Southern California Earthquake Center

Post-Earthquake Response Planning

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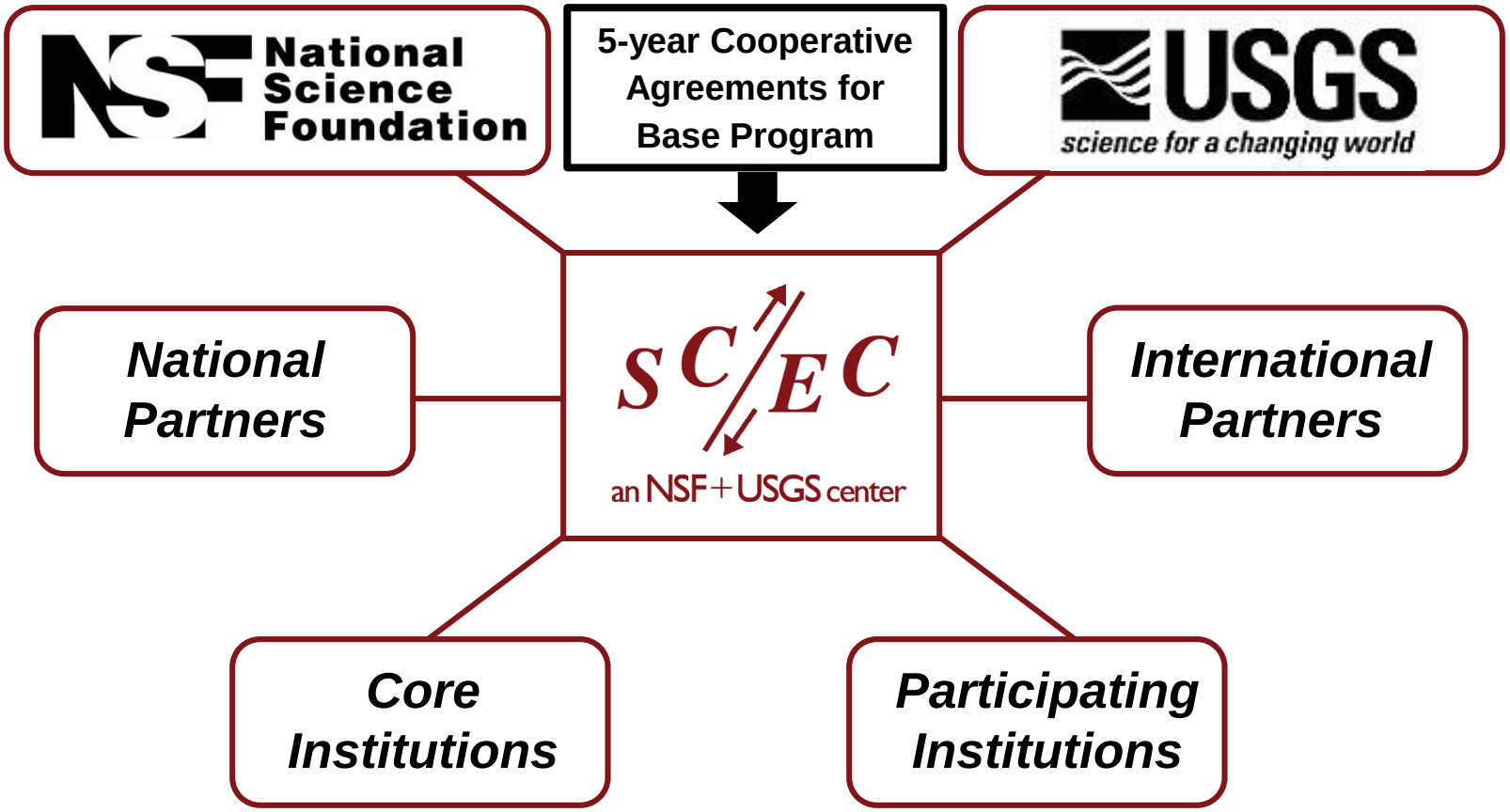
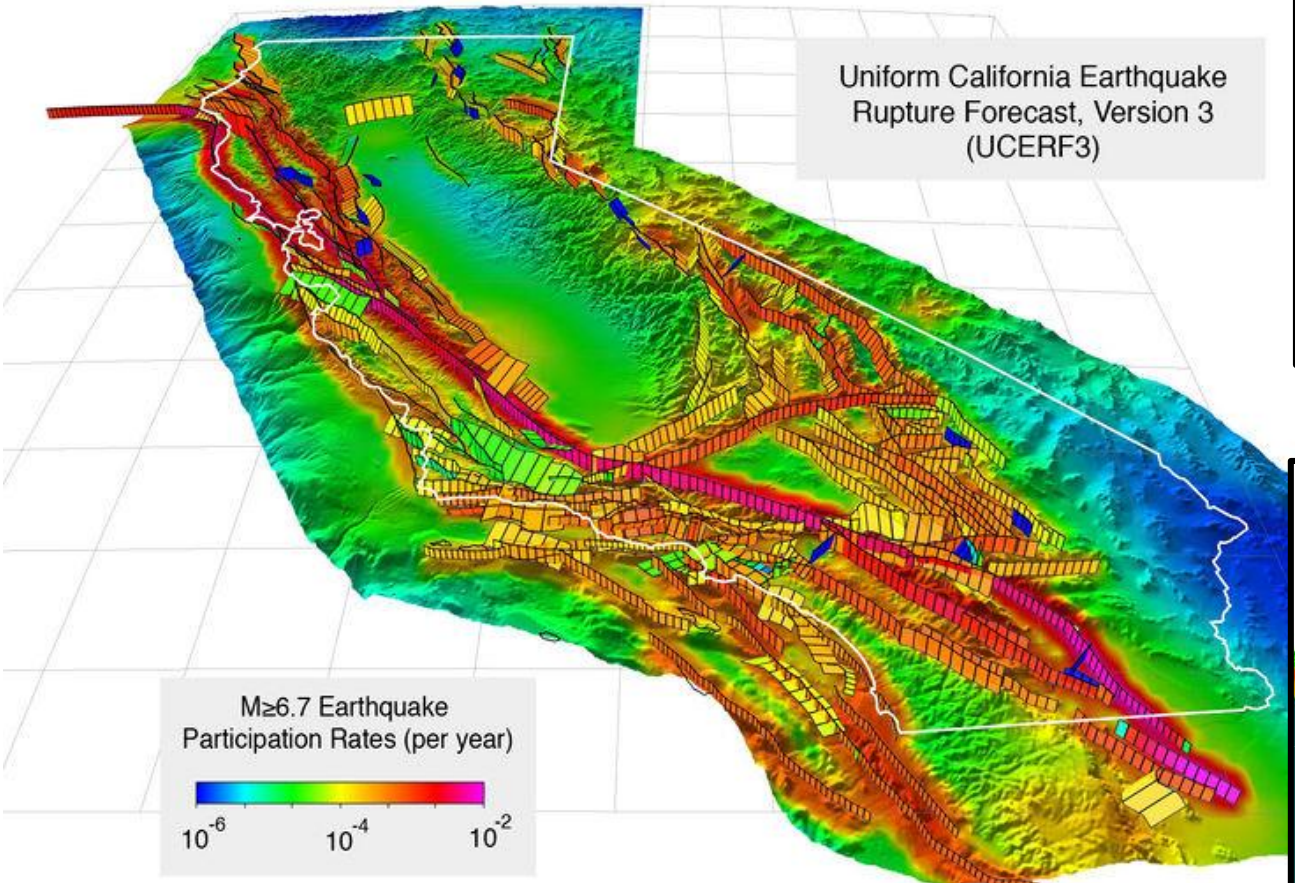
The SCEC Partnership

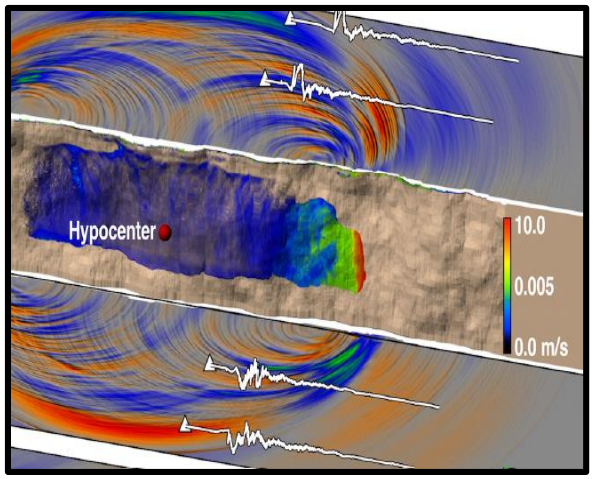


SCEC Mission Statement

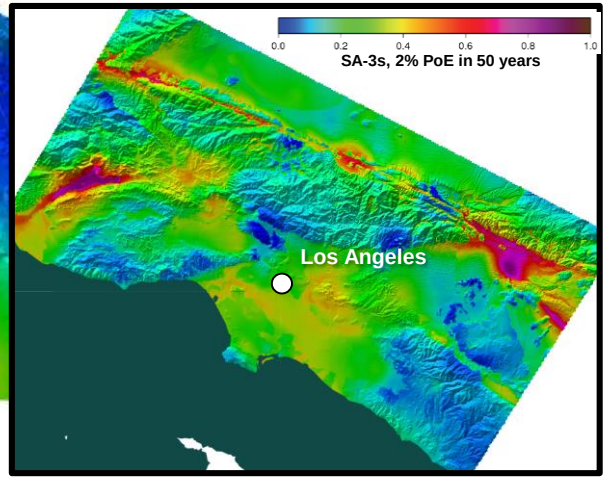
- **Gather data** on earthquakes in Southern California and elsewhere
- **Integrate information** into a comprehensive, physics-based understanding of earthquake phenomena
- **Communicate understanding** to the world at large as useful knowledge for reducing earthquake risk

Toward a comprehensive, physics-based understanding of earthquake phenomena



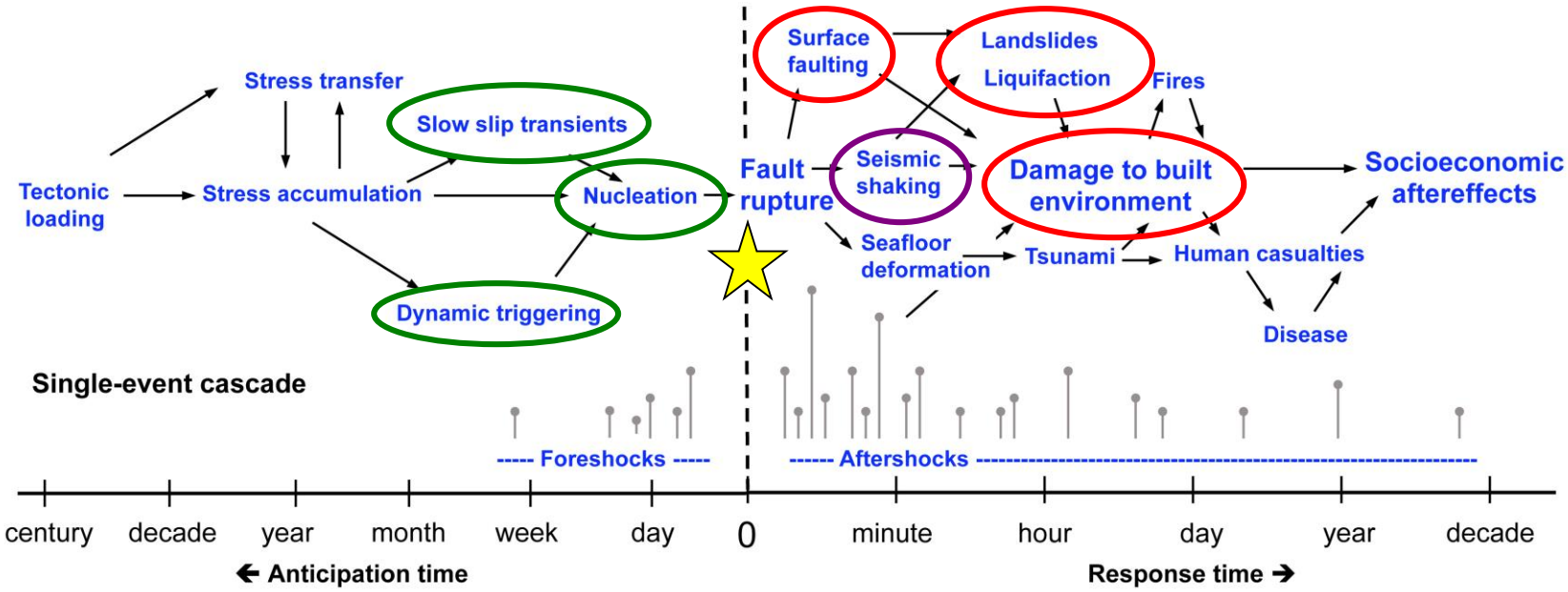


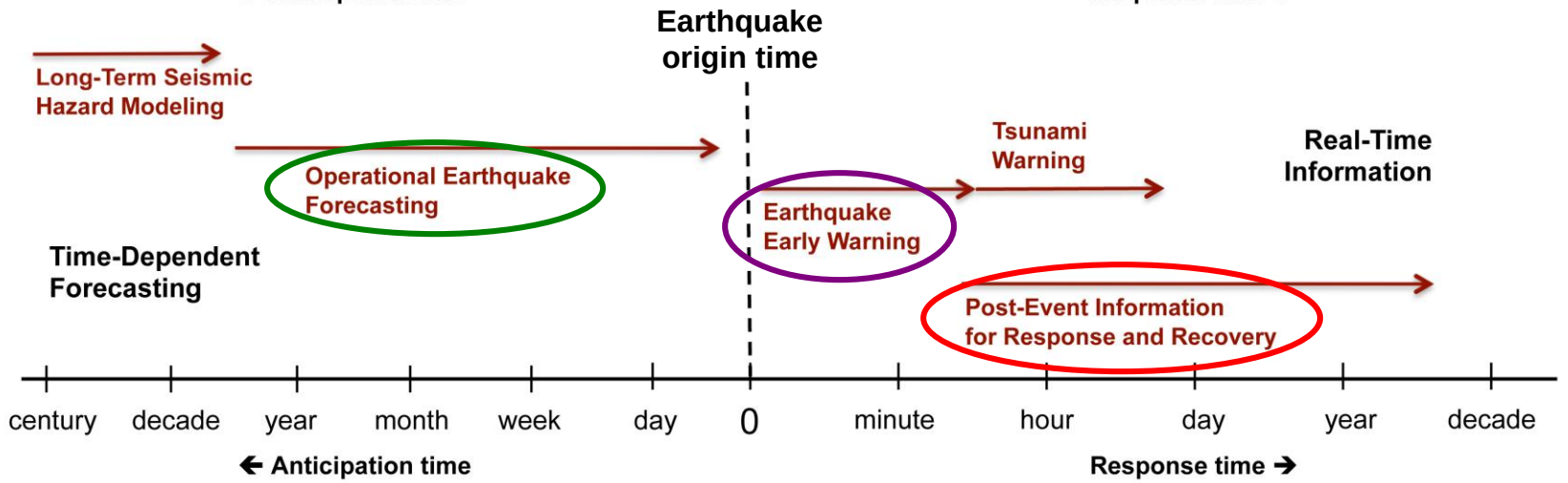
Dynamic rupture model on SAF



Shaking hazard model

SCEC4 Theme: Tracking Earthquake Cascades





SCEC Post-Earthquake Response Goals

- **Coordinate scientific observations and experiments**
  - Fault rupture mapping
  - Instrument deployment
  - See response.scec.org
- **Advance and test earthquake science**
  - Seismic hazard modeling
  - Ground motion prediction
  - Earthquake forecasting (time-dependent hazard)
- **Foster communication and open data sharing**
  - Rapid dissemination of information
  - Collection of open community data sets
  - Agency-academic collaboration
- **Communicate earthquake science to the public**

Two Goals for Aerial Reconnaissance

- **Location of fault rupture**
  - **Preliminary imagery collection**
  - **Planning for rupture mapping**
  - **Strategic deployment of instruments (GPS, seismometers)**
  - **Designing post-earthquake lidar data collection**
- **Pockets of anomalous rupture**
  - **Testing and refining ground-motion prediction from aftershocks**

- ***Post-event phenomena (aftershocks, post-seismic creep) decay rapidly, thus it is critical to get information and instruments deployed as quickly as is feasible.***
- ***Aftershocks are the most predictable of earthquakes. Post-earthquake response is an opportunity to improve earthquake forecasting and, perhaps, capture the nucleation phase of a large aftershock.***