

SCEC5 Science Collaboration

Greg Beroza and Judi Chester

SCEC Science Planning Cycle

Leadership meets in June to start update of science plan.

Developed online over the summer.

Feedback at annual meeting, revised plan out in October.

Proposals submitted in November.

Reviewed by at least 5 on PC + ExDSP + USGS JPC.

January PC meeting to evaluate proposals and recommend a balanced science budget.

February meeting of the BoD to vote on recommendation.

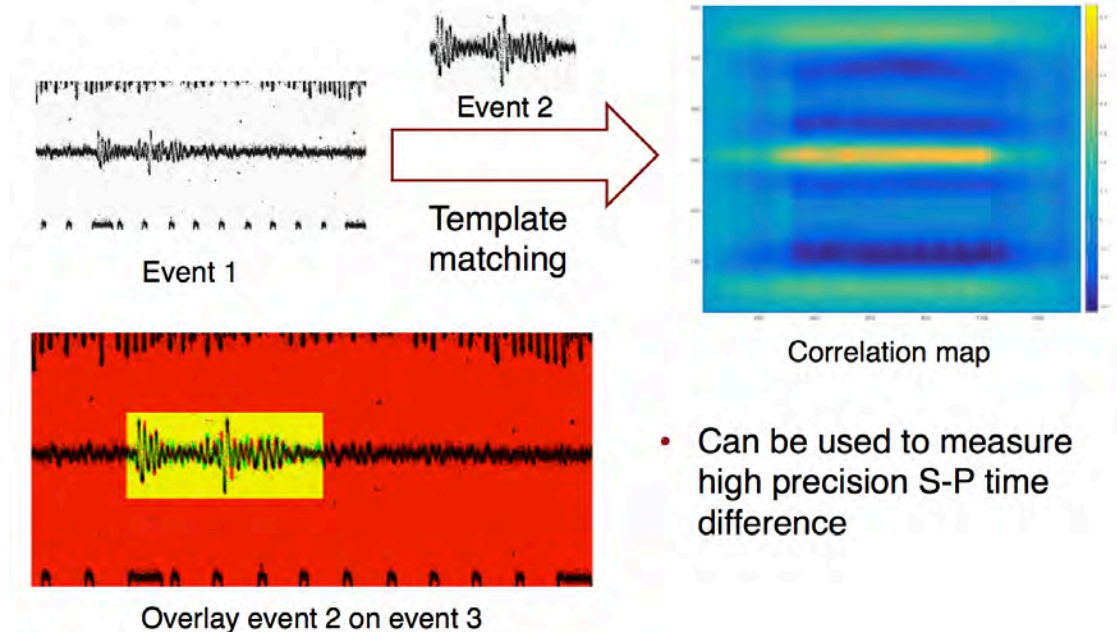
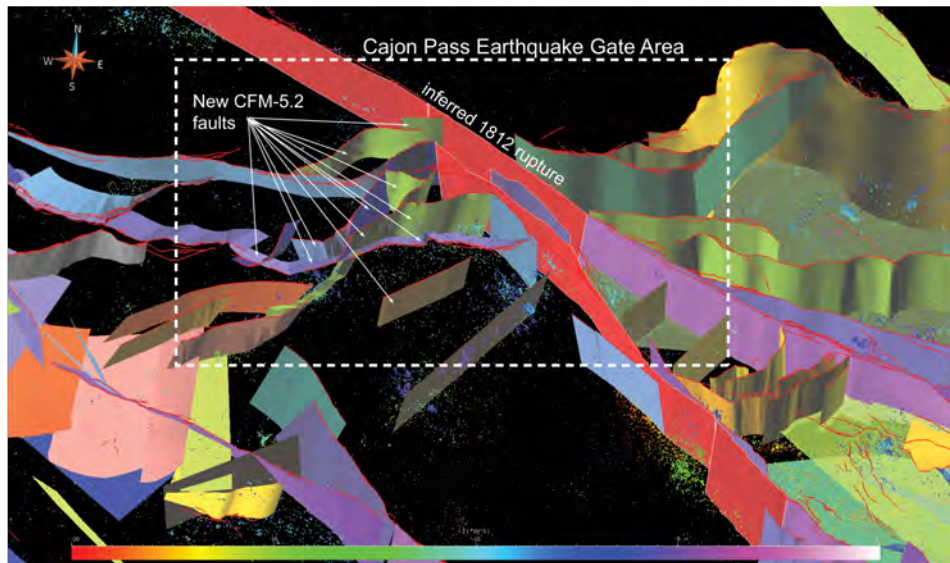
Director recommends to agencies for approval.

Theme A. Modeling the Fault System

1. Stress and Deformation Over Time
2. Special Fault Study Areas: Focus on Earthquake Gates
3. Community Models
4. Data-Intensive Computing

www.scec.org/research/cxm

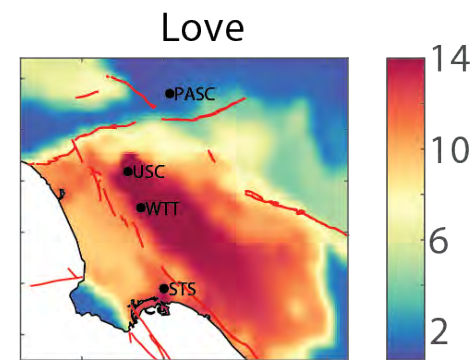
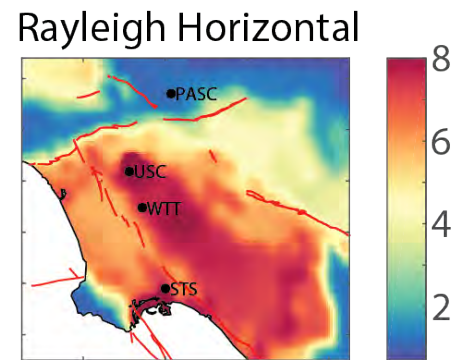
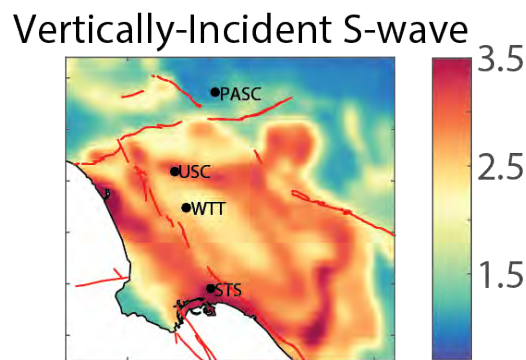
- 2-D template matching: normalized cross correlation



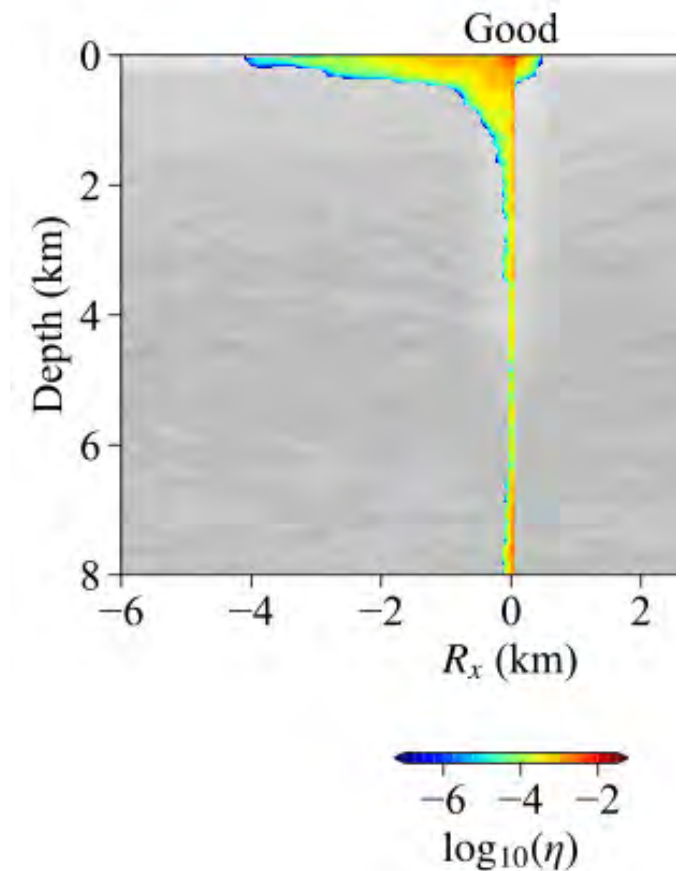
- Can be used to measure high precision S-P time difference

Theme B. Understanding Earthquake Processes

5. Beyond Elasticity
6. Modeling Earthquake Source Processes
7. Ground Motion Simulation
8. Induced Seismicity

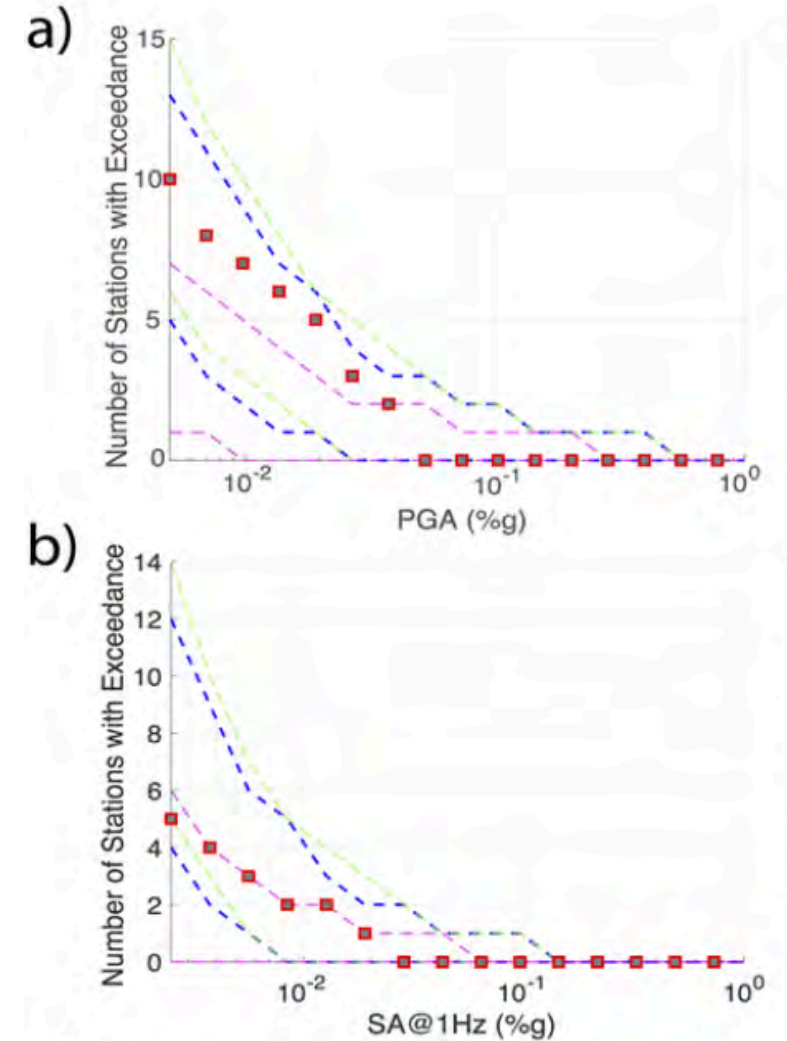
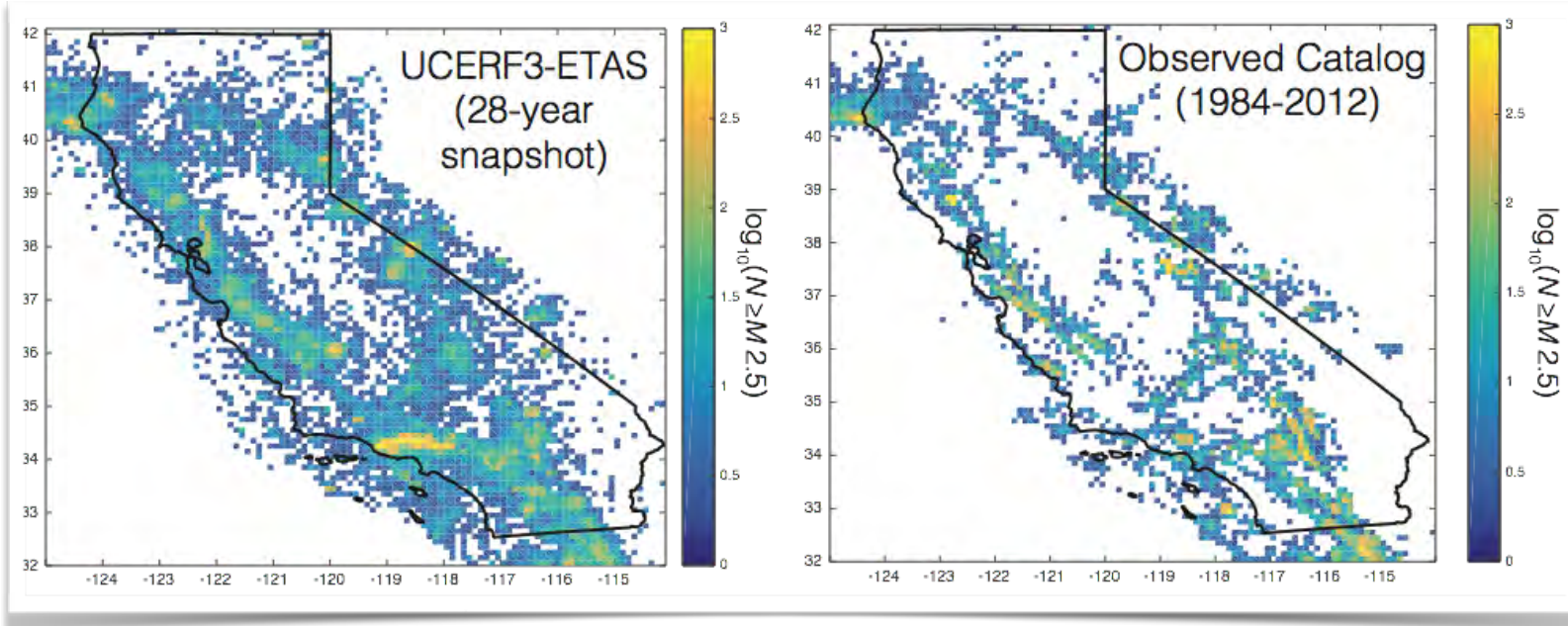


20 km



Theme C. Characterizing Seismic Hazards

9. Probabilistic Seismic Hazard Analysis
10. Operational Earthquake Forecasting
11. Earthquake Early Warning
12. Post-Earthquake Rapid Response

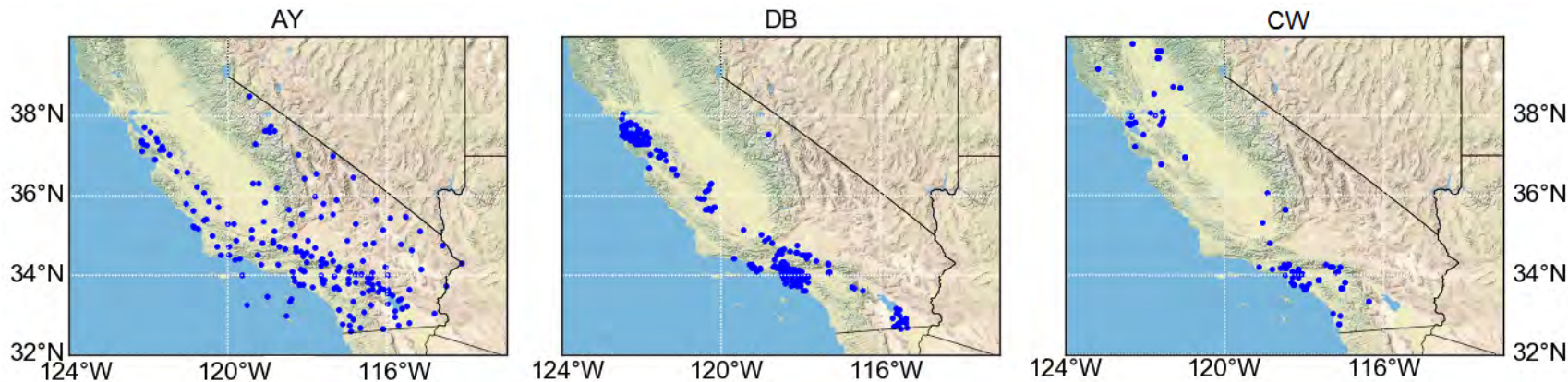


Theme D. Reducing Seismic Risk

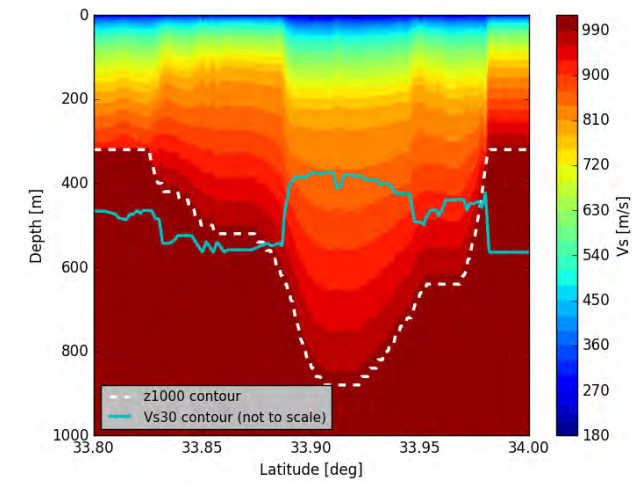
13. Risk to Distributed Infrastructure

14. Earthquake Physics of the Geotechnical Layer

Shallow stochastic heterogeneity



Asimaki, Shi, and Taborda #271



Themes and Topics of the SCEC5 Science Plan

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