

TUESDAY, MAY 5 – CONTINUED

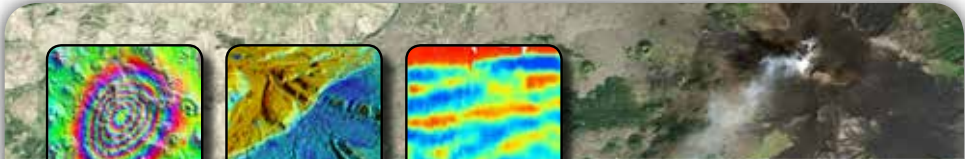
- 3:50 PM – 4:20 PM **AFTERNOON BREAK**
- 4:20 PM – 6:00 PM **BREAKOUT SESSION IV: LINKS TO INDUSTRY AND DISCOVERY-MODE SCIENCE FROM NEW TECHNOLOGIES**
- Sarnoff* 1. Links to industry, natural resources, and the environment
Discussion leaders: Greg Beroza and Brandon Schmandt (WC)
Scribes: Steve Holbrook (WC) and Adam Schultz
- Kettering* 2. Large N arrays, arrays of arrays
Discussion leaders: Florent Brenguier and John Hole (WC)
Scribes: Lara Wagner (WC) and Susan Bilek
- Potomac A* 3. GPS/InSAR/LiDAR: New technologies
Discussion leaders: Mark Murray and Tom Herring
Scribes: Tony Lowry and Bill Hammond (WC)
- Potomac B* 4. Cyberinfrastructure: High performance computing, big data
Discussion leaders: Peter van Keken and Frank Vernon
Scribes: Gary Egbert (WC) and Frederik Simons
- Potomac C* 5. Seafloor sensors
Discussion leaders: John Orcutt and Will Wilcock
Scribes: Rob Evans and Spahr Webb
- Amphitheater* 6. New technology, new students, new research: Blue sky thinking about broader impacts in a changing world
Discussion leaders: Steven Whitmeyer and Cathy Manduca
Scribes: Derek Schutt and Leigh Stearns (WC)
- 6:00 PM – 7:30 PM **DINNER** *Riverside Hearth*
- 7:30 PM – 9:00 PM **POSTER SESSION** *Amphitheater*
(Scribes/discussion leaders of the breakout discussions in each set of sessions meet with a coordinator from the Writing Committee to consolidate notes and recommendations for presentation in Day 3 morning session.)

WEDNESDAY, MAY 6

- 7:00 AM – 8:00 AM **BREAKFAST** *Riverside Hearth*
- 8:00 AM – 9:00 AM **REPORTS FROM DAY TWO BREAKOUT SESSION LEADERS** *Amphitheater*
Breakout Session III: Leigh Stearns
Breakout Session IV: Brandon Schmandt
- 9:00 AM – 9:30 AM **REPORT FROM EARLY CAREER CAUCUS** *Amphitheater*
Julie Elliott and Maureen Long
- 9:30 AM – 10:00 PM **FACILITIES OF THE FUTURE: GOVERNANCE** *Amphitheater*
Karen Fischer
- 10:00 AM – 10:30 AM **MORNING BREAK**
- 10:30 AM – 12:00 PM **FACILITIES OF THE FUTURE: SCIENCE AND BROADER IMPACTS** *Amphitheater*
Lucy Flesch
- 12:00 PM – 1:30 PM **LUNCH** *Riverside Hearth*


MEETING ADJOURNS

(except for the Workshop Report Committee)



MAY 4–6, 2015 • LEESBURG, VIRGINIA

WORKSHOP ON FUTURE SEISMIC AND GEODETIC FACILITY NEEDS IN THE GEOSCIENCES



SUNDAY, MAY 3

- 3:00 PM – 7:00 PM **REGISTRATION** *Amphitheater*
- 6:30 PM – 9:00 PM **DINNER** is available to overnight guests *Riverside Hearth*
- 7:30 PM – 7:40 PM **WELCOME AND WORKSHOP GOALS** *Amphitheater*
(Workshop Organizing Committee)
- 7:40 PM – 8:30 PM **POP-UP TALKS** (< 5 minutes) on your vision of the most exciting things to work on with the facilities of the future *Amphitheater*

MONDAY, MAY 4

- 7:00 AM – 8:00 AM **BREAKFAST** *Riverside Hearth*
- 8:00 AM – 8:15 AM **NSF ON WORKSHOP EXPECTATIONS** *Amphitheater*
Greg Anderson and Russ Kelz
- 8:15 AM – 8:30 AM **WORKSHOP ORGANIZATION** *Amphitheater*
(Workshop Organizing Committee)
- 8:30 AM – 10:10 AM **PLENARY SESSION I: EARTH STRUCTURE, RHEOLOGY AND GEODYNAMICS** *Amphitheater*
Session chair: Roland Burgmann
1. Report from Plenary Session I webinar (5 minutes plus 5 minutes of discussion) Maureen Long
 2. Three speakers (20 minutes each plus 10 minutes of discussion)
Barbara Romanowicz: Frontiers in global-scale Earth structure and dynamics and the facilities needed to cross them
Andrew Nyblade: Frontiers in regional-scale seismology and on the synergy between seismological and geodetic facilities and capacity building
Thorsten Becker: Integration of seismology, geodesy, and mantle dynamics for grand challenge Earth Science problems
- 10:10 AM – 10:40 AM **MORNING BREAK**

MONDAY, MAY 4 – CONTINUED

- 10:40 AM – 12:20 PM **BREAKOUT SESSION I: EARTH STRUCTURE, RHEOLOGY AND GEODYNAMICS**
- Sarnoff* 1. The case for long-term, global-scale seismic, geodetic and MT arrays
Discussion leaders: Bill Holt and Thorne Lay (WC)
Scribes: Bill Hammond (WC) and Karen Fischer
- Kettering* 2. The case for temporary, targeted seismic, geodetic and MT arrays
Discussion leaders: Rob Evans and Lara Wagner (WC)
Scribes: John Hole (WC) and Adrian Borsa
- Potomac B* 3. The case for new types of observations
Discussion leaders: Duncan Agnew and Tony Lowry
Scribes: Brandon Schmandt (WC) and David Schmidt (WC)
- Potomac C* 4. Supporting undergraduate and graduate education in the U.S. and abroad
Discussion leaders: Dave Mogk and Derek Schutt
Scribes: Maureen Long and Leigh Stearns (WC)
- 12:30 PM – 1:30 PM **LUNCH** *Riverside Hearth*
- 1:30 PM – 3:20 PM **PLENARY SESSION II: TIME-VARIANT BEHAVIOR OF FAULTS AND MAGMATIC SYSTEMS** *Amphitheater*
Session chair: Greg Beroza
1. Report from Plenary Session II webinar and Broader Impacts webinar
Plenary Session II: Zhigang Peng
Broader Impacts: Dave Mogk
2. Three speakers
Jeff McGuire: Earthquake processes: Research frontiers and facility priorities
Paul Segall: Magmatic processes: Research frontiers and facility priorities
Richard Allen: ShakeAlert: Societal application of scientific data
- 3:20 PM – 3:50 PM **AFTERNOON BREAK**
- 3:50 PM – 5:30 PM **BREAKOUT SESSION II: TIME-VARIANT BEHAVIOR OF FAULTS AND MAGMATIC SYSTEMS AND RELATED HAZARDS**
- Sarnoff* 1. The case for long-term, observatory style monitoring
Discussion leaders: Julie Elliot and John Vidale (WC)
Scribes: Zhigang Peng and Tim Melbourne
- Kettering* 2. The case for short-term, targeted experiments
Discussion leaders: Sue Bilek and Diana Roman
Scribes: Florent Brenguier and Victor Tsai
- Potomac B* 3. The case for new types of observations
Discussion leaders: David Chadwell and Cliff Thurber
Scribes: Emily Roland and Steve McNutt (WC)
- Potomac C* 4. Enhancing societal use of seismic and geodetic data
Discussion leaders: Susan Schwartz and Michael West
Scribes: Roland Burgmann (WC) and Richard Allen
- 6:00 PM – 7:30 PM **DINNER** *Riverside Hearth*
- 7:30 PM – 9:00 PM **POSTER SESSION** *Amphitheater*
(Scribes/discussion leaders of the breakout discussions in each set of sessions meet with a coordinator from the Writing Committee to consolidate notes and recommendations for presentation in Day 2 morning session.)

TUESDAY, MAY 5

- 7:00 AM – 8:00 AM **BREAKFAST** *Riverside Hearth*
- 8:00 AM – 9:00 AM **REPORTS FROM DAY ONE BREAKOUT SESSION LEADERS**
Breakout Session I: Rick Aster
Breakout Session II: Mark Simons
- 9:00 AM – 10:10 AM **PLENARY SESSION III: EVOLVING LANDSCAPES AND GLOBAL ENVIRONMENTAL CHANGE** *Amphitheater*
Session Chair: Doug Wiens
1. Report from Plenary Session III webinar (Sridhar Anandkrishnan)
2. Four speakers
Jay Famiglietti: The importance of seismic and geodetic facilities in studies of hydrology and water resources
Helen Fricker: The importance of seismic and geodetic facilities in glaciology
Natalya Gomez: Glacial isostatic adjustment and sea level problems and the types of geodetic and seismological data that will be needed
Ramon Arrowsmith: Tectonic geomorphology and ideas for communicating science data and results to the public, based on experience with EarthScope
- 10:10 AM – 10:40 AM **MORNING BREAK**
- 10:40 AM – 11:40 AM **PLENARY SESSION III CONTINUED** *Amphitheater*
- 11:50 AM – 12:50 PM **LUNCH** *Riverside Hearth*
- 12:50 PM – 2:30 PM **BREAKOUT SESSION III: EVOLVING LANDSCAPES AND GLOBAL ENVIRONMENTAL CHANGE**
- Sarnoff* 1. Hydrology and critical zone imaging
Discussion leaders: Adrian Borsa and Steve Holbrook (WC)
Scribes: Jay Famiglietti and Shimon Wdowinski
- Kettering* 2. Glaciology: Instrumenting glaciers and ice sheets
Discussion leaders: Leigh Stearns (WC) and Sridhar Anandkrishnan
Scribes: Paul Winberry (WC)
- Potomac A* 3. Polar networks and glacial isostatic adjustment
Discussion leaders: Terry Wilson and Doug Wiens
Scribes: Rick Aster (WC) and Natalya Gomez
- Potomac B* 4. Tectonic geomorphology and 4D topographic imaging
Discussion leaders: Kelin Whipple and Eric Kirby
Scribes: Mike Oskin (WC) and Steven Whitmeyer
- Potomac C* 5. Strengthening broad understanding of Earth and Earth science: K–12 education, informal education, and public outreach
Discussion leaders: Frederik Simons and Jeff Ryan
Scribes: David Schmidt (WC) and Dave Mogk
- 2:30 PM – 3:50 PM **PLENARY SESSION IV: LINKS TO INDUSTRY AND DISCOVERY-MODE SCIENCE FROM NEW TECHNOLOGIES** *Amphitheater*
1. Six speakers (10 minutes each plus 2 minutes of questions)
Victor Tsai: Frontiers in seismological methods (including Large N arrays, arrays of arrays)
Estelle Chaussard: Frontiers in geodetic methods
James Gaherty: Seafloor sensors
Louise Kellogg: Cyberinfrastructure: High performance computing, big data
Steven Whitmeyer: Effective use of data and visualizations in geoscience education: Past, present, and future
Geoff Abers: Potential human-induced events and the geophysical tools needed to understand them