

SCD Implementation Workshop

January 5-7, 2011, Austin, TX



Workshop Agenda (01/03/2011 version)

January 5, 2011

Phase 1. Sharpen the focus of the seven key topics

8:00 AM Introduction by conveners (Thurber, Underwood)

8:15 AM Briefings by GSOC Chair, NSF (Morgan, Haq)

Plenary talks on the seven key topics (moderators Underwood and DeShon)

9:00 AM Key topic 1 talk: Thorne Lay, Controls on the size, frequency and slip behavior of subduction plate boundaries

9:20 AM Key topic 2 talk: Jeff Freymueller, Spatial and temporal patterns of deformation through the seismic cycle

9:40 AM Key topic 3 talk: Greg Hirth, Linkages between volatile release and the rheology of the plate boundary interface

10:00 AM COFFEE BREAK

10:20 AM Key topic 4 talk: Paul Wallace, Storage, transfer, and release of volatiles through subduction systems

10:40 AM Key topic 5 talk: Maureen Feineman, Geochemical products of subduction and creation of continental crust

11:00 AM Key topic 6 talk: Bob Stern, Subduction zone initiation and arc system formation

11:20 AM Key topic 7 talk: John Jaeger, Feedbacks between surface processes and subduction zone dynamics

11:40 AM Questions and answers; break-out instructions

12:00-1:00 LUNCH

1:00 PM *Break-out sessions (7):* each on one of the 7 key topics - focus and refine the science; allow for session switching mid-way through

Break-out session leaders:

- 1 - Emily Brodsky and Chuck Ammon
- 2 - Kelin Wang and Heather Savage
- 3 - Ikuko Wada and Shun-ichiro Karato
- 4 - Doug Wiens and Kathy Cashman
- 5 - Rebecca Lange and Liz Cottrell
- 6 - Mark Reagan and Magali Billen
- 7 - Liz Hajek and Ken Ridgway

- 3:00 PM COFFEE BREAK
- 3:30 PM Talks by early-career speakers (3 talks, 20 min each; moderators Kelley and van Avendonk)
- 1 Heather DeShon: Double-difference tomography applied to the Middle America and Sunda seismogenic zones
 - 2 Aron Meltzner: Persistent rupture segmentation along the Sunda megathrust off Sumatra
 - 3 Laura Hebert: Implications of deep transport of slab-adjacent hydrated material at subduction zones
- 4:30 PM Grad student and post-doc "pop-ups"/poster "advertisements"
- 5:15 PM *Plenary session*: reports on break-outs with open mike - prioritize key topics
- 6:45 PM Dinner
- 7:45 PM Posters (cash bar)

January 6, 2011

Phase 2. Initial consideration of prospective primary sites and implementation issues

Plenary talks by potential program partners (moderators Gurnis and DeShon)

- 8:00 AM Cascadia - Jeff McGuire
- 8:15 AM EarthScope - Anne Trehu
- 8:30 AM IODP - Marta Torres
- 8:45 AM International Panel - potential collaborations and infrastructure
Shuichi Kodaira, JAMSTEC; Heidrun Kopp, IFM-GEOMAR; Lisa McNeill, National Oceanography Centre, Southampton; Paola Vannucchi, University of Florence; Laura Wallace, GNS Science
- 9:45 AM Conveners - break-out instructions (Underwood, Thurber)
- 10:00 AM COFFEE BREAK
- 10:15 AM *Break-out sessions (7)*: for the key topic, discuss the need for primary sites versus more "cross-cutting" science, identify and prioritize potential primary sites, and define the desired balance between primary sites research versus other efforts; allow for session switching mid-way through
- 12:15-1:00 LUNCH
- 1:15 PM Talks by early-career speakers (3 talks, 20 min each; moderators Kelley and Thurber)

- 1 Jamie Barnes: The global chlorine cycle: a subduction zone perspective
 - 2 Paul Hall: Thermochemical evolution of the mantle wedge
 - 3 Sarah Penniston-Dorland: Melange zones and metasomatism in subduction zone metamorphic rocks
- 2:15 PM *Plenary session*: reports on break-outs, with open mike - begin to narrow the options, merge/blend common interests, and prioritize the primary sites across key topics, implementation realities
- 3:30 PM COFFEE BREAK

Phase 3. Pragmatic assessment of prospective primary sites

- 4:00 PM Conveners - breakout instructions (Underwood, Thurber)
- 4:15 PM *Break-out sessions*: to discuss details of the science plan, including site selection, specific categories of data acquisition, and partnerships - organize by sites plus thematic
- 5:15 PM Grad student and post-doc implementation plan presentation
- 5:45 PM *Plenary session*: reports on break-outs with open mike, narrow the options even more to a small number of viable/pragmatic candidate sites (moderators van Avendonk and Gurnis)
- 6:45 PM Dinner
- 7:45 PM Posters (cash bar)

January 7, 2011

Phase 4. Implementation

- 8:00 AM Introduction by conveners - review of goals and deliverables (Underwood, Thurber)
- 8:15 AM *Plenary session*: discussion on sites and vote (if necessary) on site selection; break-out instructions (moderators Underwood and Thurber)
- 9:30 AM *Break-out sessions*: to refine/finalize immature sections of the draft science plan - organize by sites plus thematic (coffee available)
- 11:00 AM *Plenary session*: wrap-up, including consensus on 10-year timeline for implementation (moderators Underwood and Thurber)