

OTF SUMMARY

Sept 2007 - March 2008

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Preface

This report describes changes to the IODP platform schedules that have occurred following the August 2007 OTF/SPC meetings and up through the March OTF/SPC meetings. The report incorporates email discussion among OTF members, an ad-hoc OTF meeting in March 2007, and the platform schedules approved at the March 2008 SPC meeting.

1. IODP platform schedules -August 2007 OTF/SPC meetings

This section provides the state of platform schedules following the annual summer OTF/SPC meetings held in August 2007 (Santa Cruz). During those meetings, FY08 schedules were revised, provisional FY09 schedules (subject to budget guidance) were developed and approved for the FY09 Annual Program plan, and general consensus statements were developed to guide FY10 schedule development. The pertinent SPC consensus items regarding the schedules, along with graphical representations of the FY2008 and FY2009 schedules, are provided below. The reader is referred to the August SPC meeting report for details of the SPC meeting and to past OTF reports for more information regarding the development of schedules as of August 2007.

1.1 FY08 Platform Schedule

SPC Consensus 0708-04: The SPC approves the FY2008 and early FY2009 recommended scheduling options presented in the Operations Task Force (OTF) report.

Recommended expeditions for the *JOIDES Resolution* will begin in May 2008 and proceed as follows:

- Pacific Equatorial Age Transect II (Proposal 626-Full2)
- Bering Sea Plio-Pleistocene (Proposal 477-Full4)
- Pacific Equatorial Age Transect I (Proposal 626-Full2)
- Canterbury Basin (Proposal 600-Full)
- Wilkes Land Margin (Proposal 482-Full3)

Recommended expeditions for *Chikyu* will begin in late September 2007 and proceed as follows:

- NanTroSEIZE LWD
- NanTroSEIZE site NT2-3 riser pilot hole
- NanTroSEIZE sites NT1-3 and NT2-1 (ending in February 2008)
- NanTroSEIZE sites NT3-1, NT1-7, and NT1-1 (starting in early October 2008)
- NanTroSEIZE NT2-3 riser drilling

All NanTroSEIZE expeditions are related to proposal 603-CDP3 and component

proposals. Inspection and maintenance and non-IODP work is planned for February through September 2008.

MSP operations in FY2008 are expected to be New Jersey Shallow Shelf (Proposal 564-Full2). A possibility remains for Great Barrier Reef (519-Full2) operations starting in late FY2008 and spanning the FY2008/2009 transition

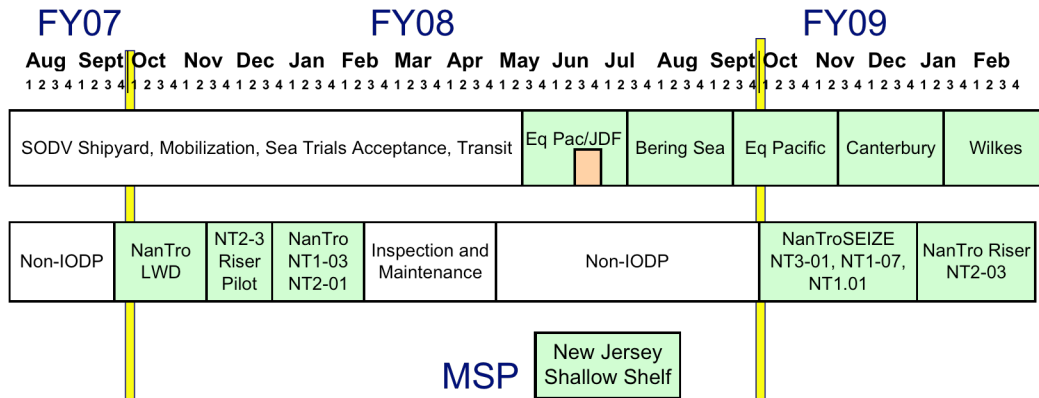


Figure OTF-1. OTF recommended and SPC approved FY08/early FY09 platform schedule revisions

1.2. FY09 Platform Schedule

SPC Consensus 0708-31: The SPC approves the FY2009 recommended scheduling options developed at the 29 August 2007 meeting of the Operations Task Force. Recommended FY2009 expeditions are:

JOIDES Resolution:

- Pacific Equatorial Age Transect I (Proposal 626-Full2)
- Canterbury Basin (Proposal 600-Full)
- Wilkes Land Margin (Proposal 482-Full3)
- Mariana (Prop 505-Full5 coring only) and South Chamorro CORK (Proposal 693-APL)
- Non-IODP work beginning mid-May 2009

Chikyu:

NanTroSEIZE sites NT3-1, NT1-7, and NT1-1

- NanTroSEIZE riser program
- Non-IODP work and Asian Monsoon (Proposal 605-Full2)
- NanTroSEIZE riser and observatory program (beginning 1 Sept. 2009)

MSP:

Great Barrier Reef (Proposal 519-Full2) beginning Sept. 2009

FY09 Platform Recommendations

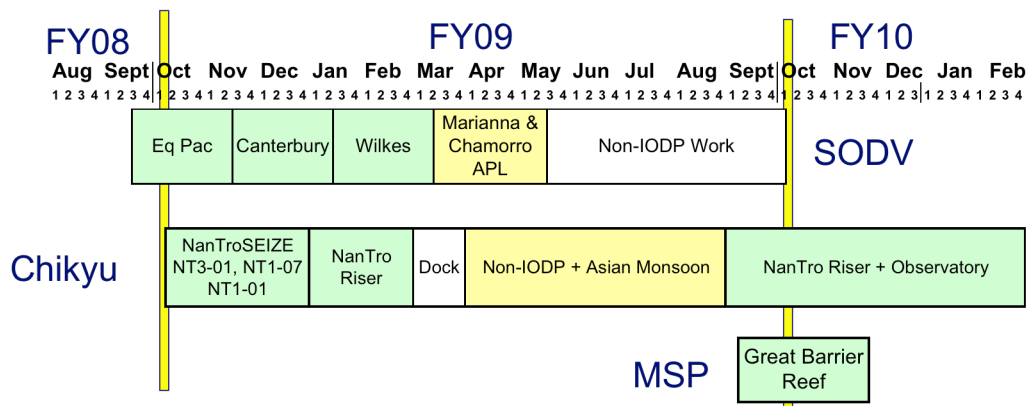


Figure OTF-2. OTF recommended and SPC approved FY08/early FY09 platform schedule revisions

1.3 FY10 Schedule Consensus Statements

SPC Consensus 0708-32: The SPC affirms that the *Chikyu* FY2010 riser program should be at site NT3-01.

SPC Consensus 0708-33: The SPC approves the Atlantic Ocean as the top priority ocean basin for FY2010 *JOIDES Resolution* operations, with Mid-Atlantic Ridge Microbiology (proposal 677-Full) as the top priority Tier 1 program.

SPC Consensus 0708-34: The March 2007 SPC rankings should guide expedition priorities for Tier 2 FY2010 *JOIDES Resolution* operations in the Atlantic Ocean, i.e., priorities are (1) 659-Full (Newfoundland Rifted Margin); (2) 644-Full2 (Mediterranean Outflow); and (3) 661-Full2 (Newfoundland Sediment Drifts)

SPC Consensus 0708-35: Should FY2010 *JOIDES Resolution* operations in the Indian Ocean become necessary, the SPC priorities for expeditions are: (1) 595-Full3 (Murray Ridge); (2) 549-Full6 (Northern Arabian Sea Monsoon); and (3) 552-Full3 (Bengal Fan).

SPC Consensus 0708-36: Juan de Fuca Flank Hydrogeology Part 2 (Proposal 545-Full3) is the Tier 1 choice for FY2010 *JOIDES Resolution* operations in the Pacific Ocean; Superfast Spreading Crust (Proposal 522-Full5) is the top-ranked Tier 2 choice.

2. Revisions to August 2007 Schedule

2.1. USIO – JOIDES Resolution revisions

In December 2007, following revisions to the delivery date of the SODV and recognizing the potential for additional delays, the USIO proposed several changes to the USIO's FY08 and FY09 schedules.

2.1.1 Reordering of expedition sequence

First, the USIO proposed a reordering of the first two *JOIDES Resolution* expeditions (see Figure OTF-3a, below). The August 2007 schedule was based on the weather constraints for Bering Sea, Wilkes Land and Juan de Fuca. Bering Sea was currently scheduled very late in the weather window (on site late July through early Sept) and could not be moved later (should the whole schedule slide due to additional delivery delay). Wilkes Land anchored the other end of the schedule in a weather window (February/earliest March) that has little room for movement (either forward or later). Juan de Fuca was in a satisfactory weather window but one that would be less ideal if *JOIDES Resolution* delivery forced it to move later in the year.

The August 2007 schedule assumed that the *JOIDES Resolution* would be delivered from the shipyard on the 31 March. Following delivery, the vessel would be docked in Loyang for loading and then sail on sea trials. However, any potential delivery delay (a high probability when this was discussed in December) would require an adjustment to the start date for the initial expedition (and all subsequent expeditions). As any shift in the Bering Sea expedition start date would put the expedition into an unacceptable start date, the Bering Sea expedition would have to be removed from the schedule.

In order to keep the Bering Sea expedition in the schedule, even if there was a delay of 1-2 months past 21 March, the USIO proposed switching the position of the first two expeditions (see Figure OTF-3b, below).

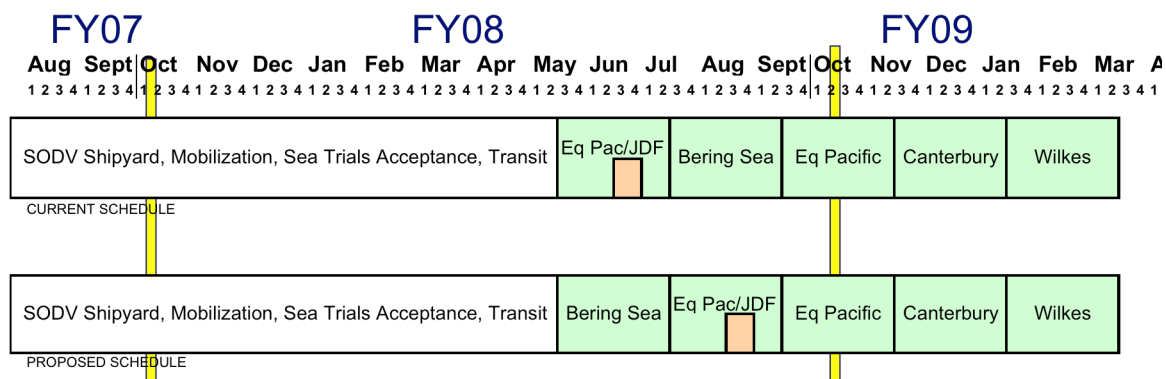


Figure OTF-3 (a) upper panel: Approved *JOIDES Resolution* schedule per August 2007 SPC meeting. (b) lower panel: Proposed *JOIDES Resolution* schedule switching the first two expeditions in order to keep Bering Sea in a good weather window should delays occur in the delivery schedule.

This change in itself is rather straight forward as it only reorders the expedition sequence. It does not change the science priorities. In this model the start date of the initial expedition would not change, however the port would. The Bering Sea program would start from Tomakomai, Japan and end in Astoria. This would be followed by the Juan de Fuca cementing/Equatorial Pacific program starting in Astoria and ending in Honolulu or Tahiti.

The advantage to this proposed change is that it moves the Bering Sea program into an improved weather window. In addition, it provides greater flexibility to accommodate up to a two month slippage in the shipyard schedule. It also provides greater stability by making the change now with adequate lead time for individuals to adjust to the change.

Disadvantages in switching the two programs include potential impact on the availability of shipboard participants and possible success of clearance for sites in Russian territorial waters. Clearance documentation has been already submitted for approval. Any changes to the initial documents could potential impact clearance approval. These risks are minimal, though. Not implementing the above would place delivery of the Bering Sea program at risk given any slip in the shipyard schedule. The only option then would be to remove the Bering Sea from the FY08 operating schedule for scheduling reconsideration.

Given the above discussion, OTF approved this modification as its working model (subject to full SPC approval in March 2008).

2.1.2 Accommodating a further adjustment in the shipyard delivery schedule

Further concern about potential delays in the SODV delivery date beyond March 31 prompted the USIO to propose, for pro-active planning purposes, a 30-day delay to the start of IODP operations (from mid May to mid June 15, 2007). The idea behind this proposal was take into account potential delays now when it is easier to address the issue rather than deal with this issue on a very short notice in March.

Given this updated information about the high probability of further delays in the SODV delivery schedule OTF felt it was prudent to plan for this now while there was time to effectively address the ramifications of this change and discuss fully with SPC new schedules that may result from such a change.

Thus, OTF approved this change in SODV start date and informed the USIO.

OTF then discussed the schedule changes required by incorporating this 30-day delay into the operational schedule. The first issue was that a simple shift of the entire schedule by 30 days would push much of the Wilkes operation into late March/early April --a very undesirable weather window (See Figure OTF-4b; below)

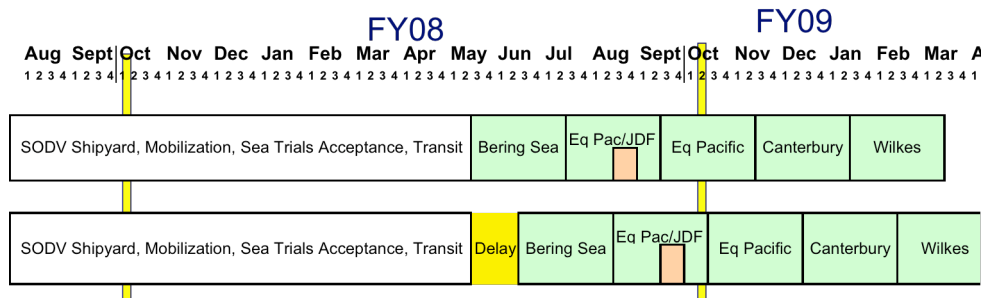


Figure OTF-4. (a) upper panel: SODV FY08/FY09 schedule with OTF recommended Bering-EqPac/JdF switch. (b) lower panel: proposed 30-day delay would shift schedule such that Wilkes Land is in an undesirable window.

To remedy this situation of an undesirable operational window for Wilkes, the USIO proposed that OTF remove an expedition in the schedule prior to Wilkes Land to move Wilkes back into its original desirable window (late Jan - early Mar). Removing a full expedition from the schedule between Bering Sea and Wilkes Land, however, results in up to 30 days of time available for science; either at the beginning of FY08 operations or in the middle of the sequence (Figure OTF5, third and fourth row).

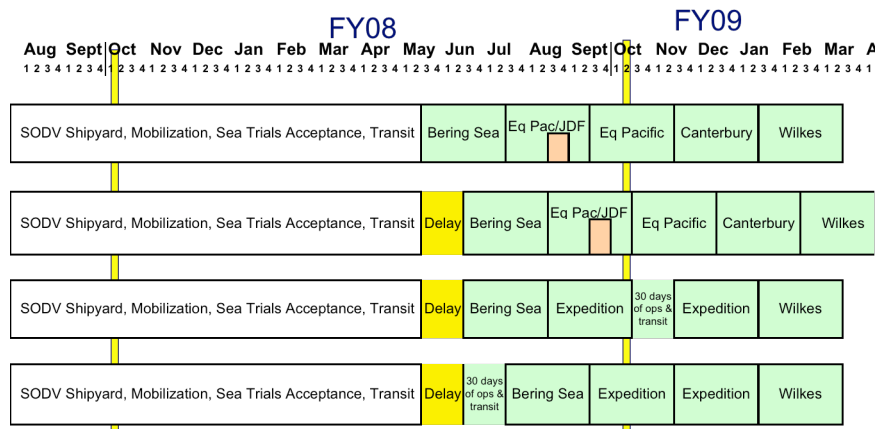


Figure OTF-5. Lower two panels build upon Figure OTF4 and show how moving Wilkes Land back into an acceptable weather window necessitates the need to remove an intermediate expedition but also provides for 30 days of potential operations time

Two issues arose from this scenario:

- 1) OTF needed to examine several options to determine if science operations could be implemented during these 30 days.
- 2) OTF needed to determine if Bering and Wilkes, with their restrictive weather windows were truly the end-point anchors of the schedule (and thus should be kept in the schedule if at all possible). If so, what other expeditions (Equatorial Pacific, Canterbury, Juan de Fuca cementing) should be removed from the schedule.

2.1.2.1 30-day Options

2.1.2.1.1 Middle sequence option –

OTF first examined inserting an operational program in the middle of the expedition sequence. Two likely programs that could fit into this 30-day window were discussed: Equatorial Pacific and Superfast (appropriate weather windows, in line with proposed transits, easily implemented programs).

Equatorial Pacific – Assumes the following: (a) 30 days are available, (b) expedition commences from Honolulu, (c) expedition ends in Tahiti.

- 11 days would be required for transiting to and from the operating area and ports.
- 19 days would be available for operations. In general, each site requires seven to nine days to complete the proposed science. The available time would allow completion of two+ sites with transit between sites. Thus two of the total eight proposed sites could be completed in the available time.

Superfast - Assumes the following: (a) 30 days are available, (b) expedition commences from Acapulco, (c) expedition ends in Tahiti.

- 18 days would be required for transiting to and from the operating area and ports.
- 12 days would be allowed for operations of which about four days would be used for hole clean out. This would result in about 8 available days for science.

The above two “middle of sequence” options indicate that with either option a significant number of days are spent transiting the vessel rather than completing science.

Furthermore, these models are based on the assumption of having a potential 30 day window. Further delay in the shipyard would further reduce the total days available for science. An additional delay in the shipyard would either option impractical.

2.1.2.1.2 Beginning of Sequence Option –

Two options were examined for the utilizing an additional 30 days prior to Bering Sea. Mariana and NanTroSEIZE “Inputs” were discussed, as these options are in line with transits (shipyard to Bering), have acceptable weather windows, and have easily implemented programs.

Mariana – Assumes the following: (a) 30 days are available, (b) expedition commences from Guam, (c) expedition ends in Tomakomai.

Note that the Mariana program would consist of a coring only program as

lead times and budgets would prevent delivery of the proposed CORKS /casing programs.

- 8 days would be required for transiting to and from the operating area and ports
- The proposed science program consists of ten sites. An estimate of 35 operating days is required to complete the proposed coring program. Only 22 days would be available for operations.

NanTroSEIZE – Assumes the following: (a) 30 days are available, (b) expedition commences from Yokohama, (c) expedition ends in Tomakomai.

- 9 days would be required for transiting to and from the operating area and ports
- The proposed science program consists of three sites. Approximately 39 operating days are required to complete the full, proposed program. 21 days would be available for operations. Most likely only one site could be completed in full, plus part of a second site.

The above two options show that significantly less time is invested in transit than the “middle of the sequence” options, allowing more time for completing science. This fact, combined with the increased flexibility an additional 30 days provides in managing any potential further delay in vessel delivery led OTF to prefer inserting the 30 days of operational time up front

At this point (just prior to the Christmas holiday break), OTF did not specify the operations to be conducted in this extra 30-day window, only that it preferred to put this window “up front”. Given the potential for further delays and the need to ensure that the USIO had ample time to shakedown its drilling and science systems, this scenario provided an additional contingency to compensate for potential delays

OTF then planned to continue the discussion of specific operations for this 30-day window and the actual expeditions that would fit into the revised four expedition schedule in early January after the Christmas holiday break

Before discussion resumed in January, further information coming from the shipyard strongly suggested that that the upfront "30 day" operations time would be consumed by shipyard and science system outfitting activities and it would not be possible to include any scientific operations in that time period. Thus further discussion resumed with the knowledge that operations would start with in mid-July with and that subsequent OTF discussion would revolve around determining the remaining expeditions.

2.1.3 Revising Sequence of Operations (part 1)

2.1.3.1 Science Priorities

Given that the USIO FY08/early FY09 schedule would begin mid-July 2007 and be a four-expedition package, OTF's next task was to select the expeditions to remain on the schedule. To determine these expeditions, OTF first addressed some basic questions regarding science priorities:

- Are both Bering Sea and Wilkes Lands of sufficient priority to keep them as anchor points to drive the rest of the schedule?
- Are Wilkes Land and Canterbury still a package? That is, if Canterbury is deemed of lower priority and removed, is a transit to Wilkes Lands still justified?
- How important is it to complete the Equatorial Pacific program in FY08/early FY09? That is, can we defer one of the two Equatorial Pacific programs to a later date (perhaps replace Marianna with a second Equatorial Pacific if funds are available for FY09 operations after Wilkes)? Is the answer the same if no funds are available for an FY09 program post-Wilkes?

2.1.3.2 The Polar Programs: Bering Sea and Wilkes

OTF members discussed the status of the two polar programs, Bering Sea and Wilkes. These programs have very specific weather windows and thus provide distinct anchor points for any schedule. Most OTF members agreed that these two programs should remain in the schedule if at all possible. They both focus on high-latitude paleoclimate, their science is strong (as articulated in the rankings of these proposals at SPC), and drilling these programs during the International Polar Year would be very beneficial for IODP.

2.1.3.3 Canterbury

Canterbury also hits a key climate change/sea level target, solidifying a set of completed and planned expeditions (i.e., New Jersey). This package (once completed) will show programmatic vision, ability to implement the vision, and mark a true “deliverable” in program parlance.

OTF always considered Canterbury and Wilkes as part of a Southern Ocean “package”, given the unlikelihood of either being drilled separately because of the large transit penalty. In addition, Canterbury and Bering/Wilkes have additional logistical (transit) considerations. They are less likely to be in the transit path to other science programs in subsequent years (given the other programs that currently reside at OTF)

There was a suggestion to move Canterbury to the time frame after Wilkes, which would allow for the implementation of both Equatorial Pacific expeditions between Bering Sea and Wilkes. This idea had two drawbacks. The first is that we are moving the expedition to a less desirable weather window. It is an acceptable window for safety but weather conditions (wave height), combined with shallow water, increase the risk of poor coring conditions. The second reason is that we may not have an FY09 operation following Wilkes (due to budgetary reasons). Thus we would be back in the position spending an immense amount of transit to conduct one Southern Ocean operations.

2.1.3.4 Juan de Fuca Commitment

Placing the Bering Sea as the first expedition would result in the Juan de Fuca remedial cementing being completed in the middle of September (if the combined Equatorial Pacific/Juan de Fuca Cementing operation is maintained in its current slot). The desired weather window to complete this operation is July to August. Operations in early to mid September may be successful, but there is increased risk. Operating in the region in late September or later is very problematic and should not take place at those times if at all possible.

Given the challenges associated with remedial cementing, the operator's preference would be to defer operations at Juan de Fuca until a better weather window. However, the proponents have made a strong case to OTF for moving forward on this cementing in September, as these holes need to be cemented as soon as possible. Further scheduling delay could have serious science ramifications for the Proposal 545 experimental program and the time/expense already put into that program. As such, if OTF/SPC were to keep the Juan de Fuca program a priority (and thus implement the cementing operations in September), 5-10 contingency days would need to be added to this program (at the expense of Equatorial Pacific operations which are paired with this work).

2.1.3.5 Equatorial Pacific Expeditions

OTF members next discussed the Equatorial Pacific Age Transect expeditions, particularly, the need for two expeditions and if two expeditions are required then how far in time can they be separated.

The USIO developed several scenarios for OTF to examine in order to evaluate the number of sites that can be achieved during one Equatorial Pacific program (with and w/o Juan de Fuca cementing). Scenario 1 assumes that Juan de Fuca is included in the program. Scenarios 2 and 3 assume that Juan de Fuca cementing is not included. All expeditions end in Tahiti to accommodate the start of Canterbury Basin. Scenario 3 is USIO's best guess (without Co-chief input) at trying to fit the priority sites into a single expedition while ensuring a complete stratigraphic section. In this third scenario only five sites are completed. The secondary sites proposed to ensure overlap of the sedimentary sequences

have been sacrificed due to time constraints. Also in this scenario, 70+ days are required to complete five sites, which exceeds the available time for an expedition and does not take into account sharing an expedition with the Juan de Fuca objectives. This information, combined with the need for the secondary sites (about 10 days depending on site sequence), would suggest that allocating a single expedition to completing the equatorial Pacific program places at risk the ability to achieve a continuous stratigraphic sequence and completion of the scientific objectives.

- Equatorial Pacific (w/JdF) - port of calls Victoria and Tahiti
 - 58 days (5 port days, 8 transit to/from port and 45 operating days (33 on site / 12 between sites)).
 - Sites include JdF and Eq Pac – 1C, 2C, 3C, and 4C
- Equatorial Pacific (w/o JdF) - port of calls Honolulu and Tahiti
 - 60 days ((5 port days, 12 transit to /from port and 43 operating days (39 on site / 4 between sites)).
 - Sites include Eq Pac – 1C, 2C, 3C, 4C, and 6C
- Equatorial Pacific (w/o JdF) - port of calls Honolulu and Tahiti
 - 70 days (5 port days, 12 transit to /from port and 53 operating days(48 on site between sites)).
 - Sites include Eq Pac – 1C, 3C, 4C, 6C and 7C

The three Equatorial Pacific scenarios presented by the USIO suggest that we do need two expeditions (definitely ---if we conduct Juan de Fuca cementing). It should be noted that scenario 3 (the best attempt at a full stratigraphic section) exceeds the allotted expedition time and most likely could not be conducted w/o disrupting the Canterbury/Wilkes schedules and crew rotations.

The prevailing mood (but not a unanimous consensus) among OTF was that we should keep Bering Sea, the Southern Ocean Canterbury/Wilkes Land package and the Equatorial Pacific /Juan de Fuca cementing expeditions in the schedule and defer one Equatorial Pacific operation until a later date. The reasons include maintaining regional balance of high-priority proposals, the improved logistics (transits) associated with a two-expedition Southern Ocean package, maintaining a commitment to Juan de Fuca, and the increased likelihood of a full Equatorial Pacific expedition (required to finish that program) being in future SODV transit paths.

Before the OTF was able close the discussion and come to a unanimous consensus, events in the SODV conversion overtook the process. In early February, the USIO and NSF

informed OTF that the expected delivery date for the SODV into IODP operations was now the middle of September, 2008.

2.1.4 Revising Sequence of Operations (Part 2)

2.1.4.1 Bering Sea deferral

A mid-September start date had serious implications for the SODV schedule. OTF could not simply shift the current operating schedule (Bering Sea, Juan de Fuca/Equatorial Pacific, Canterbury Basin, Wilkes Land) "to the right" to accommodate this change in start date. First, a mid-September start date for the Bering Sea expedition put it into an unacceptable weather window. As there is no acceptable weather window in mid-September to mid-May time frame for this expedition (the operating time frame for the SODV in FY08/FY09), this delay required that the Bering Sea program be deferred to an unspecified later date.

Removing Bering Sea from the start of the schedule (at a first glance) still provide for the remainder of the schedule to be completed (i.e., Juan de Fuca-Equatorial Pacific, Canterbury Basin, Wilkes Land, and Marianna). However, for Juan de Fuca cementing to be conducted in an acceptable weather window, it would have to occur in mid-late September. This scenario would require a cross-Pacific transit from the shipyard before operations could begin at Juan de Fuca and then move on to the Equatorial Pacific program. This approach provides 5 operational days at Juan de Fuca and only about 20 operational days at Equatorial Pacific (enough for only ~ two sites). There would be even less operational days at Equatorial Pacific if OTF put 5-10 days contingency time in the Juan de Fuca operations to compensate for potential bad weather this late in the season. Thus, the amount of transit time (28 days) spent for this expedition and the limited operational time at Equatorial Pacific in this scenario would seem to be too low to justify this as the first expedition out of the shipyard.

2.1.4.3 New schedule sequence

Given the above issues surrounding the change in start date of the SODV, the USIO proposed following schedule for discussion:

- Equatorial Pacific (w/o Juan de Fuca)
- Canterbury
- Wilkes Land,
- Equatorial Pacific /Juan de Fuca cementing

(Note: that this schedule substituted the Equatorial Pacific /Juan de Fuca cementing for Marianna)

This schedule provided the following benefits:

First, it kept the core of already planned programs in place (and still retained one of the two polar programs). To begin planning for a new set of operations for the mid-Sept 2008 to mid May 2009 time frame at this point would be extremely difficult, if not impossible, especially for the first 3 time slots.

Second, the schedule retained a programmatic commitment to Juan de Fuca and to finishing the Equatorial Pacific program. Although the Juan de Fuca cementing is later than preferred, it is still in an acceptable time frame to keep forward progress with that program.

Third, the schedule provided a contingency should there be additional slippage beyond mid-September. Should the schedule slip up to a few weeks, we can de-scope the full Equatorial Pacific expedition to fit the delay and still achieve much of the Equatorial Pacific objectives when this de-scoped expedition is combined with the Equatorial Pacific /Juan de Fuca cementing expedition results. If the delay is too long, we can defer this first full Equatorial Pacific expedition to a later date (as had previously had done).

Ramifications/Issues

1) This schedule removes Marianna (w/o CORK) from the previously approved schedule. However, OTF and SPC have generally supported the idea of working towards completion of expeditions/programs (in this case, Equatorial Pacific and Juan de Fuca [via the cementing operations]) before starting new programs. This proposed schedule is consistent with that approach.

2) This schedule leaves several Pacific programs still residing at OTF, including the completion of coring and observatory installation at Juan de Fuca, Bering Sea, Shatsky Rise, Superfast, Marianna, and Asian Monsoon (although this latter expedition might be picked up by *Chikyu*). Given the number of Pacific programs still at OTF, SPC will be requested to re-verify its previous consensus to move into the Atlantic in FY10.

3) The idea of combining Juan de Fuca cementing with Superfast (instead of Equatorial Pacific) was examined by OTF. The USIO calculated that after transits and cementing operations are factored in, only 13 operational days would be available for Superfast. The Equatorial Pacific/Juan de Fuca combination [proposed to be conducted] after Wilkes would provides 25 operational days at Equatorial Pacific and would have the added benefit of completing the Equatorial Pacific program started in the fall of 2008.

4) It is presumed [for this discussion] that the SODV will conduct an IODP expedition following the Wilkes expedition (whether it is Equatorial Pacific/Juan de Fuca, Marianna or something else) and then move into non-IODP work. In other words, for planning

purposes the USIO is evaluating a four expedition package for this mid-Sept - mid May time frame. However, FY08 and FY09 budgets are still being resolved and it is unclear if this fourth expedition can be financially supported at the time of this discussion.

5) It must be kept in mind that Non-IODP work is still a possibility following Wilkes and whatever expedition we have in the slot post-Wilkes might need to be deferred. This is consistent, though, with the "Tier" approach where Tier 2 programs are shifted to fit non-IODP work.

In summary, deferring the start date for the SODV to mid-September 2008 necessitated the deferment of Bering Sea and Juan de Fuca cementing operations until a later date. A SODV schedule consisting of Equatorial Pacific (w/o Juan de Fuca), Canterbury, Wilkes and Equatorial Pacific /Juan de Fuca was constructed by OTF and presented to SPC for approval (Figure OTF-6, lower panel).

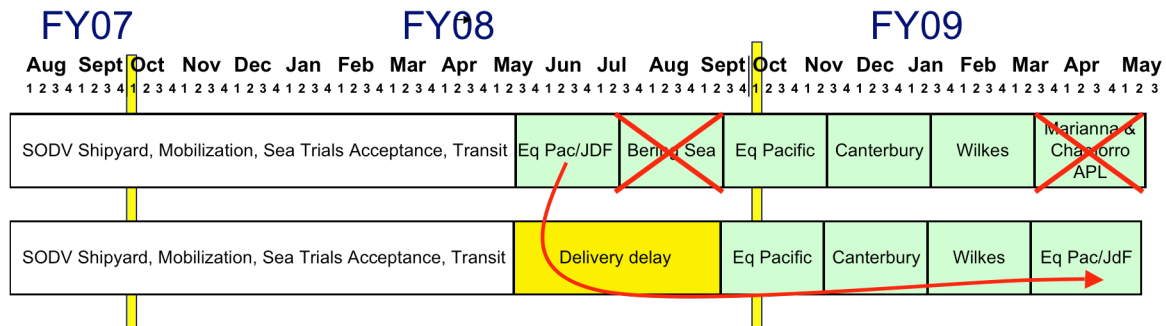


Figure OTF-6. Upper panel: FY08/FY09 SODV schedule approved at August 2007 SPC meeting. Lower Panel: FY08-FY09 SODV schedule presented to SPC (at March 2008 meeting) for approval

This schedule minimizes disruption in IO and community planning and provides some contingency (from individual site de-scoping to a complete removal of the first Equatorial Pacific) should the schedule slip further. It also attempts to finish one program (Equatorial Pac) and make needed and significant progress on another (Juan de Fuca).

2.1.4.4 Contingency for Further Slippage

OTF and SPC further discussed how to deal with any additional slippage of the SODV delivery date. Should the schedule slip such that the initial Equatorial Pacific expedition would have to be deferred (Figure OTF-7, middle and lower panel), two options were to be examined by the USIO. The first would simply move the deferred Equatorial Pacific expedition after the combined Equatorial Pacific/Juan de Fuca expedition. The second option would examine the possibility of idling the ship for one month and then conduct the deferred Bering Sea expedition in a mid June- mid August time frame. This latter

option was preferred by SPC but a final decision will have to wait until the USIO can fully cost out the two models.

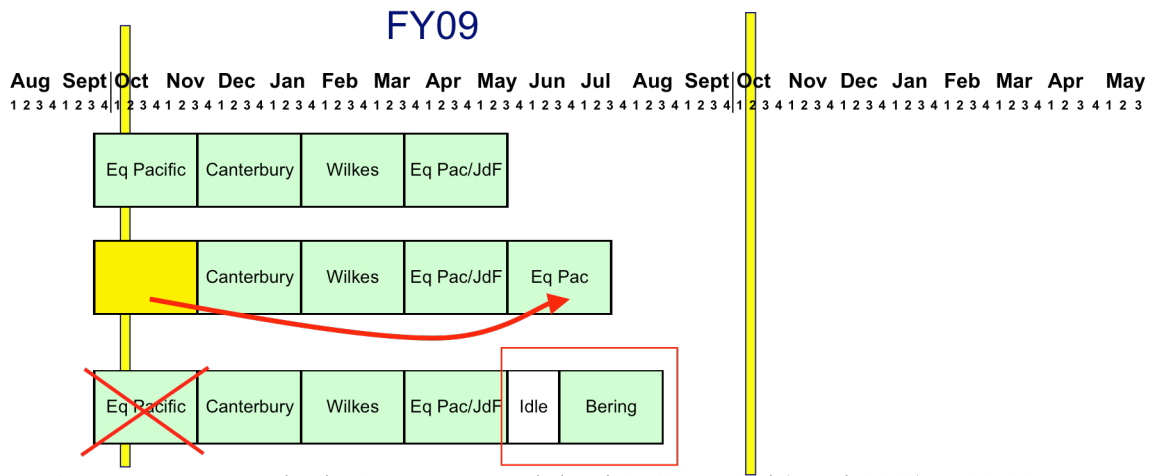


Figure OTF-7. Upper Panel: The OTF recommended and SPC approved (March 2008) FY09 SODV schedule. Middle and lower Panels: Contingency options to be examined by the USIO should further SODV delivery delays occur.

2.2 CDEX – Chikyu schedule revisions

2.2.1 FY09 scheduling issues

In February, CDEX informed the NanTroSEIZE Project Management Team (PMT) that only three months of (riserless) operations (Dec 2008-Feb 2009) would be available in FY09 (instead of the previously scheduled riser operations at NT2-03). In addition, the PMT learned that new operational limits on *Chikyu* riser operations (based upon recently completed Vortex Induced Vibration studies) also mean that the proposed riser sites (NT2-03 and NT3-01) will not be drilled unless the Kuroshio current moves into its Large Meander mode (i.e., away from the two sites). In essence, these schedule changes mean that the previously scheduled Riser operations for FY09 (see Figure OTF-2, above) would need to be delayed until at least 2010 (for budgetary reasons) and possibly beyond (if the Kuroshio does not change its meander mode or an acceptable alternate site found).

Given this new information, the OTF chair asked the PMT to:

- (1) Prioritize NanTroSEIZE riserless operations for this The Dec-Feb time period before the March 2008 OTF/SPC meetings. OTF/SPC would then examine these options and prioritize them against other IODP riserless programs that could be conducted by CDEX/Chikyu during that time from

and

(2) Examine options for alternate riser sites in the NanTroSEIZE area and provide OTF with these prioritized options during the summer of 2008 (When OTF would be discussing FY10 platform options).

2.2.2 Riserless Options –FY09

In response to request #1 (NanTroSEIZE riserless priorities for Dec 2008- Feb 2009), the PMT recommended to the OTF chair two separate expeditions. The first would include coring of the Input Sites -- NT1-07 and NT1-01 (The PMT also provided additional coring contingencies should they be needed). This program is essentially what had been previously approved by OTF and SPC at the August 2007 OTF/SPC meetings (however at that time we thought the expedition would be in the late fall of 2008). The second expedition would be install casing at the two sites planned for the Non-riser Observatories (NT2-01 and NT3-01). This latter expedition provides important building blocks (both scientific and logistical) for future observatory installation in the deep riser holes.

The OTF chair then requested that CDEX develop time estimates for these operations NanTroSEIZE operations along with other non-NanTroSEIZE operations (e.g., Asian Monsoon, Shatsky Rise, Marianna, etc) that could be conducted in the proposed FY09 operational time frame.

At its March meeting just prior to the SPC meeting, OTF examined *Chikyu* operations for FY09 operations (Dec-Feb time block). The following programs were discussed: NanTroSEIZE riserless (as defined by the PMT), Asian Monsoon, Shatsky Rise, and Marianna. Asian Monsoon and Marianna were deemed riskier options as compared to NanTroSEIZE and Shatsky by OTF because of weather window constraints (ideal times for these operations are late spring to summer). Shatsky Rise operations had significant crew change and Supply base issues compared with NanTroSEIZE. Thus OTF recommended the NanTroSEIZE operations for the Dec-Feb time slot.

CDEX noted that there might be additional riserless time in FY09 (somewhere in the March-May time frame), but indicated that operations in time period are still subject to pending budget discussion with MEXT. Previously, OTF had recommended that Asian Monsoon be conducted in this time frame if riserless operational time became available (Note that NanTroSEIZE operations cannot be conducted in this time frame because of fishing union restrictions). OTF did not change its recommendation but did indicate that if other regional programs were forwarded by SPC at their March 2008 meeting, these could also be considered for prioritization in this Mar-May period. Indeed, SPC did recommend that Okinawa Trough (601Full3) be considered the first priority for this slot.

The OTF recommended FY09 operations for CDEX/*Chikyu* are shown in Figure OTF-8 (below). These changes were approved by SPC at their March 2008 meeting. The primary changes are (1) the removal of riser operation in FY09 (see Section 3.1.3 below), (2) moving the NanTroSEIZE “Input Sites” coring to the Dec-Feb time frame, (3) including a casing operation for preparation of riserless observatory installation

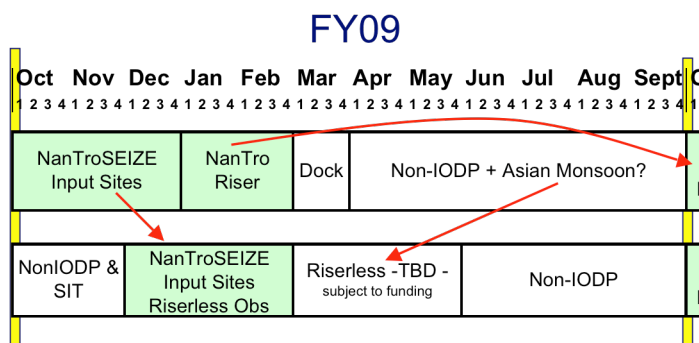


Figure OTF-8. Upper panel: Previous CDEX/*Chikyu* FY09 schedule as of the August 2007 OTF/SPC meetings. Lower panel: Revised FY09 *Chikyu* operations. Major changes include (1) moving the start of riser operation to FY10 (see Section 3.1.3 below), (2) moving the NanTroSEIZE “Input Sites” coring to the Dec-Feb time frame, (3) including a casing operation for preparation of riserless observatory installation

In sum, the OTF recommended (and SPC approved) FY09 *Chikyu* schedule (1) kept previously approved “Input Sites” coring, (2) Added drilling/casing for riserless observatory sites and (3) kept open the possibility of additional riserless drilling (either Okinawa Trough or Asian Monsoon) should funding become available.

2.2.3 Riser operations

As described in Section 3.1.1 (above), numerous issues including funding constraints and operational constraints (i.e. Kuroshio current) have forced the start of riser operations at NanTroSEIZE to be delayed until the start of FY10. The NanTroSEIZE PMT is now examining alternate riser site locations in the even the Kuroshio does not change from its current Large Meander path. OTF will examine these alternate sites during summer 2008 meeting and make recommendations to SPC as to where riser drilling (i.e., which NanTroSEIZE site) should be started in FY10.

2.3. ESO - MSP Scheduling updates

2.3.1 New Jersey Shallow Shelf – FY08

No major changes or revisions to the proposed FY08 MSP operations occurred between August 2007 and March 2008. The tendering process for the a rig was conducted during the time frame and ESO was still in discussion with a potential operator as of the March

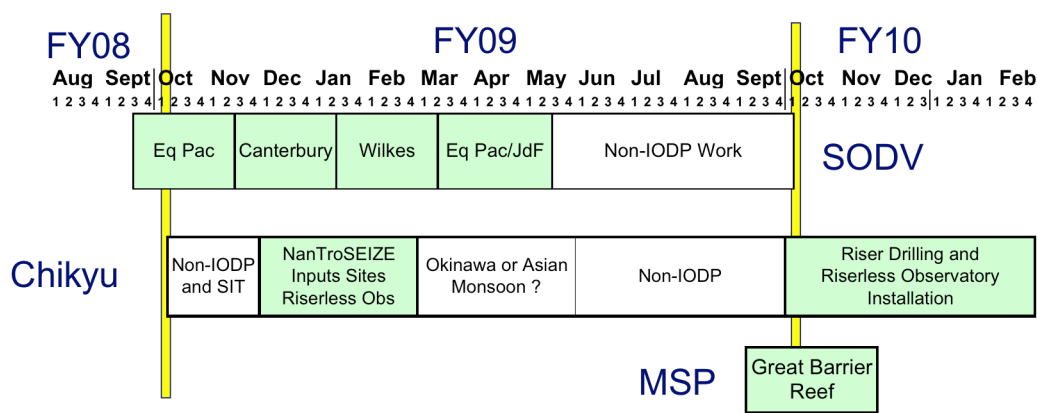
2007 OTF/SPC meetings. ESO indicated they were still planning for a May 2008 start for operations.

2.3.2 Great Barrier Reef -- FY09

In December, ESO informed OTF that for reasons of funding, permitting, and limited time for logistics the ESO would not attempt to schedule the Great Barrier Reef (GBR) in FY2008 but plan for a Sept-Nov 2009 implementation. Such a change was not unexpected due to the problems that ESO was having in securing permission to drill in the Great Barrier Reef Marine Park (GBRMP). Planning time was becoming too compressed to successfully implement both New Jersey and GBR in the same fiscal year.

The second major update regarding GBR occurred late February. After numerous attempts to clarify issues and concerns with GBRMP, ESO was notified that its request to drill in the GBRMP was approved. ESO informed OTF that it is planning for operations starting in September 2009. At their March 2008 meetings, OTF and SPC re-confirmed the program's commitment to GBR for FY09.

3. FY09 Schedule (approved at March SPC meeting)



4. Appendices

4.1 Appendix A: OTF Proposals as of March 2008

Table OTF-1 (below) provides a list of expeditions currently at OTF.

Proposal No.	Short Title	Ocean	Platform	Tier
603-Full A-D	NanTroSEIZE	Pacific	Chikyu	
626-Full2	Pacific Equatorial Transect	Pacific	JR	
482-Full3	Wilkes	Pacific	JR	
600-Full	Canterbury	Pacific	JR	
564-Full	New Jersey	Atlantic	MSP	
519-Full2	Great Barrier Reef	Pacific	MSP	
644-Full2	Mediterranean Outflow	Atlantic	JR	Tier 1
659-Full	Newfoundland Rifted Margin	Atlantic	JR	
677-Full	Mid-Atlantic Microbiology	Atlantic	JR	Tier 1
581-Full2	Late Pleistocene Coralgall Banks	Atlantic	MSP	
595-Full3	Murray Ridge -- Indus Fan	Indian	Chikyu	
724-Full	Gulf of Aden Faunal Evolution	Indian	JR	Tier 1
549-Full6	Northern Arabian Sea Monsoon	Indian	JR	
537B-Full4	Costa Rica Seismogenesis Project Phase B	Pacific	Chikyu	Tier 1
537A-Full5	Costa Rica Seismogenesis Project Phase A	Pacific	JR/Chikyu	
601-Full3	Okinawa Trough Deep Biosphere	Pacific	JR/Chikyu	Tier 1
605-Full2	Asian Monsoon	Pacific	JR/Chikyu	
662-Full3	South Pacific Gyre Microbiology	Pacific	JR	
633-Full2	Costa Rica Mud Mounds	Pacific	JR	
686-Full	Southern Alaska Margin 1: Climate-Tectonics	Pacific	JR	
654-Full2	Shatsky Rise Origin	Pacific	JR	
522-Full5	Superfast Spreading Crust	Pacific	JR	
505-Full5	Marianna	Pacific	JR	Tier 1
545 Full	Juan de Fuca Hydrgeology	Pacific	JR	Tier 1
477-Full4	Bering	Pacific	JR	
638-APL2	Adelie APL	Pacific	JR	
693-APL	Chamorro APL	Pacific	JR	

Table OTF-1. Programs residing at OTF following the March SPC meeting. Items shaded in green indicate Programs currently scheduled (as of March 2008). Tier 1 programs are those OTF is committed to scheduling in next 3-5 years.

SPC Meeting #1 - Sep03 - Sapporo, Japan						
519-Full2	South Pacific Sea Level (Great Barrier)	1	4.43	2.56	I	Scheduled***
512-Full3	Oceanic Core Complex	2	4.57	3.16	I	Completed
545-Full	Juan de Fuca Hydro (2nd exp)	3	4.64	3.88	I	Partially Completed
564-Full	New Jersey Sea Level	4	5.21	3.81	I	Scheduled ***
589-Full3	Gulf of Mexico	5	6.21	5.22	I	Partial Complete/Return to SPC1
553-Full2	Cascadia Margin Hydrates	6	8.14	4.00	II	Return to SPC
572-Full3	N. Atlantic Late Neogene-Quaternary Climate	7	8.64	3.67	II	Completed
482-Full3	Wilkes Land Margin	8	8.79	4.59	II	Return to SPC
543-Full2	CORK in Hole 642E 9.14 3.96	9	9.14	3.96	II	Return to SPC
547-Full4	Oceanic Subsurface Biosphere 9.50 3.25	10	9.50	3.25	II	Return to SPC
595-Full3	Indus Fan and Murray Ridge 9.57 3.13	11	9.57	3.13	II	Return to SPC
584-Full2	TAG II Hydrothermal 10.21 3.14	12	10.21	3.14	II	Return to SPC
557-Full2	Storegga Slide Gas Hydrates	13	11.14	3.48		Not Forwarded
581-Full2	Late Pleistocene Coralgal Banks	14	11.14	3.98		Not Forwarded
548-Full2	Chicxulub K-T Impact Crater	15	11.57	5.77		Not Forwarded
573-Full2	Porcupine Basin Carbonate Mounds	16	13.07	3.67		Not Forwarded

SPC Meeting #3 - Jun04 - Yokohama, Japan						
522-Full3	Superfast Spreading Crust	1	3.18	2.30	I	Partial Complete/ Return to SPC 2
603A-F2	NanTroSEIZE Phase I	2	3.47	2.45	I	Scheduled
603B-F2	NanTroSEIZE Phase II	3	3.76	2.77	I	Scheduled
477-Full4	Okhotsk/Bering Pliocene/Pleistocene	4	5.12	3.43	I	TBS
482-Full3	Wilkes Land	5	5.94	3.27	I	Scheduled
553-Full2	Cascadia Hydrates	6	6.35	3.12	I	Partial Complete/ Return to SPC1
600-Full	Canterbury Basin	7	6.88	3.57	I	Scheduled
621-Full	Monterey Bay Observatory	n/a	n/a	n/a	n/a	Deactivated
595-Full3	Indus Fun and Murray Ridge	8	8.82	2.88	II	Return to SPC
547-Full4	Oceanic Subsurface Biosphere	9	9.24	3.99	II	Return to SPC
557-Full2	Storegga Slide Gas Hydrates	10	9.65	4.05	II	Return to SPC
581-Full2	Late Pleistocene Coralgal Banks	11	10.53	2.94	III	Return to SPC
584-Full2	TAG II Hydrothermal	12	10.88	2.96	III	Return to SPC
555-Full3	Cretan Margin	12	11.18	2.24	III	Return to SPC
573-Full2	Porcupine Basin Carbonate Mounds	14	12.06	2.95	III	Completed
537A-Full3	CRISP Stage 1	15	12.94	1.95	III	Return to SPC

SPC Meeting #5 - Mar05 - Lisbon, Portugal						
603C-Full	NanTroSEIZE Phase III	1	1.38	0.81		Scheduled
595-Full3	Indus Fan and Murray Ridge	2	3.06	1.12		TBS
626-Full2	Pacific Equatorial Age Transect	3	3.19	2.07		Scheduled
552-Full3	Bengal Fan	4	5.44	2.5		Not forwarded
547-Full4	Oceanic Subsurface Biosphere	5	5.88	2.22		Not forwarded
584-Full2	TAG II Hydrothermal	5	5.88	2.16		Not forwarded
505-Full5	Mariana Convergent Margin	7	6.38	2.16		Not forwarded
581-Full2	Late Pleistocene Coralgal Banks	7	6.38	1.54		Not forwarded
555-Full3	Cretan Margin	9	7.44	1.09		Not forwarded

SPC Meeting #7 - Mar06 - St. Petersburg, FL						
677-Full	Mid Atlantic Ridge Microbiology	1	2.40	2.10	I	TBS
603D-F2	NanTroSEIZE Observatories	2	3.90	3.60	I	Scheduled
637-Full2	New England Hydrogeology	3	3.90	3.60	n/a-on hold	Return to SPC1
605-Full2	Asian Monsoon	4	5.90	3.60	I	TBS
549-Full6	Northern Arabian Sea Monsoon	5	6.00	3.20	I	Return to SPC 2
537A-F5	Costa Rica Seismogenic Phase A	6	6.60	3.50	I	Return to SPC1
537B-Full4	Costa Rica Seismogenesis Project Phase B	7	8.65	3.37	II	Return to SPC
552-Full3	Bengal Fan	8	9.71	3.89	II	Not forwarded - On hold
505-Full5	Mariana Convergent Margin	9	10.53	3.61	II	Return to SPC
659-Full	Newfoundland Rifted Margin	10	10.59	3.08	II	Return to SPC
654-Full2	Shatsky Rise Origin	11	11.06	3.4	II	Not forwarded - On hold
555-Full3	Cretan Margin	12	11.47	4.69	II	Not forwarded - On hold
667-Full	Northwest Australian Shelf Eustasy	13	11.76	3.99	II	Not forwarded - On hold
535-Full5	Atlantis Bank Deep	14	12.18	3.24		Not forwarded
584-Full2	TAG II Hydrothermal	15	12.53	4.24		Not forwarded
618-Full3	East Asia Margin	16	13	3.39		Not forwarded
547-Full4	Oceanic Subsurface Biosphere	17	13.76	2.91		Not forwarded

SPC Meeting #9 - Mar07 - Osaka, Japan						
505-Full5	Mariana Convergent Margin	1	5.59	3.36	I	TBS
659-Full	Newfoundland Rifted Margin	2	5.76	3.80	I	Return to SPC1
633-Full2	Costa Rica Mud Mounds	3	6.12	3.48	I	Return to SPC1
552-Full3	Bengal Fan	4	6.29	4.06	I	Return to SPC 2
644-Full2	Mediterranean Outflow	5	6.35	3.44	I	Return to SPC 2
654-Full2	Shatsky Rise Origin	6	6.65	4.00	I	Return to SPC 2
537B-F4	Costa Rica Seismogenic Phase B	7	6.94	2.93	I	Return to SPC1
522-Full5	Superfast Spreading Crust IV	8	7.18	4.00	I	Return to SPC 2
661-Full2	Newfoundland Sediment Drifts	9	7.29	4.13	I	Return to SPC 2
548-Full2	Chicxulub K-T Impact Crater	10	8.18	5.04	II	Return to SPC1
612-Full3	Geodynamo	11	9.71	5.64	II	Return to SPC1
581-Full2	Late Pleistocene Coralgal Banks	12	9.94	4.19	II	Return To SPC1
535-Full5	Atlantis Bank Deep	14	12.18	3.54		Not forwarded
584-Full2	TAG II Hydrothermal	15	12.53	4.24		Not forwarded
618-Full3	East Asia Margin	16	13	3.39		Not forwarded
547-Full4	Oceanic Subsurface Biosphere	17	13.76	2.91		Not forwarded

SPC Meeting #11 - Mar08 - Barcelona, Spain						
724-Full	Gulf of Aden Faunal Evolution	1	2.94	2.82		TBS
601-Full3	Okinawa Trough Deep Biosphere	2	6.35	5.37		TBS
644-Full2	Mediterranean Outflow	3	8.06	5.26		TBS
662-Full3	South Pacific Gyre Microbiology	4	8.41	6.38		TBS
659-Full	Newfoundland Rifted Margin	5	9.47	5.64		TBS
637-Full2	New England Shelf Hydrogeology	6	9.71	6.29		Not forwarded
537B-Full4	Costa Rica Seismogenesis Project Phase B	7	10.18	5.66		TBS
633-Full2	Costa Rica Mud Mounds	8	10.71	7.25		TBS
549-Full6	Northern Arabian Sea Monsoon	9	11.18	5.64		TBS
686-Full	Southern Alaska Margin 1: Climate-Tectonics	10	11.82	6.52		TBS
537A-Full5	Costa Rica Seismogenesis Project Phase A	11	12.65	6.17		TBS
654-Full2	Shatsky Rise Origin	12	13.06	6.45		TBS
522-Full5	Superfast Spreading Crust	13	13.76	6.58		TBS
553-Full2	Cascadia Margin Hydrates	14	14.35	6.20		Not forwarded
669-Full3	Walvis Ridge Hotspot	15	14.35	5.70		Not forwarded
548-Full2	Chicxulub K-T Impact Crater	16	14.47	9.10		Not forwarded
556-Full4	Malvinas Confluence	17	14.71	5.95		Not forwarded
661-Full2	Newfoundland Sediment Drifts	18	15.00	5.49		Not forwarded
703-Full	Costa Rica SeisCork	19	15.18	6.28		Not forwarded
581-Full2	Late Pleistocene Coralgal Banks	20	15.24	7.39		TBS
567-Full4	South Pacific Paleogene	21	15.65	4.17		Not forwarded
589-Full3	Gulf of Mexico Overpressures	22	18.24	3.98		Not forwarded
612-Full3	Geodynamo	23	19.35	8.57		Not forwarded
584-Full2	TAG II Hydrothermal	24	19.65	6.62		Not forwarded
535-Full6	Atlantis Bank Deep	25	22.76	2.68		Not forwarded
547-Full4	Oceanic Subsurface Biosphere	26	23.76	3.03		

4.2 Appendix B: Status of all Proposals forwarded to OTF during IODP

TBS=To Be Scheduled

*** FY09 but no platform tender yet

Return to SPC -- Proposal returned when not scheduled in

Return to SPC1 -- see Aug 07 SPC minutes

Return to SPC 2 -- See Mar 08 SPC minutes

Not forwarded -- not sent to OTF by SPC

Programs at OTF as of March 08 SPC

Deactivated - See Aug 07 SPC minutes