 328, 330, 331, and 333

The STP approves the Expedition Measurement Plans for IODP Expeditions 328 (Cascadia Subduction Zone ACORK Observatory) and 330 (Louisville Seamount Trail) represented by the USIO, as well 331 (Deep Hot Biosphere), and 333 (Inputs Coring -2 & Heat Flow) represented by CDEX.

Vote: 17 Yes, 0 No, 0 Abstentions

Priority: High

STP suggests this be forwarded to IODP-MI and the IOs.

Background to STP Consensus Statement 1008-08: During its meeting at Geneva, Switzerland (August 5-7, 2010, STP11), STP reviewed the Expedition Measurement Plans for the expeditions listed above.

STP Consensus Statement 1008-09: Approval of measurement plan for IODP Exp. 329

The STP approves the Expedition Measurement Plan for the South Pacific Gyre Microbiology Expedition (329) as presented by the USIO. However, the STP recognizes that the information given to the USIO is insufficient to ensure adequate support of the non-standard measurements. The STP highly recommends improved communication between the Co-Chiefs, Science Party, Staff Scientist and USIO to ensure a successful expedition.

Vote: 17 Yes, 0 No, 0 Abstentions

Priority: High

STP suggests this be forwarded to USIO, Exp. 329 co-chiefs, science party, and staff scientist, and IODP-MI.

Background to STP Consensus Statement 1008-09: During its meeting in Honolulu (March 2009, STP8) STP recommended that the IOs present the measurement plan for each scheduled expedition for each of the different platforms (STP Consensus Statement 0903-05). During its meeting at Geneva, Switzerland (August 4-7, 2010, STP11), STP reviewed the Expedition Measurement Plans for the upcoming expedition to South Pacific Gyre (329) presented by the USIO representative.

STP Consensus Statement 1008-10: Template for presenting measurement plans for non-standard measurements

The STP recommends the following guidelines regarding reporting measurement plans for non-standard measurements. These reports should be submitted prior to STP meetings and contain:

- Name of the measurement
- Sampling type
- Sampling frequency
- Instrument
- Description of the measurement
- Consumables and supplies required
- Methods with references
- Plan for QA/QC

The STP also provides a spreadsheet template to facilitate the production of the measurement plan.

Vote: 17 Yes, 0 No, 0 Abstentions

Priority: High

STP suggests this be forwarded to the IOs and IODP-MI

Background to STP Consensus Statement 1008-10: During its meeting in Honolulu (March 2009, STP8) STP recommended that the IOs present the measurement plan for each scheduled expedition for each of the different platforms (STP Consensus Statement 0903-05). This consensus statement also resulted from the discussion associated with the Expedition 329 measurement plan.

STP Consensus Statement 1008-11: Bremen Core Repository (BCR) samples in Drilling Information System (DIS) database

The STP thanks Ursula Röhl from ESO for presenting an update on the status and access to the DIS database at the BCR. This system provides scientists an easy access to data about all samples stored at the BCR location. The STP is impressed that all Atlantic, Arctic, and Mediterranean samples since the beginning of DSDP can be found in DIS. STP realizes that at this stage the DIS online query is only a temporary solution and recommends that a Central Inventory be established in order to consolidate all core and related information from the three core repositories (Gulf Coast, Kochi and Bremen).

Vote: 17 Yes, 0 No, 0 Abstentions

Priority: Medium

STP suggests this be forwarded to IODP-MI and the IOs.

Background to STP Consensus Statement 1008-11: This Consensus Statement is based on the presentation by Ursula Röhl and the subsequent discussion.

STP Consensus Statement 1008-12: Inclusion of the Scientific Technology Roadmap as Appendix to the new Science Plan

The STP recommends the Scientific Technology Roadmap, which has been developed over the past 3 years to improve the IODP science, be included as an Appendix in the new science/implementation plan, due for release in early 2011.

Vote: 17 Yes, 0 No, 0 Abstentions

Priority: High

STP suggests this be forwarded to IWG+, SPC, SASEC, EDP, and IODP-MI.

Background to STP Consensus Statement 1008-12: The finalized new science plan is due for release in January/February 2011 and will shape the next phase of IODP beginning September 30, 2013. Over the past 3 years, the STP has developed a technology roadmap that is designed to improve IODP science. This roadmap has been coordinated with that of the Engineering Development Panel (EDP).

STP Consensus Statement 1008-13: External Assessment of the R/V JOIDES Resolution Shipboard Science Systems

The STP appreciates receiving the draft report entitled ‘External Assessment of the R/V JOIDES Resolution Shipboard Science Systems, Victoria, B.C., 27-29 June 2010’ produced by the external assessment team of eight scientists. The STP supports adoption and implementation of these changes along the priority basis assigned in the report. The STP sees value in such assessments and suggests that such exercises will be useful on other platforms if conducted on a regular basis. It is important that STP be involved with the evaluation assessments either directly or as recipients of the reports.

Vote: 16 Yes, 0 No, 1 Abstentions (Dugan).

Priority: High

STP suggests this be forwarded to IODP-MI and the IOs.

Background to STP Consensus Statement 1008-13: STP thanks Brandon Dugan for both attending the USIO External Assessment exercise and for reporting back to us at this Geneva meeting. The USIO External Assessment of the R/V Joides Resolution shipboard systems was carried out by a panel of 6 experienced scientists toward the end of the platform’s maintenance period at Victoria, B.C. with a mandate of providing a benchmark for later comparisons. The team was provided with direct oral and written reports, carried out interviews with technical staff and members of a recent science team, and went through hands-on exercises in the laboratories. These activities and the team’s findings are documented in an extensive 57 page report ‘External Assessment of R/V JOIDES Resolution shipboard science systems, Victoria B.C., 27-29 June 2010’ a draft form of which was provided to STP. The team noted the hard work and success of USIO in already implementing a number of improvements, but as always some issues require attention. Briefly, the principal recommendations of the team are:

- 1. That a better system for tracking versions and developments to the shipboard systems be implemented*
- 2. That the operational manuals for the systems be updated more frequently, perhaps using an online mediated ‘Wiki’ format that would allow for rapid updates.*
- 3. That onboard technical staff be cross trained so that they are capable of effectively using and maintaining a number of systems.*
- 4. That the database systems be streamlined, and*
- 5. That mechanisms be put in place to allow for better use of advice.*

The report also includes numerous more focused recommendations to directly address other issues.

STP Consensus Statement 1008-14: Preservation of Cuttings from Riser Sites

Following from, and expanding on, STP Consensus Statements 0908-02 and 1003-11, the STP recommends that both washed and unwashed cuttings from riser sites be curated to ensure that a record of material is preserved. Total volumes should be up to 2 liters, as material permits, collected every 5 m or less. Washed and unwashed cuttings must both contain archive and working portions, equally divided. All of this material should be curated without separation into size fractions, unless needed on the aliquot taken for shipboard analyses. Residues that have been processed for specific shipboard measurements must be preserved as “residue” and not recombined with cuttings. Separated magnetic fragments should be preserved and labeled as “magnetic fragments”. All cuttings and residues should be stored at 4°C.

Vote: 17 Yes, 0 No, 0 Abstentions

Priority: High

STP suggests this be forwarded to IODP-MI and IOs.

Background to STP Consensus Statement 1008-14: STP Consensus Statements 0908-02 and 1003-11, and a request from the Kochi Core Center Curator for guidance on treatment/curation of cuttings.

STP Consensus Statement 1008-15: Preservation of Core Working Halves

The STP reinforces the current policy that working half materials not be discarded under any circumstances. Furthermore, sampling of the permanent archive half must not be done under any circumstances without the approval of the CAB. Sediment cores and hard rock cores must be stored at 4°C to minimize sample degradation.

Vote: 17 Yes, 0 No, 0 Abstentions

Priority: High

STP suggests this be forwarded to IODP-MI and the IOs.

Background to STP Consensus Statement 1008-15: This Consensus Statement is in response to a request from the Kochi Core Center Curator for guidance on storage, preservation, and sampling of cores and cuttings.

STP Consensus Statement 1008-16: Updates on third party logging tools

The STP thanks Helen Evans for her report on tests and development status of third party logging tools, namely the Göttingen Borehole Magnetometer (GBM), Multisensor Magnetometer Module (MMM), Magnetic Susceptibility Sonde (MSS), the Multi-Function Telemetry Module (MFTM) and the new DEBI-t (deep earth and biosphere investigative tool). The STP expresses its continued support and welcomes updates on the progress at the forthcoming STP meeting.

Vote: 17 Yes, 0 No, 0 Abstentions

Priority: Medium

STP suggests this be forwarded to IODP-MI and IOs.

Background to STP Consensus Statement 1008-16: This consensus statement follows in consensus statement 1003-09 based on the request from Anthony Koppers Co-Chief scientist for IODP Expedition 330 in using the GBM 3rd party tool. The STP formulated a recommendation that the deployment of the GBM proceed for Expedition 330 knowing that there were several issues that needed to be addressed.

STP Consensus Statement 1008-17: Use of cores after freezing using the “magnetic technique”.

The STP expresses its interest in the new freezing technique of cores by using magnetic technique (Cells Alive System - CAS). The STP recognizes the great potential of CAS for the preservation of precious core samples. The STP encourages additional studies on the uses of this technique that would improve IODP science.

Vote: 17 Yes, 0 No, 0 Abstentions

Priority: High

STP suggests this be forwarded to IOs, IODP-MI, and SLTF.

Background to STP Consensus Statement 1008-17: The STP member Yuki Morono presented his trial study on the new freezing technique of cores that was tested for microbiological preservation and showed that it is the best way to keep the structure of the microbes in the cores. It was also shown that it preserves several core properties without any detectable change in the volume of the core. Further study is required to determine how much change to the core properties this preservation technique would induce.

STP Consensus Statement 1008-18: IODP-MI Scoping Studies

STP requests that IODP-MI reports progress of the IODP-MI Scoping Studies on deep drilling technology and core recovery and quality at the next STP meeting.

Vote: 17 Yes, 0 No, 0 Abstentions,

Priority: High

STP suggests this be forwarded to IODP-MI, EDP, and IOs.

Background to STP Consensus Statement 1008-18: IODP-MI has reported the progress of the scoping studies at the EDP meetings. Because deep drilling technology and core recovery and quality are high priority items in the Scientific Technology Roadmap, STP would welcome an update from IODP-MI on these scoping studies.

STP Consensus Statement 1008-19: Virtual Core Library (VCL)

The STP would like to thank Lallan P. Gupta from KCC for the presentation on the Virtual Core Library (VCL). The STP recognized that the VCL system has fundamental merits for users in terms of understanding various geological phenomena. Also, this can influence subsampling strategy and can advance IODP science. Therefore, STP strongly endorses the development of VCL.

Vote: 17 Yes, 0 No, 0 Abstentions

Priority: Medium

STP suggests this be forwarded to IODP-MI and CDEX

Background to STP Consensus Statement 1008-19: This consensus statement is related with previous STP consensus statement of 1003-16, 3-D imaging of cores. XCT scanner on the Chikyu is providing the core image data and there is need to spread information about this new data for better understanding of geological feature and processes.

VCL is defined as a web-based interface and may have the following four implications; 1) Provide an opportunity to use XCT data, 2) Quick overview of sample 2-D XCT images, 3) Download or request DICOM files and 4) Overview of cores prior to sampling at KCC.

STP Consensus Statement 1008-20: Nomination of STP vice chair
STP requests that SPC approve Doug Schmitt as vice-chair of STP.

Vote: 16 Yes, 0 No, 1 Abstention (Schmitt)

Priority: High

STP suggests this be forwarded to SPC and IODP-MI

Background to STP Consensus Statement 1008-20: Due to the rotation of the chair and vice chair, STP nominates a new vice chair from current STP members from the ECORD countries. Doug Schmitt is familiar with STP and iSciMP and has corporate memory with regard to the long-term issues that STP has been dealing with.

STP Consensus Statement 1008-21: Nomination of STP Chair
STP requests that SPC approve Saneatsu Saito as Chair of STP.

Vote: 16 Yes, 0 No, 1 Abstention (Saito)

Priority: High

STP suggests this be forwarded to SPC and IODP-MI

STP Consensus Statement 1008-22: Laboratory upgrades on the Chikyu
The STP thanks Chiaki Igarashi for her presentation on the upgrading of several laboratory systems on the Chikyu, including the gas monitoring system. The STP looks forward to hearing about the performance of the upgraded laboratories at its future meetings.

Vote: 16 Yes, 0 No, 0 Abstentions, 1 Absent (Krustel)

Priority: Medium

STP suggests this be forwarded to CDEX and IODP-MI.

Background to STP Consensus Statement 1008-22: Chiaki Igarashi presented recent upgrading of laboratory on Chikyu during #11 STP meeting. Gas monitoring system is included in the Scientific Technology Roadmap and is an example of implementation of the roadmap recommendations.

STP Consensus Statement 1008-23: Pore water sampling techniques

The STP thanks Brandon Dugan for his presentation on Porewater Sampling: Whole Round Squeezing vs Rhizon Sampling, with input from E. Solomon, M. Kastner, and M. Torres. Compared with the traditional squeezing technique used since DSDP, Rhizon sampling has the advantage for high resolution studies, which are relatively non-destructive. The STP urges that a comprehensive comparison is needed between the two techniques to evaluate potential artifacts with sampling and identify pore fluid constituents that are compromised during the sampling process. However, the STP recognizes that this cannot be conducted by the IOs. Where possible the IOs could encourage science parties to contribute to this study.

Vote: 16 Yes, 0 No, 0 Abstentions, 1 absent (Krastel)

Priority: High

STP suggests this be forwarded to the IOs and IODP-MI.

Background to STP Consensus Statement 1008-23: Since DSDP, whole round squeezing technique is used for obtaining pore water onboard immediately after core recovery, a whole-round section (~5-40 cm) is cut from the core. It is transferred to the lab where it is extruded, scraped to remove contamination, and placed inside a Ti squeezer. Pressure is applied with a hydraulic press and emerging water is collected in a plastic syringe. The pore fluid is then filtered and dispensed into aliquots for analyses. Rhizon Sampling technique starts to be used widely in marine geosciences only in recent years. Rhizons consist of a microporous tube (0.1 μm nominal pore size) connected to a plastic syringe via PVC tubing and a luer lock fitting. Unlike traditional squeezing that pushes water from sediment samples, Rhizons pull water from the sediments. The syringe plunger is pulled back and secured with a spacer to create a vacuum that pulls pore fluid into the syringe. In order to allow this technique to be more widely used in IODP, a comparison test should be done in a region of high metabolic activity with a shallow SMT and high alkalinity on at least 15 samples in the upper 50 m of the sediment column. Samples from both methods should be analyzed for the entire shipboard suite of measurements (i.e. Cl, SO₄, Alk, nutrients, majors, and minors), and subsamples for isotopes can be collected and sent to shore-based labs for analysis.

STP Consensus Statement 1008-24: Field Trip Geotraverse Chamonix-Geneva

The STP wishes to thank Dr. Georges Gorin (STP Panel member and local host) for his effort to organize and guide this field trip, and to Ph.D. students Jérôme Chablais and Chloe Pretet from Geneva University for their help as our drivers on this field trip. During the trip, we enjoyed very much the northern Alpine chain geology, the glaciers, and ice cave, as well as to ride in the Montenvers mountain train and to experience the gorgeous view along the Chamonix valley and the Arve valley.

Vote: 15 Yes, 0 No, 1 Abstentions, 1 (Gorin) absent (Krstel)

Background to STP Consensus Statement 1008-24: During the #11 STP meeting in Geneva, Switzerland, Dr. Georges Gorin organized an excellent pre-meeting field trip for us to make a touristical « geotraverse » between Geneva and Chamonix in nearby France. Although not all of us are geologists, this trip showed us the different units constituting the northern Alpine chain, expressed by very different surface morphologies. We took the mountain train to the Montenvers, at an altitude of 1'900m, to enjoy the beautiful view over the glacier and the most famous mountains in Europe. Back down in Chamonix, we had lunch in a small restaurant in the village of Les Bois located on the left side of the Arve valley with an excellent view of the glaciers. In the afternoon, we drove back towards Geneva, stopping at several geological viewpoints, enjoying the panorama view of the Plate massif and Aiguilles-Rouges massif, the famous Arpenaz fold of limestone in Middle Jurassic age.



STP Consensus Statement 1008-25: Georges Gorin, SNSF and EMA

The STP expresses its sincere thanks to Georges Gorin for organizing this very fruitful and successful meeting at the University of Geneva. In addition, the panel enjoyed the tour through the old and beautiful town of Geneva and the delicious banquet with lots of cheese in the Clinton restaurant after a hard working day. The panel is extremely grateful that Georges not only volunteered to be an STP-member for one additional meeting in order to organize the Geneva meeting, but also celebrated his birthday with the entire panel. STP also thanks the Swiss National Science Foundation (SNSF) and the ECORD Managing Agency (EMA) for its support of this meeting.

Vote: 15 Yes, 0 No, 1 Abstentions (Gorin), 1 Absent (Krastel)



STP Consensus Statement 1008-26: Georges Gorin

The STP would like to thank Georges Gorin for his unwavering passion and commitment to the plight of biostratigraphy within IODP over the past three years. In Georges' sedimentary way, his bedding skills have proven a hit but it is his proud focus on all things small that will be sorely missed. The STP will forge on in Georges' absence, but in microscopic detail, the panel will sit in quiet contemplation in the evenings without that gentile Swiss manner to guide us. The STP wishes him all the very best in his post-STP life.

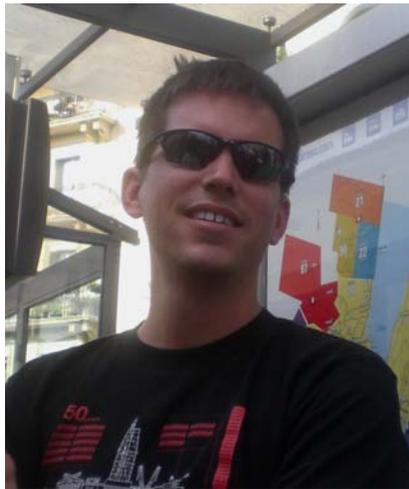
Vote: 15 Yes, 0 No, 1 Abstentions (Gorin), 1 Absent (Krastel)



STP Consensus Statement 1008-27: Brandon Dugan

The STP thanks Brandon Dugan for his exemplary service on the panel. Over the last three years he has assisted greatly in the development of the STP roadmap bringing up for discussion many new or novel ideas that became items on that list. His propensity for things robotic with riserless mud technologies and remote borehole logging tool entry were quite apparent. His subtle ‘control’ of the STP through his unstinting official minute taking will reverberate through the scientific drilling community for many decades. Most importantly, however, his enthusiasm for scientific drilling, his conscientious contributions to the group, and his sense of humor are infectious and helped to make the STP experience highly enjoyable for all.

Vote: 15 Yes, 0 No, 1 Abstentions (Dugan), 1 Absent (Krastel)



STP Consensus Statement 1008-28: Clive Neal

STP thanks Clive Neal for his long-term dedicated efforts to the iSciMP, SciMP, and STP for eight years. STP mourns the loss of Clive Neal, a strong leader of the STP. His passing from STP and return into the 'real world' leaves a tremendous void in the panel that will probably never be filled by any one person. His unselfish devotion to IODP and distinct way to call for ORDER as panel chair will be sorely missed. One can only hope that his life after STP will be as rewarding as the one he left behind when he passed back into the normal world on this day, August 7, 2010 to pastures much greener. We also sincerely hope that he will continue to play a significant role in IODP in the future.

Vote: 15 Yes, 0 No, 1 Abstentions (Neal), 1 Absent (Krastel)



STP Action Item 1008-29: Taxonomic Name Lists

The STP urges that iterative communication occurs between IODP-MI and the chair of the Paleontology Coordination Group (David Lazarus) regarding finalization of the Taxonomic Name Lists (TNLs), and incorporation of the TNLs in the IODP database.

Priority: High

Leads: Ellen Thomas

Deadline: update by IODP-MI at next STP meeting

Background to STP Action Item 1008-29: The contents of the Taxonomic Name Lists (TNL's) for the most commonly used microfossil groups (planktic and benthic foraminifera, calcareous nannofossils, diatoms, radiolarians, and dinocysts) are of prime importance for the efficient functioning of the input of micropaleontological data in the IODP database. Historically, it has been difficult to provide TNLs that are widely accepted by the scientific community as well as convenient for shipboard use. The Paleontological Coordination Group (PCG) chaired by Dr. David Lazarus (Humboldt-Universität zu Berlin, Germany) has received some funding by IODP-MI to prepare lists with community input. During STP meeting #9 (0908, Jeju, South Korea) STP asked IODP-MI for an update on the status of the TNLs and their incorporation in the database (STP Action Item 0908-27). During STP Meeting # 11 (Geneva) IODP-MI representatives reported that the TNL's for planktic foraminifera, calcareous nannofossils, radiolarians, dinocysts and diatoms are close to completion. STP member Thomas received information from Dr. Lazarus on August 2 2010 confirming that the TNLs are near completion, but he stated some additional funds would be needed to complete the lists, and organize a PCG meeting in order to review and advise on how to improve the input/output and maintenance of taxonomic information in the IODP system.

STP Action Item 1008-30: DESClogik use by biostratigraphers

The STP understands that DESClogik is not fully functional for use by biostratigraphers. The panel members ask to be fully informed on the nature of the problems with DESClogik by the USIO, and the plans to address these.

Priority: High

Leads: Thomas, Young

Deadline: next STP meeting

Background to STP Action Item 1008-30: historically, micropaleontological /biostratigraphic shipboard data input has been fraught with difficulties and never was fully functional within JANUS. The STP members viewed a draft of the External Assessment report of the RV JOIDES Resolution Team, which described that DESClogik for biostratigraphers is not working as per its original design specification. STP member Thomas has received complaints about DESClogik from shipboard paleontologists on many expeditions including the recent Wilkes Land

expedition. Biostratigraphic data are generally collected in Excel forms and entered in the database afterward by technicians, and easy data entry and retrieval of paleontological abundance charts are reported to be non-functional.

STP Action Item 1008-31: Scientific Technology Roadmap publication and advertisement

In order to implement the Scientific Technology Roadmap, it is important to advertise it to the IODP community and policy makers. STP recognizes that one of the practical and effective approaches is to publish the Executive Summary of the roadmap in Scientific Drilling with the web link to the full roadmap.

Priority: High

Leads: Sanny Saito

Deadline: September 2010 (link to Science Plan review)

Background to STP Action Item 1008-31: STP has developed over 3 years a technology roadmap that is designed to improve the science that can be conducted using IODP cores and boreholes. The STP is being to work with the IOs and the funding agencies to device an implementation plan. The Roadmap version 1.0 has been posted on the IODP website (STP Consensus Statement 1003-07).

STP Action Item 1008-32: Third party tool discussion

The STP will review the IODP third party tool policy with the goal to revise and update this document. Each STP member will review this document by the next meeting.

Priority: High

Lead: The (new) STP Chair

Deadline: Next Meeting.

Insert Background to STP Action Item 1008-32: The existing policy requires review and update.

STP Action Item 1008-33: Core contamination issue

The STP will supply CDEX with a draft plan for the use of tracers in the detection of core contamination during riser drilling.

The STP asks that CDEX keep in contact with STP regarding this issue and try to test the tracers in future riser drilling expeditions.

Priority: High

Leads: Morono, Yamanaka

Deadline: Next meeting

Background to STP Action Item 1008-33: Drilling fluids contain high levels of active microbial cells and high concentrations of heavy mineral salts (e.g., barite) that are potential contaminants of microbiology and geochemistry, respectively (Action Item 0612-29). STP presented Consensus Statement 0802-06: "Detection and Control of Contamination Issues" and asked EDP to investigate drilling fluids and/or techniques that are less likely to adversely impact interstitial water geochemistry, rock geochemistry, and microbiology. The EDP responded to the STP Consensus and organized Microbiology Contamination Working Group (Rick Colwell and Yuki Morono as STP liaison) at the EDP 7th meeting in July 2008. The EDP and working group finalized the discussion and forwarded their report to the STP (EDP Consensus 1001-17). Then STP constructed the draft plan for the contamination detection in riser drilling (Action Item 1003-23) and presented at its 11th meeting in August 2010.

STP Action Item 1008-34: Routine Microbiology sample curation

The STP would like to thank Lallan Gupta of the KCC for his presentation on routine microbiology sample (RMS) curation. The STP recognizes that these curatorial procedures are highly useful for implementation of RMS curation and will forward this document to the Subsurface Life Task Force (SLTF) for comments. Also the STP asks IOs to consider ways of advertising the availability of RMS to the broad scientific community and asks the SLTF for advice in this regard.

Priority: High

Leads: Morono, Yamanaka

Deadline: Next meeting

Background to STP Action Item 1008-34: This consensus statement follows STP recommendation 0908-09 referencing relevant recommendations generated by the 2003 IODP Microbiology Working Group Report, the IODP Deep Biosphere Workshop held in Vancouver, BC (October 2006) and the manuscript resulting from that workshop (D'Hondt et al. Scientific

Drilling.No. 5 Sept. 2007), the Sept. 2007 report to IODP-MI from the Subsurface Life Task Force, and past STP consensus statements including 0708-14, 0807-12, 0807-17, 0807-18, 0903-06, and 0903-07. Following the Subseafloor Life Task Force (SLTF) report at the Edmonton 2008 STP Meeting, STP issued a set of recommendations for routine microbiological sampling on IODP expeditions (including those for which microbiology is the primary scientific objective) so that samples are adequately and consistently preserved for future microbiological analysis.

STP Action Item 1008-35: Review of the new Science Plan:

The STP will review the first draft of the new Science Plan that will be released in the middle of August 2010. Each STP member will review the new Science Plan within one month of the release. Discussion will be held via E-mail and the STP chair will provide feedback to IODP-MI.

Priority: High

Leads: STP panel members

Deadline: September, 2010

Background to STP Action Item 1008-35: Incorporation of engineering development and technological innovation in the new IODP Science Plan is critical for facilitating “transformative science”. Use of the expertise with the EDP and STP panels can ensure the inclusion of these critical elements that will drive the next era of scientific ocean drilling.

STP Action Item 1008-36: Magnetic Susceptibility Calibration and Standardization

Development of recommendations for calibration and standardization of magnetic susceptibility measurements on all platforms will be reported during the next STP meeting.

Priority: High

Leads: Joe Stoner

Deadline: Next Meeting

Insert Background to STP Action Item 1008-36: Magnetic susceptibility is measured in different ways, but at present is incompletely calibrated. Standardized and calibration between equipment (discrete sample, whole round, logging tool) and platform (Chikyu, JR, MSP) is needed.

STP Action Item 1008-37: Measurement plans for the CPP Expedition

The STP requests CDEX report the measurement plan for the CPP Expedition to the STP as soon as it is available. The STP will review it via e-mail.

Priority: High

Leads: STP Panel Members

Deadline: as soon as possible

STP Action Item 1008-38: Thermal conductivity and Non-Contact Resistivity (NCR)**Updates from USIO**

The STP thanks David Houpt for the information on problematic measurements with the TeKa TK04 thermal conductivity system and the NCR on the JR. The STP requests that the USIO follow up with their investigation and testing of the TeKa system models for determining thermal conductivity and a new system to replace the NCR meter. This follow up should include a presentation of results and progress at the 12th STP meeting and dissemination of that information to CDEX and ESO because of their use of TeKa probes and resistivity systems.

Priority: Medium

Leads: USIO

Deadline: Next Meeting

***Background to STP Action Item 1008-38:** The USIO has removed the non-contact resistivity (NCR) from the JR because it has never performed adequately. The USIO has investigated options for determining resistivity (e.g., Olympus Nortec 2000 D+ flaw detector) for determining resistivity of cores. The USIO intends to purchase a new system and evaluate its performance for determining resistivity.*

On Expedition 328 (Wilkes Land), the TeKa TK04 system used to determine thermal conductivity functioned well to on the Macor standards, however it did not yield good results on samples. This problem has been isolated as a software problem related to the vendor-supplied, complex model that has been used to interpret thermal conductivity from the acquired data. The old technique (slope-intercept method with extrapolation) appears to work well in instances where the complex model does not perform well. The USIO is investigating methods to get consistent, reliable results for thermal conductivity using the vendor software or perhaps with user-developed software.

STP Action Item 1008-39: Evaluation of Infrastructure and Development of Standards for Formation Factor Determination

The STP requests that the IOs provide a list of existing equipment or equipment to be purchased for measuring resistivity. This should include the type of equipment, an overview of how its measurement works, and when it will be available (for items to be purchased). The IOs should review the proposed cross-platform resistivity measurement test proposed by STP as presented by Dugan. The IOs should comment on the ability to complete such a test including details, concerns about standard preparations and equipment needed to complete the test, and an estimated time-frame for completing the test. Yuki Morono will contact the SLTF for their comments on this issue.

Priority: Medium

Leads: Reichow, Morono, IOs

Deadline: Next Meeting

Background to STP Action Item 1008-39: This follows STP Action Item 1003-28: Cross-Platform Consistency of Formation Factor Issues, STP Consensus Statement 1003-10: Determination of Formation Factor, and STP Recommendation 0807-10: Formation Factor Determination. All of these items are aimed at developing a methodology for routine formation factor determination on all platforms for use by microbiologists. In order to accurately determine formation factor, a reliable and repeatable measurement of sediment resistivity is necessary.

STP Action Item 1008-40: New Publication format:

The STP requests a representative from the Publications group to present the complexities of the issue regarding the preparation and presentation of data in the Proceedings volumes. This presentation and discussion will solicit advice from the panel on which data need to be included in the Proceedings volumes and which can be presented only on line.

Any changes here would be implemented post 2013 in the new program.

Priority: High

Leads: STP Members, USIO Publications

Deadline: Next meeting

Insert Background to STP Action Item 1008-40: As part of the USIO report presented by Greg Myers at STP #11 in Geneva, Switzerland (5-7 August, 2010), questions were raised as to how much data should be included in the IODP Proceedings volumes, and in how many different formats this data should be presented. Virtually all data collected now is available online, plus these Proceedings take time to prepare, with smear slide and thin section data, (both tabular), and core section images (JPGs) the most time consuming. Should only specific data be reproduced with links to online versions as necessary?

Draft Agenda for the 11th IODP STP Meeting, Geneva, Switzerland

Day 1, Thursday August 5, 2010. Start 8:30 a.m., Lunch Noon-1:30 p.m., End 5 p.m.

1. Welcome, meeting logistics, safety, introduction, Robert's Rules, COI ([Gorin](#), [Saito](#), [Neal](#))
2. Approval of meeting agenda ([Neal](#))
3. Approve Minutes from STP Meeting #10 ([Neal](#))
4. Preliminary discussion of next meeting locations and dates; panel rotations ([Neal](#), [Saito](#), [IODP-MI](#)): Kochi has been proposed.
5. Implimentation of the new STP Terms of Reference ([STP Consensus 1003-04](#)) ([IODP-MI](#))
6. Review status of previous meeting Action Items and Recommendations ([IODP-MI](#), [Neal](#))
7. SAS Activity: ([IODP-MI](#)).
8. EDP Meeting Report ([Wanatabe/Saito](#))
Major shared issues between two panels are 1) Review of New Science Plan, 2) Roadmap linkage, 3) Open-water re-entry logging, 4) microbiology contamination, 5) IODP-MI Scaping Studies, and 6) SCIMPI
9. SPC Report and Discussion of the SAS Transition ([Filipelli](#)).
10. The New IODP Science Plan discussion – [STP Consensus 1003-01](#) ([presentation by IODP-MI](#), [discussion by All](#))

LUNCH

11. Consideration of issues from routine reports, supplied pre-meeting, from IODP-MI, SPC, lead agencies, & IOs; discussion focused on issues raised by Panel Members:
ECORD Report ([Röhl](#))
USIO Report ([Myers](#))
CDEX Report ([Igarashi](#))
(formal presentations required as requested at the 1003 STP meeting)
12. Review of expedition QA/QC reports to be supplied by the IOs **prior** to the meeting for completed expeditions (using the new format agreed upon at STP #10: [STP Consensus 1003-03](#)) ([All](#)).
13. Approval of Measurement Plans for the upcoming expeditions ([IOs to supply](#); [All](#))
14. Desklogik Update – Improvements made since Sydney (related to [STP Action Item 0908-21](#)) ([USIO](#))
15. CCLSI Roadmap update ([CDEX](#))
16. Report on the JR Review (see [STP Action Item 1003-21](#)) ([Dugan](#))
17. Progress on the riserless mud recovery system tests – [STP Consensus 1003-08](#) ([Myers/IODP-MI](#)).

18. Virtual Core Library ([Gupta](#))

Day 2, Friday August 6, 2010: Start 8:30 a.m., Lunch Noon-1:30 p.m., End 5 p.m.

19. Revision of the Depth Scale document and its implementation ([STP Action Item 1003-22](#)).

Introduction ([Sakamoto](#))

Discussion ([ALL](#)).

LUNCH

20. STP Roadmap Implementation – see [STP Consensus 1003-07](#) ([Saito/Neal](#)).
Discussion and drafting of implementation plan.

21. Update on Taxonomic Name Lists for micropaleontology – [STP Action Item 0908-27](#) ([IODP-MI/IOs](#)).

22. All BCR samples in DIS database ([Röhl](#)).

23. Logging Tools ([Evans](#))

Microbiology tool

MMM and MSS update

24. Core Contamination Issues - [STP Action Items 1002-23, 1003-27](#) ([Morono, Yamanaka](#)):
Review of past STP actions/consensus statements on this issue
[This is a carry over from the Sydney meeting]

25. Routine Microbiological Sample (RMS) curation procedure and update from feasibility study related to the RMS curation ([Gupta](#))

Day 3, Saturday August 7, 2010: Start 8:30 a.m., Lunch Noon-1:30 p.m., End 5 p.m.

26. **STP Action Item 1003-28:** Cross Platform Formation Factor Issues ([Dugan](#))

27. Use of cores after freezing using the “magnetic technique”. [STP Action Item 0908-29](#) (Tabled at the 1003 meeting) ([Morono, STP](#)):

STP members have been asked to explore uses of frozen cores, in addition to microbiological applications, and give input to the STP chair. Background to Action Item 0908-29: The new freezing technique of cores for microbiological preservation can also preserve core structures. The STP members are asked to give specific input via the chair on how cores frozen using this new technique could be used in addition to microbiological investigations.

28. Smear Slide Reference Materials ([STP Action 0908-21](#)) ([IODP-MI](#))

29. Curation of cuttings samples ([Gupta](#))

30. Third Party Tools discussion ([Neal](#))

31. Pore water sampling techniques for the future ([Dugan](#))

LUNCH

32. Panel Rotation ([Neal](#), [Saito](#), [Kawamura](#))
33. Select Meeting Location and determine preliminary agenda
34. Finalize Consensus Statements and Recommendations

11th IODP STP Meeting
Geneva, Switzerland
08/05/2010-08/07/2010

Minutes

08/05/2010

08:30

Neal called meeting to order. Introductions, welcome, logistics, Robert's Rules of Order, and agenda.

Agenda and COI discussed. Morono mentioned that he may have a COI with item 25 – Routine Microbiology Sampling. COI was overridden by the chair because we need Morono's expertise in the discussion. Neal noted that 15 – CCLSI update will be replaced by a discussion about sampling issues and emerging technology including minimum amounts of samples taken. Data Error Issues noted by CDEX that were circulated to all STP members should also be discussed. Chiaki requested to move that to morning of day three (08/07/10).

08:50

Modified agenda was unanimously approved.

08:55

Approval of Minutes from STP Meeting #10. Thomas noted STP Consensus Statement 1003-10 background information was missing a correct Action Item number. Neal found the correct AI Number and it will be updated. Modified STP Meeting #10 Minutes were unanimously approved.

09:00

Meeting dates, locations, panel rotations, and nominations for next vice-chair.

Hirose-san made presentation on Kochi as the location for STP Meeting #12 noting the proximity to Nankai trough, the nice city, and the Kochi Core Center. Tentative timing would be February/March. Saito prefers February due to potential to be at-sea in March.

Saito-san summarized that this is Neal's last meeting as chair, and he will become chair, so we need to nominate a new vice-chair from the ECORD community.

09:05

Neal asked for IODP-MI update on STP Terms of Reference from STP meeting #10. Kawamura noted that SPC accepted the terms of reference. Kawamura will distribute to STP members. STP may have to review and edit as the SAS structure evolves with the successor to IODP.

09:10

Neal summarized AIs and CSs from STP. All STP members have a summary spreadsheet with this information. Kawamura added that New IODP Science Plan is being revised and should be

available for comment starting in middle of August (relates to CS 1003-01). Kawamura also noted that Oct 1, 2010 will be last call for drilling proposals for current ISP. Starting Oct 1, 2011 call for proposals will be for new ISP. Filippelli will provide more details on SAS transition.

Saito inquired about implementation plan for new ISP. Kawamura commented this is still being discussed and it is being decided who will write it and that IOs would like to be included. Collier noted that Japan, Europe, and US have all held or are holding naming workshops for the new program. Kawamura said new program name may be announced in December (AGU Town Hall meeting).

Neal pointed out CS 1003-03 on QA/QC reporting is accepted and this has led to better reports from the IOs to STP.

STP Roadmap (CS 1003-06) has been released on the IODP website. Saito was thanked for his efforts in completing the posting of the roadmap.

Myers gave brief update on Riserless Mud Recovery System (related CS 1003-08). USIO has approached DOE (REPSEA) for funding to test in the Gulf of Mexico. Due to recent BP problems in the Gulf of Mexico, they were told this is not the best time for testing in the Gulf of Mexico. This is leading to a delay in finding funding and a location for testing.

Evans summarized testing and success for getting the Gottingen Borehole Magnetometer (CS 1003-09) and that all looks well for deployment on Exp 330: Louisville Seamounts.

CS 1003-12 (SCIMPI deployment at HR Site 1245) – tool will not be deployed because it is not ready and completely tested yet. USIO is looking at future potential locations and times. STP will write a follow up CS that the tool should be deployed and tested (Dugan will write).

Neal will provide a revised spreadsheet of AIs and CSs after this meeting.

09:30

Kawamura gave an overview of SAS Activity including meeting schedule, proposal statistics, other IODP meetings, and other news/updates. It was noted that of the 38 proposals at OTF some are not ready for drilling (e.g., geopolitics, safety issues, engineering issue) and this is a problem that needs to be evaluated and was discussed at last OTF meeting. Thomas inquired for clarification on how proposals that are not ready for drilling could go to OTF. Neal commented that SPC forwards to OTF on the basis of science and these other issues then get noted. Having lots of proposals at OTF allows lots of flexibility in scheduling through the end of the program. EDP will disband after next meeting under the thought that IOs will control engineering development with a Task Force. New SAS will have SSEP, SPC, SASEC condensed into a two-tier system. First call for new science plan proposal will be Oct 1, 2011. Preliminary OTF schedule for rest of program is available from website.

09:55

Watanabe gave the EDP Meeting Report from EDP #11 (Santa Fe, NM 14-17 July 2010). Review included executive summary and EDP CSs and AIs. EDP is still offering to offer review

of new science plan and critical engineering needs and is concerned that engineering development has not been fully appreciated in the science plan. EDP notes and appreciates the links between the EDP and STP roadmaps. EDP responded to STP CS 1003-13 ROV deployment of logging tools that environmental forces could be large for such operations and that larger-diameter pipe is preferred, but in some conditions as appropriate ROV-guided logging could be employed. EDP acted on STP CS 1003-23 – Microbiology Contamination Expert and has provided STP with contact information. Saito mentioned scoping studies that EDP noted on Deep Coring and Core Quality and commented STP would like to see a report on these scoping studies from IODP-MI.

10:25

Coffee break until 10:45.

10:45

Filippelli presented on SPC (updates) and SAS (re-organization). Started with summary of role of SPC. SPC made action on two APLs – 757-APL was not forward to OTF and 762-APL was forwarded to OTF. SPC CS 1003-03 recognizes need to develop adequate borehole monitoring in the future of ocean drilling, the lack of which may hinder science goals – a better job of getting funds/including funds for monitoring is desired; how to do this is not yet decided, but it is important; perhaps somehow setting aside extra funds at the onset for times of need. SPC CS 1003-07 notes how climate influenced early stages of human evolution and encourages the establishment of a Joint Program Planning Group (ICDP and IODP communities) to integrate onshore, lake and ocean drilling. SPC deactivated Proposals 547-Full4, 557-Full2, did not consider 703-Full for ranking, and asks for revisions on 667-Full, 595-Full3, and 698-Add2. SPC forwarded 11 proposals to OTF. SPC removed (CS 1003-16) the tier system for proposals at OTF or forwarded to OTF because the program is nearing its end.

SAS Restructuring is underway and is to be completed by 10/2011. Issues to be addressed in restructuring: redundancy of science evaluation functions between SSEP and SPC delaying proposals, inadequate technical/operational input in early stage of proposal development, exec. Committee with responsibilities of program approval but little ownership of science, and a lack of clarity of how technical, engineering, and sci. measurements advice is integrated with each other and with IOs. New structure should be simple and integrate key advice functions and show agility of program. New structure may have simplified science evaluation, assessment, and program approval structure, larger programs supported by workshop development (comment from Neal – how do we get panel representatives at these workshops? E.g. upcoming Mohole workshop), more direct early input on science and technical and operational realities, two panels instead of three; some service panel functions integrated with IODP-MI and IO processes; final structure architecture not clearly developed but requires advice from current structure. Advice needed from panels: how are current projects progressing? How to complete them? What are friction points that need improvement? What are key aspects that need to be carried forward and how should they be carried forward?

In looking at STP meetings and new development, Neal noted that STP looks at some long-term development as well as short-term, rapid-response inquiries from IOs on measurements (e.g. how to preserve cuttings). This could influence how/when STP meetings from now through new panel

structure, which will begin in 10/2011. STP can give early feedback and input to proposals and proposed measurements.

Open discussion and feedback from STP to Filippelli about the questions posed about SAS restructuring. Johnson – importance of modifying or redefining sampling and preservation of cores to make sure we don't eventually end up with "Swiss cheese" and can preserve core for future measurements; this is a protocol that would evolve with measurements and techniques something that STP would track. Filippelli asked – if STP did not exist, how would such functions be accomplished or preserved? Stoner – seems like some measurements/tools don't have rules/requirements that are explicit which results in ad hoc rules defined onboard the ship which may impact legacy of samples/material; STP can provide guidance as things evolve. Reichow – need something/panel in place that can quickly respond and provide advice to IOs and co-chiefs. Röhl – rules and regulations already exist with the sample allocation committee and the curator/CAB can be consulted to make sure the rules are being followed and implemented as rules state. Miller – there are rules and guidelines and each IO does not have the authority to govern those rules, but the panels do have the authority. Neal asked if we could review the current guidelines. Gupta – no recollection of guidelines or rules about sampling as whole rounds. Filippelli – could small task forces that interact with IOs provide that authority. STP – responds that won't give enough authority. Dugan – how do we ensure the longevity and completion of roadmaps (EDP/STP)? Neal – these roadmaps are living documents so it is crucial they get tracked, updated, and modified as tasks are completed or technologies and needs change. Filippelli – could roadmap developments be assessed with some regular Task Force meetings? Neal – that seems like it would be feasible. Morono – how can we implement STP roadmap and noted that Nature.com announced prizes for innovation and perhaps such prizes could potentially arise from implementation. Krastel – it is important to have a group that is an umbrella looking at short-term to the long-term. Gorin – need overarching continuity (short-to-long). Johnson – fractionating would destroy some of the synergy of team/committee working together for numerous, regular meetings. Neal and Gorin – corporate memory and knowledge of who to contact is important. Young – ANZIC had considered sending him to only every other meeting but have not because continuity is important. Sakamoto – likes the simplification of the system and notes we need to remember some panels needed to assess science and some to look at implementation. Dugan – commented on friction that was recently resolved about panels to pass CS directly rather than all through SPC (the old process that was slow) and it would be difficult to see such a bottleneck return if too many task force operations developed losing the panels and their direct communication.

Filippelli – interesting aspects of panel rotation is that it gets new people into the program; this is the case for all panels except EPSP, which doesn't rotate because of the need for safety and knowledge. Gorin – 6 meetings can be a short time to get up to speed. Neal – maybe 4 year (8 meeting) rotation is better to carry knowledge but also allow rotation. Filippelli – what is the disposition of the roadmap; have asked EDP to stamp roadmap and move forward to advertise and publish; would like same completion of our roadmap. Saito – STP roadmap is living document and it needs close linkage with new science plan and new implementation plan. Filippelli – strong, large dollar programs have very well defined implementation plans and we need to do this for the new program; having committee saying we know what the science is and we know how to do it would be valuable. Neal – inquired if we could make sure the current

science writing committee has access to the roadmaps and that any implementation plan writing committee also has them. Filippelli – STP should make a CS that roadmaps be provided writing committees, and that STP volunteer to help in writing or reviewing implementation plan. Kawamura – role of STP in QA/QC across platforms is critical and not a task force job, and also approval of measurement plans for expeditions by STP is important for the program; also important is STP assessment of 3rd party tools which also has IODP-MI policy. Filippelli – if some STP jobs can be done by task force (e.g. long-term roadmap revisions) but other tasks require a standing committee, why develop task force and take away some of the tasks? Neal – you may lose some information and linkage if you take away some tasks. Igarashi – noted that in updating Chikyu lab they have used EDP and STP roadmaps, INVEST input, Subsea Life Force Task Force, so IOs need community input to successfully maintain and update labs. Morono – for implementation of roadmap, we could re-evaluate and emphasize which items are ready to go when money is available and which require innovation and development. Saito – this is in spreadsheet but not in document.

Filippelli – encourage generation of consensus statements that were discussed during this SAS reorganization discussion.

12:25

Break for lunch. Reconvene at 13:30.

13:35

Item 10 (New IODP Science Plan discussion) has been tabled for the next meeting as there is no new science plan yet for discussion. It was noted that we need to have an email discussion once science plan is available. Action item will be written to have panel review science plan and to link it with items in STP roadmap.

Röhl gave ECORD summary. Update on how Exp. 325 (Great Barrier Reef) progressed – core flow and curation, some initial core catcher description, water sampling, microbiology, and MSCL were done. Routine microbiology samples were sent to KCC. Downhole logging in 4 holes. Prior to onshore sampling party, some whole core work was done in Bremen (X-ray CT, thermal conductivity, first dating on core catcher samples). Photos of massive corals were taken prior to splitting. Cores likely span the LGM (MIS2) and pre-LGM (MIS3). Future ESO Plans – at least 1 MSP before 2013; scoping 3 proposals (548 Chicxulub; 716 Hawaiian Drowned Reefs; 581 Late Pleistocene Coralgall Banks) but final decisions based on funding and permitting. ESO is looking at exploring use of seabed rock drills and logging. ESO will consider and new proposal forwarded to OTF before 2013. Neal inquired if low recovery was increased through the expedition as it started out very low. Röhl noted as experience of drilling team increased, so did recovery. Gupta noted that before drilling it was determined that RMS (routine microbiology samples) would go directly to KCC, but in reality all RMS went to science party and did not go to KCC. Schmitt inquired if all cores were CT scanned and if this could be a routine measurement or if it is too labor intensive. Röhl mentioned not all cores were scanned, and amount of scanning will depend on expedition objectives and science goals. Great Barrier Reef QAQC is not done yet because the sampling party just ended on 16 July. An update to the New Jersey (313) QAQC report was provided to the STP for review to follow up with the STP Sydney meeting.

Myers presented the USIO summary. Last few months of operations have been maintenance operations (4 months in Victoria). JR is now off doing Juan de Fuca cork installation which will be followed by Cascadia CORK and then South Pacific Gyre Microbiology, Louisville Seamount, CRISP, Superfast, and then coming to the Gulf of Mexico. After Superfast, the vessel comes off contract for 4 months so it may tie-up or may do off-contract work with the Chevron-DOE Gas Hydrate JIP. Myers thanked community for helping gather team for USIO External Assessment. Short summary of USIO-related CSs:

CS 1003-09 GBM on Exp 330 – is ready and should go forward

CS 1003-10 Formation Factor – working to find replacement for NCR, a potential replacement has been located

CS 1003-12 SCIMPI – won't be ready or sea-tested by Exp 328, but proponents are working with USIO for a 2011 deployment

Question from USIO – how much data do we include in the proceedings because so much of the data are already available online in digital form? There is a cost associated with taking data from database and reformatting and redisplaying in Proceedings. USIO would like STP input on this. Smear slide data and thin section data are already tabular but take a lot of time. Core images also take a lot of effort. Collier said this has also been discussed at IODP-MI and consensus was that there should be consistency in IODP however there is the opportunity to adapt/change this for new program. Collier also pointed out that different IOs have different databases that would have to be accommodated. Thomas – what is the implication for the user if changes are made to publications – table physically copied from proceedings or link in proceedings to database so publications people do not have to make multiple formats. Young – some peer-reviewed journals do this where a link is provided to a full data table. Kawamura – will this lead to any compromise in QAQC? Miller – no because that is done before publications. Morono – why are there already 3 versions of the data (DVD format, html, and pdf). Maybe start with measurements document and decide which are required in publication and which can be put as link to data table; also should address how many formats and what format we need for publications. Might be helpful to have somebody from publications give us some insight and an overview at the next meeting. This starts building where publications should go in the next program. An STP AI will be drafted about this. Ultimately STP may generate something like a measurements document but for publication requirements.

Mantle Frontier Workshop is sponsored by the Alfred P. Sloan Foundation as the Deep Carbon Observatory is interested in Deep Carbon but IODP is the vehicle to get to deep carbon. Johnson has applied for this and could be an STP representative at the workshop.

Igarashi presented CDEX Summary. Reply to CSs is in the CDEX report to STP. Chikyu schedule was provided for Exp 326, 331, 332, and 333 which carries through January 2011. Summary of Exp objectives also provided. Deep hot biosphere will have 4" thick industry core and core flow is developed for cores that are standard (HPCS) and industry core (HydroLift). Science plan is not finalized yet for deep hot biosphere so STP will have to evaluate it once completed. For 333 – basement core sampling may occur at KCC as cores will be collected at the end of the expedition. P-Mag for 333 – will use 2 spinner magnetometers and 2 AFD demagnetizers and an additional set of measurements from JAMSTEC-IFREE will be 3rd party and U-channel at KCC is one last option. STP has to evaluate the 3rd party tool application once

it has been made. CDEX provided overview of new L-He free SQUID that will be installed by Feb 2012. After 333, there is a Carbon Capture Sequestration drilling as a CPP (complementary project proposal) for Shimokita deep subsurface biosphere planning. CPP = ~70% POC money raised external of IODP program. STP will get a measurement plan for this program.

Chikyu lab updates – gas monitoring system, Iso VAN to unseal radioactive material, core splitter adjustment to accommodate industrial size cores.

Chikyu data handling errors – report was circulated to STP including XCT, MSCL-W, MAD, SQUID, UV-NH₄, and IC-Anion errors; corrected data will updated and uploaded to JCORES in mid-August. A detailed update will be given by Matsuda on 7 Aug at the STP meeting.

15:10

Coffee break.

15:25

Review of QAQC reports from the IOs.

USIO QAQC reported by Houpt.

Updates from Wilkesland Exp 318

1) TeKa thermal conductivity – MACOR reference worked well but had problems getting reasonable results from sediments. Problem has been isolated to reduction technique and a work-around exists by using the older regression technique.

All IOs are using TeKa so STP should disseminate this info to all IOs

2) Non-contact resistivity meter – removed from vessel as it has never worked correctly. USIO is looking at other methods. Chikyu also has MSCL NCR so it should be evaluated.

3) ICP-AES had excessive drift due to lack of consumables; this has been resolved.

4) TOC IR detector failed and could not be fixed. System is obsolete so a new system is being acquired

5) PFT gas chromatograph was not performing as needed. Onshore the system was tested and the contamination was also seen. Will have a service call soon and get it out to sea once fixed.

6) MS calibration – calibration standard from manufacturer is a broad check but values are undependable. Stoner said STP can look into it and should be able to find better standards and thus techniques.

7) NGR has a number of isotopes for calibration and is sufficient for basic measurements and total counts. To quantify K, U and Th USIO need to have standards with known quantities for these.

8) Chloride by titration standardization was not difficult but the IW samples from “Adelie Drift” site had notable dissolved sulfide which interfere with this measurement. IO is looking at ion-selective electrodes as replacement for titration.

Röhl provided a summary table for Exp 313 that was clear to all. Necessary changes have been made as best as possible.

CDEX QAQC issues will be covered on day 3 when we return to Chikyu data errors.

15:50

STP needs to approve Measurement Plans for Upcoming Expeditions – 331, 333 and CPP (Shimokita deep subsurface biosphere), 327, 328, 329, 330.

- 327 – may require some sampling of legacy cores so new science party can see how previous cores were described; this may lead to some sampling of the legacy cores for new measurements; one third party tool is being brought on board for titration of porewaters.
- 328 – will deploy and test new towed magnetometer during transit; this item was on STP roadmap which should be updated.
- 330 – Gottingen borehole magnetometer is 3rd party and IO has communicated with PIs about it so all data will be captured as necessary; portable XRF scanner (see comments in 329)
- 329 – expects to deploy a portable XRF scanner (has the science party thought about how it will be used? This is a test/development deployment of system as it is really being used for 330 at request of science party; tool may not be ready for 329). Reductions of O₂, NO₃⁻, SO₄²⁻, MN[IV] and Fe[II] to look at microbial activity – don't yet have technique information from scientists. In many of the measurements proposed, STP received insufficient information (e.g., sample technique, standard or non-standard, frequency) to fully evaluate the plan and asks how IO knows all adequate data will be captured; USIO says that science party has been informed they must document all techniques and protocols and all data will be captured in LIMS. Prospectus mentions that many of the techniques were used on 201. Neal proposes we approve the measurement plan but that a note should be provided to the co-chiefs and staff scientist making sure that all methods and data are captured. Question was raised if we need to develop a set of microbiology measurements that can be referenced? Houpt pointed out that this is still an evolving field so a standard set may not be reasonable. STP will approve with reservations and outline the list of what is needed and what the IOs need from co-chiefs to ensure success (e.g., methodology details, required consumables, etc.). Question – should STP devise a template of what a scientific measurement plan should include. STP needs to discuss support of 3rd party tools and will return to 3rd party tools listed in measurement plan.
- 331 - STP notes that plan include TeKa thermal conductivity; data reduction should be verified based on problems observed by USIO; because original sample of 4” cores is in aluminum liner have to modify MSCL-W plan; co-chiefs are aware of this; some of missed MSCL-W can be made in PVC liner on MSCL-S
- 333 - STP notes that plan include TeKa thermal con; data reduction should be verified based on problems observed by USIO; 3rd party may be involved for PMag but PIs are aware of requirements

16:45

Dugan presented a summary of the JR External Assessment completed in Victoria. Discussions included QAQC is already done by STP, what type of assessment will best help the IOs improve systems and advance, IODP-MI has requested FY11 review by CDEX as moving toward renewal, and how is this different/similar to ORTR. STP will draft a consensus statement to look at how STP can help the IOs, what the IOs expect/want for evaluation, and if/who STP can be involved in the lab assessments. It was noted that the assessment was funded outside of IODP-MI so distribution of information may be limited to USIO for this assessment.

17:25

Miller presented on DescLogik that the inherent flexibility of the software and limited support from the IO in early expeditions led to difficulty in using the tool. No data were lost, it is all preserved but accessing some of it can be difficult. USIO has made some revisions to the software and it has been tested and is working better. They are tracking changes and noting issues as they arise. USIO has good communication and regular communication so that improvements can be made quickly and efficiently. STP will request a biostratigraphy update on DescLogik for the next meeting.

17:40

Gupta provided an update on the Virtual Core Laboratory which is expected to be available online in about 2 months. Nice aspect is it allows unlimited sampling of data and provides web-interface for opportunity to use X-ray CT data, to get quick overview of 2-D XCT images, to download or request DICOM files for making 3D images, and to provide ability to study cores prior to sampling. A draft version of the VCL website was shown.

18:00

Meeting adjourned for the day.

08/06/10

08:30

Neal called meeting to order. Morning agenda is discussion of the Depth Scale document and its implementation. Neal gave an introduction to the Depth Scale document. There are two primary datums – rig floor and sea floor – to which most scales relate. The two unique depths are CCSF (core composite depth) and SSF (seismic depth scale).

Sakamoto provided a presentation on the depth scale issue based on experiences in Exp. 323. Sakamoto included some history to the development of the depth scale document and use on different expeditions. Scientists all agree that defining the source of the depth measurement is important and at a minimum should be captured in “Methods” chapters. There is some confusion because scientists are not familiar with the new terminology and there are not clear definitions of some of the sub-methods. Successful implementation of depth scale requires some simplification including better names that are easier to remember. Question – how do we correlate actual length of core recovered and driller’s depth? Important note that lots of sediment cores may change length over time; how to address this with depth scale? There are also software problems/issues associated with the new depth scales. One proposal is to make a “depth map” for processed depth

that includes a series of tie points and description of how done, when done, and by whom. Another suggestion is to track and upload section length in time. One important point for implementation is a consistent scheme on each database on all platforms. Need to have technicians onboard who are well versed in depth scales to help users and also ability to contact experts onshore as needed. Depth management is very important.

Generally agreed that alphabetical clarifications (CCSF-A, CCSF-B, etc) are not easy to follow and may be preferred to append existing scales with explicit method, date, and implementer (e.g., mcd (onshore splice table 20090805, Tats & Alan)). Also confusing with the alphabetical modifiers is that the modifiers relate to different sub-methods depending on the parent method (e.g. D is “other” in one case, but E is “other” in another case). The lack of consistency in publications of proceedings is problematic, so a recommendation for consistency in the way depths are used in publications would have value.

Need to develop recommendations to improve consistency and simplify the system. Revisions to the depth scale document and detailed graphics will help. Depth scale document needs a general introduction for new users. A focus group or task force is necessary to finalize/update the details of the depth scale document. STP can highlight what needs to be done – uniformity and consistency, cross-platform uniformity, simplifications (reduce confusion for understanding and implementation), depth-scale management, more illustrations, an introduction to the document, and a preferred approach for publications (probably mbsf or mbrf that will be qualified in the methods). Focus group must consist of people who are educated about the problems, issues and history but also a couple people from outside the program to give guidance on how outside community understands the terms. Is there a way once a core is collected, to put a scale on the core that can be used to monitor changes? It may be an approach to think about depths from a sample side of things.

10:05

Coffee break.

10:25

Discussion of what STP should put in Depth Scale consensus statement that will be sent to IODP-MI, IOs, and SPC. Statement should be explicit that there is not a need to rewrite the depth scale document and no need to create a whole new series of acronyms and terms; what is needed is clarification for it. Task force should be made aware of all existing versions and history of depth scale documents. Task force should work relatively quickly because of importance for publications and perhaps renewal. IO representatives should be involved in task force to make sure recommendations and changes are implementable.

10:35

Discussion of IODP Sample, Data, and Obligations Policy and trying to preserve as much of the working half of core for future science. With increasing technology, the amount of sample required for some measurements may be reduced – see Appendix D4 of Obligations Policy for current guidelines. Reduction of volumes would affect curation and volumes that are at repositories. General thought is that Appendix D4 volumes are OK. Does this Appendix need to be updated to include things like microbiology, ICP-MS, etc....or are those samplings that are

discussed and organized by the co-chiefs and sample allocation committee. Decided that document is OK as a guideline and does not need updating.

11:00

Taxonomic name list update provided by Kawamura. Dinoflag, foram, and radiolarian lists have been provided to IODP-MI. Group working on this has asked for an extension through end of September to provide IODP-MI with final lists. IODP-MI will build master database after getting final lists and get it out to the IOs. Need to make sure that lists get finalized and put into usable format for IODP-MI. IODP-MI needs to close the loop with D. Lazarus. STP will make a recommendation for IODP-MI to follow up with the paleontology coordination group to make sure lists get finalized.

Röhl provided an update on DIS (Drilling Information System) database which now has all BCR samples in it. All sampling and scientist information for BCR cores and samples are in the DIS and accessible through a web interface. Also have a web interface for curatorial data. New system provides one location for all information, which makes it easier for users/scientists. KCC does not yet have all the curatorial data migrated to JCORES and most likely won't; they have curated length, liner length etc in JCORES but access rest of the curatorial data through JANUS.

Evans provided an update on logging tools – microbiology tool, MMM, and MSS. MMM (multisensor magnetometer module) – purchasing sensors for the tool, working on acquiring non-magnetic pressure housing, design and construction of power supply and microcontroller in Fall 2010, large scale design and tool construction Fall 2010/Spring 2011, completion and bench testing Summer 2011/Fall 2011, test well deployment at Lamont Spring 2012, first expedition deployment Late 2012. MSS-B (Magnetic Susceptibility Sonde) – lost MSS-A in Exp 320, currently building 2 new tools (MSS-B), purchasing and building is underway, bench testing phase November/December 2010. MFTM (multi-function telemetry module) – to provide telemetry with their tools and SCIMPI etc in line with Schlumberger tools. DEBI-t (Development of a Deep Earth Biosphere tool) – similar device has been deployed on and ROV and want to adapt for a downhole tool, it is an optical tool with a UV source, questions about how it will work in presence of minerals that fluoresce (answer – sensors designed for specific acids/compounds) and what about if a filter cake is on borehole wall and presence of seawater in the borehole, data product will be microbial abundance on borehole walls as a function of depth. Should be an update on this tool at the next meeting. GBM – to be deployed on Exp 330 Louisville Seamounts, bench testing was done in August in Houston, co-chiefs have funding for a technician to sail with the tool. Question as to whether or not a 3rd party tool request has been submitted for this yet? STP will have to see/review this before the next meeting because Exp 330 occurs before next STP meeting.

Morono commented that perhaps STP develop a template for measurement plan to prevent problems and increase clarity of expedition measurement plans presented to STP based on the concerns STP had with Exp 329 measurement plan. Morono presented a draft template that looks like it could help streamline the presentation of material to STP. Perhaps such a form could be included in pre-cruise meeting and prospectus development to explain measurements that are beyond the minimum and standard measurements. Morono will provide example template and

consensus statement about it. Could also send out the template to the science party for completion after science party is selected.

12:00

Break for lunch.

13:30

Morono presented summary on core contamination issues and contamination tracing for riser drilling. Contamination tracing is established for riserless drilling but a method must be established and implemented for riser drilling. Tracer requirement – can be selectively analyzed, does not disturb drilling, does not disturb later analyses. Example tracers – PFT (used in riserless drilling), fluorescent tracer, biological tracers. Fluorescent and biological tracers require pore water for analysis. Tracer would be added in the Active Tank for mud on Chikyu. PFT will be mixed with drilling mud at 1 ppm, plug samples will be collected at outer and inner parts of core, plugs will be heated to 80°C for 10 min and headspace gas will be analyzed. GC-ECD is on Chikyu and tested for PFT analysis. Before expedition use – look at lab results, study effects of tracer on mud (done), establish standard procedure for PFT analysis, secure funds (\$1000/kg which is good for 1000km³ of mud). Lab test at KCC demonstrated that mud can be driven into sandstone specimens suggesting that riser mud could flow into drill cores for some, higher porosity (>13%) rocks. Also did PFT analysis of test cores (sandstones of 13% and 20% porosity). Still need more information on drilling mud composition which influences geochemistry of cuttings, chemical composition of mud should be periodically checked. Should routine analysis of drilling mud be a standard/supplemental IODP measurement? Focusing on microbiology, one just needs to know if mud penetrated or not (contamination) so maybe geochemical analysis of mud is not necessary as a routine. Igarashi noted that drilling mud composition is noted in the CDEX reports and should be available to scientists. Next step should be to try contamination tracing/testing in an expedition with riser drilling. Morono will write an action item to continue forward with testing plan/development of testing plan.

14:00

Routine Microbiological Sampling (RMS) curation procedures were presented by Gupta. Onboard processing of RMS – ensure overall cleanliness, visual inspection of core for disturbance, whole round core (WRC) sampling followed by sub-sampling of WRC, pack RMS into retort bag and store at -80°C, and samples are shipped to researchers or repository after packing with dry ice. Onshore processing – ensure overall cleanliness, store at -80°C but one aliquot at -160°C, sub-sampling of RMS in frozen conditions with band saw, sample shipment done with samples packed on dry ice, and maintain curatorial record of all sampling and sub-sampling. A chemical fixation procedure is available or QA/QC of RMS. RMS is done on Chikyu, but it is not done on JR or MSP partly influenced by cost and personnel (USIO) and sometimes by lithology even if RMS planned (ESO). STP should continue to monitor and push for RMS on all platforms. SubSeaFloor Life Task Force should promote availability and existence of samples to the broader communities. KCC would like STP to review report that was provided and give comments for its revision.

14:25

STP Roadmap discussion started by Saito. Following on Filippelli comments to get roadmap in appendix of new science plan and some implementations of parts of the roadmap that have been completed. Actions for STP this meeting – working group breakouts to update roadmap including new EDP links, complete Vers 1.1, and begin drafting an implementation plan. STP also needs to define linkages to New Science Plan once it is released for review. Should we publish our roadmap in Scientific Drilling? Or publish the implementation plan?

16:25

Breakout group summaries were presented for physical properties/petrophysics (Dugan), core description (Thomas), geochem/microbio (Neal). A question was raised on how the top 10 list was prioritized; that process should be clarified.

Implementation discussion led by Saito. Collier commented that a list of implemented roadmap items should be kept to show progress and how it was implemented. Need to review new science plan when draft is release and then how integrates with roadmap. May need to re-prioritize top 10 roadmap items based on science plan. We need to tighten up the criteria used to prioritize and put it up front in the roadmap. Then we must provide more detail on what it would take to implement those top items. Providing list of existing technology items on roadmap to IOs is also valuable as they continually update labs. Finding roadmap on IODP website is difficult and making sure Executive Summary is easy to find and download (good naming and location). It is important to specify which items are for which platforms (new column).

16:50

Neal presented summary of assignments for Consensus Statements/Action Items that need to be completed.

17:10

Meeting adjourned for the day.

08/07/2010

08:30

Neal called meeting to order.

Dugan gave presentations on Formation Factor and Pore Water Sampling. Group discussions supported more detailed testing and analysis are required. STP will draft action items and consensus statements to move these issues forward. Formation factor plan will include test plan for IOs to evaluate and comment. Pore water sampling plan will include tests that are desired but note that this needs to be carried out by community and reported back to IOs and STP so plan of implementation and methods can be updated as necessary. Additional porewater work was done on Expedition 320 and that should be investigated.

09:35

Morono gave a presentation on use of cores after freezing using the magnetic technique. CAS (Cell Alive System) – snap freezing with alternating magnetic field; goal is to get frozen cells without destroying them. Usually freezing forms water crystals that can destroy microstructure. CAS freezing will not form crystals so may be way to preserve cores for long time. Frozen cores may allow for sharing of samples from same horizon. Tests on Exp 904 showed CAS freezing did a good job at preserving cores compared to normal freezing or 4°C preservation. CAS freezing shows no detectable volume change during freezing. Test was also performed to see if CAS freezing affected magnetic properties of the core – remnant magnetization level is slightly decreased but it is unknown why. Steps forward – microbial cell survival after freezing, observe core microstructures, observe microfossils, cryosplitting of easily broken core samples. Thomas noted that freeze drying alters forams so observations of forams in CAS freezing would be useful. STP will develop action item to get more input on CAS freezing and desired applications or observations to be made.

10:00

Coffee break.

10:15

Update from IODP-MI on smear slide reference material. IODP-MI has request the money for next year to get the materials. If budget is approved, it will be acquired. STP will generate a consensus statement supporting the acquisition.

Gupta presented an update on curation of cuttings samples. Onboard processing – collect 2.5L cuttings every 5m interval which is split into 3 bottles (400 ml archive and 2 ~1000ml working portions). Cuttings are washed and sieved and then measurements/analyses are done. Residues from shipboard measurements are archived. Issues with cuttings – recovery varies with formation (perhaps use smaller mesh or curate smaller volumes as necessary); archiving of cuttings in unwashed and washed form (reaction of unwashed cuttings with mud, hardening of unwashed cuttings); data archive volume (e.g., 50% of cuttings in a bottle treated as archive half, and requests for sampling approved by CAB); residues from measurements be combined to make “pristine residue” treated as working half; magnetic fragments collected during sieving can be discarded soon after expedition; washed cuttings and pristine residue can be stored at room temperature. Also presented were information on core curation – consider 2 types of materials (dried up sediment due to moisture loss and basement cores) – can these be stored in air conditioned room rather than 4°C; after 5 year moratorium should archive half be used for sampling and working half be discarded? Seems like it would be a dangerous precedent to start getting rid of any materials before they are used up. Policy states that archive half is not open for sampling unless there are extreme circumstances (i.e., working half is completely sampled and the request gets approved from CAB). Desire of 4°C is to limit growth and degradation so room temperature storage is not suggested. Johnson will generate consensus statement responding to all inquiries from Gupta. Discussion about number of bottles required for archive and working splits of washed and unwashed cuttings.

11:10

CDEX presentation on data and measurement errors in IODP Expedition on Chikyu.

Presentation by Matsuda. A summary report was provided to the STP in digital format. Problems

found on the data processing/handling of instruments – XCT, MSCL-W, MAD (pycnometer), SRM, UV-NH4, ion-chromatograph. Summary of each errant measurement was provided including what was affected, what the cause was, what the solution is, and what the action is. Have updated data as possible in JCORES and will restart online distribution of data by 13 Aug. Still need to return to publications to see how tables/figures/text may require updates due to changes in the data. CDEX also looking at implementing system to prevent future mistakes and improve data quality.

11:45

Neal proposed STP re-read 3rd party tools document before next meeting (Action Item) and then have a full 3rd party tools discussion at 12th Meeting rather than at 11th Meeting.

12:00

Break for lunch.

13:45

Saito led discussion on panel rotations – STP member rotation and recommendation for new vice chair. Doug Schmitt was selected as he is from an ECORD country and he has corporate memory important for vice chair. Dugan, Neal, and Gorin rotate off STP after this meeting. Krastel rotates off after 12th meeting. Current status is that core description group is small, so that expertise is necessary. Secondary needs are petrophysics and petrology. Saito will contact PMOs to provide members in areas of need.

Saito led discussion on next meeting location and preliminary agenda. Two locations were proposed – Kochi and Auckland (JR port-call to test equipment on the JR). Miller said he could help coordinate and act as host. Miller will be in Auckland in December and could use that time to prepare/organize an STP meeting in Auckland in February. Auckland meeting would have to be 12-16 February as that is when the JR is available in port. Kochi time window is late January to early March. Saito proposed Kochi is primary location and Auckland is secondary location. Saito will follow up with panel to finalize location based on panel member schedules.

14:10

Neal and Saito led the discussion and approval of consensus statements/recommendations and action items. Neal also presented a summary of the proposed new science advisory structure from the triennial review.

Schmitt abstained from voting on the consensus statement for nomination of new STP vice chair as he was the nominee.

Saito abstained from voting on the consensus statement for nomination of new STP chair as he was the nominee.

Johnson abstained from voting on the consensus statement to attend Deep Carbon/Moho Workshop as he was the nominee to attend the workshop.

Dugan abstained from voting on the consensus statement on the External Assessment of the R/V JOIDES Resolution because he was on the external assessment team.

It was discussed whether Morono should vote on the consensus statement on the measurement plan for IODP Exp. 329 (South Pacific Gyre Microbiology) as he is participating as an expedition scientist. Neal (STP Chair) indicated Morono could vote and there was not a conflict; the panel supported this.

Krastel was absent for votes on the consensus statements for laboratory upgrades on Chikyu, pore water sampling techniques, field trip geotraverse, Gorin and SNFS and EMA, outgoing member Gorin, outgoing member Dugan, and outgoing member Neal.

Gorin abstained from voting on the consensus statement on the field trip geotraverse as it was thanking him for his organizing and leading the field trip. Gorin also abstained from voting on the consensus statement for Gorin and SNFS and EMA as it was for his involvement in the meeting. Gorin abstained from voting on the consensus statement thanking him for his service to STP.

Dugan abstained from voting on the consensus statement thanking him for his service to STP.

Neal abstained from voting on the consensus statement thanking him for his service to STP.

18:50

11th STP Meeting adjourned