

**2011 EarthScope Workshop:  
Opportunities for EarthScope Science in Alaska in Anticipation of USArray**

**Sunday, May 15**

Icebreaker at Dog and Duck Pub  
Hosted by the University of Texas Institute for Geophysics (UTIG)  
6-8 pm Sunday May 15th  
406 West 17th Street  
Austin, TX 78701

Directions: Walk west from AT&T Conference Center to Guadalupe Street, turn left and walk 1.5 blocks, Dog and Duck Pub is on the right and the icebreaker is on the back patio. Hor d'oeuvres provided with selection of local and imported beers, ciders, and wines for purchase at the bar.

**Monday, May 16**

7:00 Registration, breakfast  
8:00 opening remarks, workshop overview/goals, EarthScope 2010-2020 plan

*Session 1: Tectonics, history and structure*

8:15 Tectonic History and current knowledge of the crust (*Sarah Roeske and Rick Saltus*)  
8:55 Discussion  
9:10 Active Tectonics (*Peter Haeussler, Jeff Freymueller, Stephane Mazzotti*)  
9:45 Discussion  
  
10:00 Break

*Session 2: Testing Hypotheses Developed in the Lower 48*

10:30 Mantle flow at slab edges (?? and ??)  
10:50 Discussion  
11:00 History and effects of slabs under North America (*Lijun Liu and Geoff Abers*)  
11:20 Discussion  
11:30 Tremor and slow slip (*Justin Brown and Tim Melbourne*)  
11:50 Discussion  
  
12:00 lunch  
  
13:00 Mini-talks (5 minutes each)  
13:30 Discussion (30 minutes)

*Breakout sessions: Exceptional scientific opportunities and integration with other projects. We have two one-hour breakout periods and people are expected to switch halfway through. Charge to Breakout groups:*

- *Discuss scientific opportunities addressable through Alaska/Canada deployments*
- *Based on the scientific opportunities, what recommendations should be made for facility design or operation.*
- *In each area, what opportunities exist for synergy or cooperation with other programs, especially GeoPRISMS.*

*Breakout Session 3A: Slab and mantle structure and dynamics*

14:00 Discussion (1 hour)

15:00 Discussion (1 hour)

*Breakout Session 3B: Exploring the genesis zones and Earth's response from great ( $M > 8$ ) earthquakes*

14:00 Discussion (1 hour)

15:00 Discussion (1 hour)

*Breakout Session 3C: Accessory measurements and enhancements of the facility instrumentation*

14:00 Discussion (1 hour)

15:00 Discussion (1 hour)

*Session 4: Active processes modifying the continent*

16:30 Volcanism and magmatic processes (*Brad Singer and Mike Lisowski*)

17:00 Discussion

17:15 Earthquake processes (*?? and Rowena Lohman*)

17:45 Discussion

18:00 Mini-talks (5 minutes each)

18:30 Discussion (45 minutes)

19:30 dinner

evening informal poster session and discussion

**Workshop Agenda: Tuesday, May 17**

7:30 breakfast

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*Breakout Session 5A: Structure and dynamics of active volcanoes, and magmatic processes at depth.*

8:00 Discussion (1 hour)

9:00 Discussion (1 hour)

*Breakout Session 5B: Illuminating past tectonics with present seismicity: Crustal structure and seismic imaging with slab seismicity, widespread crustal seismicity, teleseisms, and ambient noise.*

8:00 Discussion (1 hour)

9:00 Discussion (1 hour)

*Breakout Session 5C: Hydrosphere, Cryosphere and Atmosphere*

*--Coupling of solid Earth to changes in the hydro-, cryo- and atmosphere (models and observations)*

*--Additional met measurements (P, T, precip.) at PBO and TA sites for improvement of regional climate models*

*--Monitoring of wave energy and sea ice changes from near coastal TA sites*

8:00 Discussion (1 hour)

9:00 Discussion (1 hour)

10:00 Break

*Session 6: Wrap-up*

10:15 Breakout reports and discussion (45 minutes)

11:00 Recommendations for USArray

12:00 lunch

