

HPWREN User Group Meeting ANZA Seismic Network

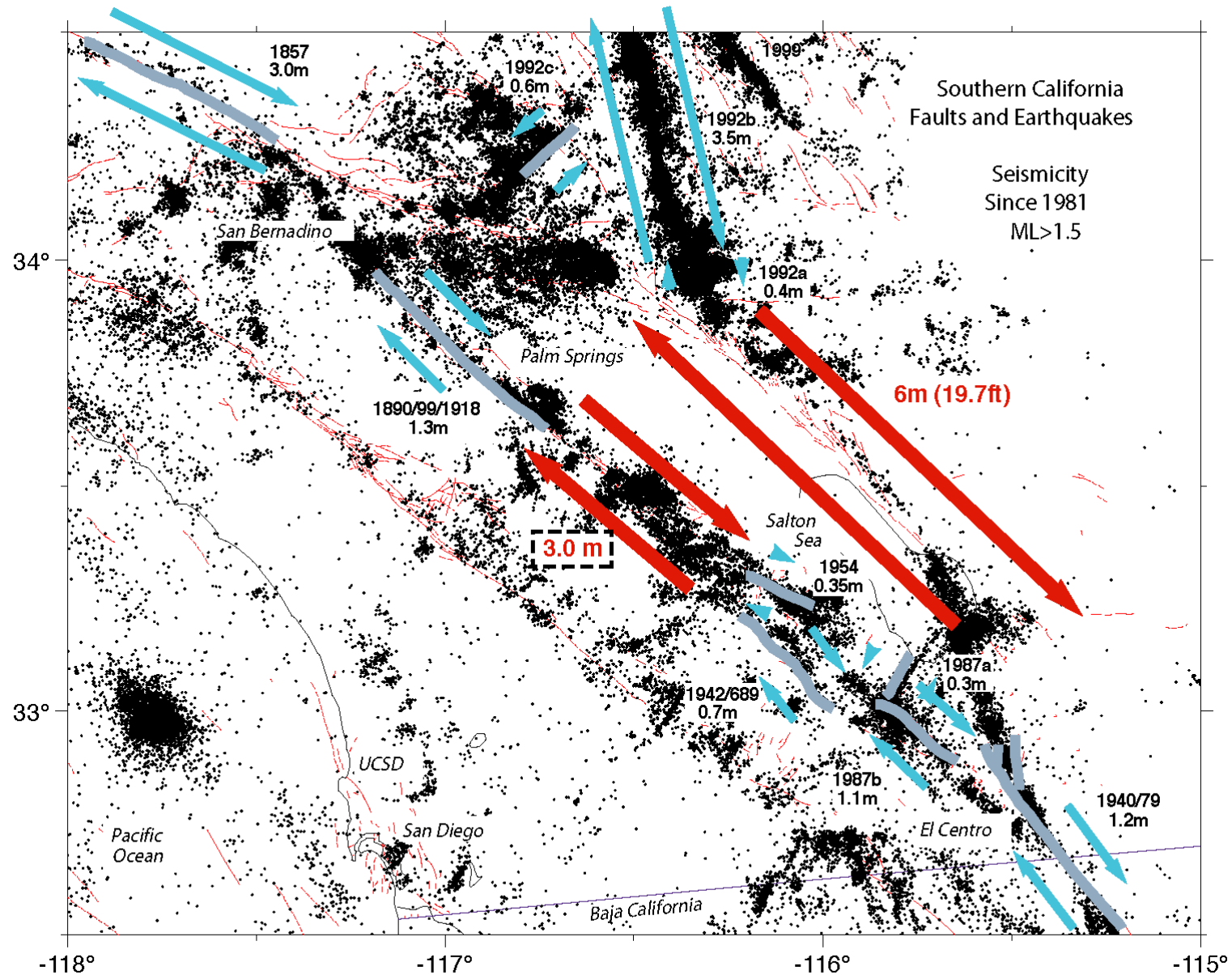
Frank Vernon

IGPP

UCSD



Historical seismicity and Slip Deficits



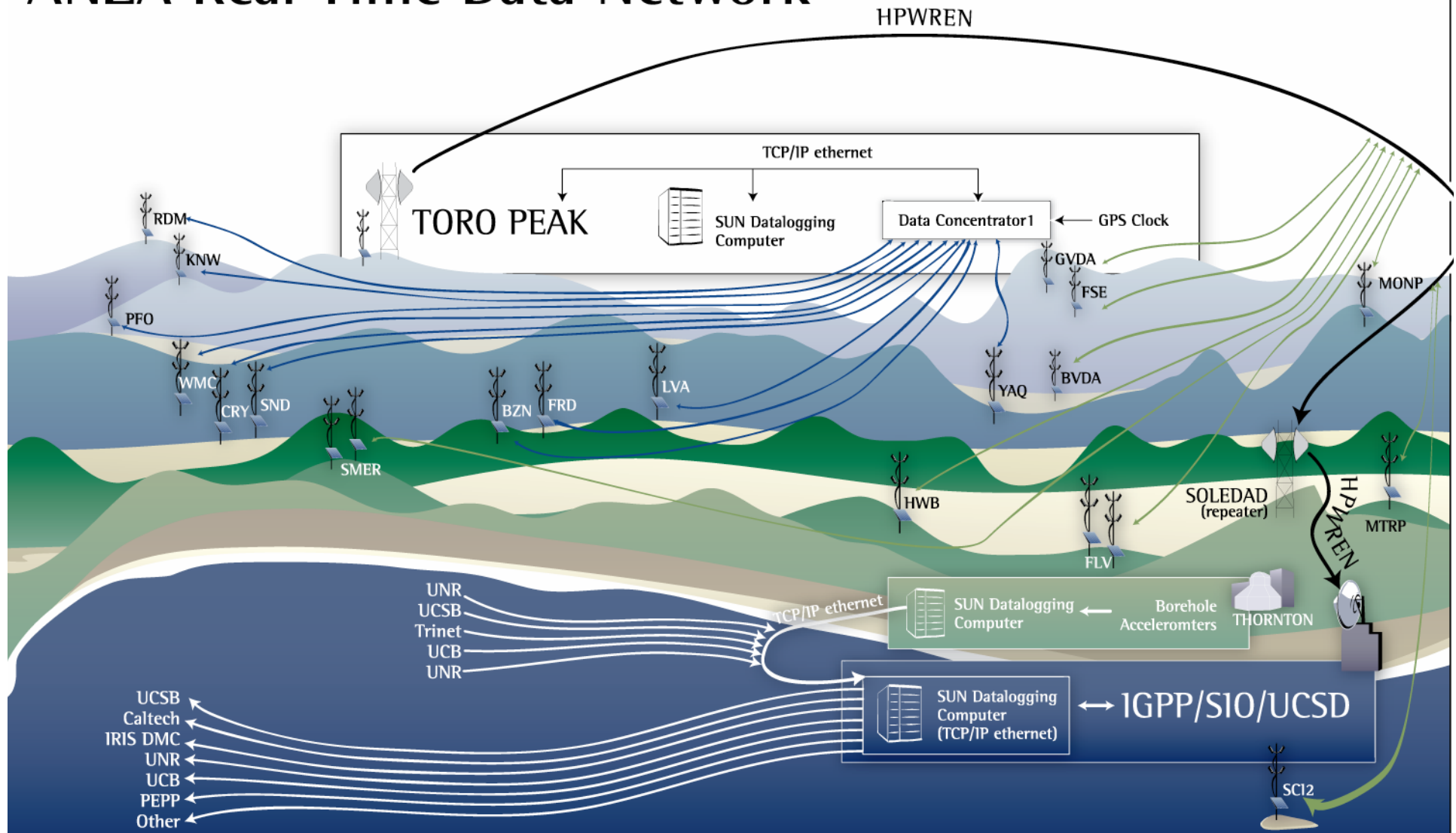
ANZA Data Exchange

- Import
 - SCSN
 - UCSB
 - PBO
- Export
 - SCSN/CISN/ANSS
 - UCSB
 - USArray
 - IRIS DMC



ANZA Network Topology

ANZA Real Time Data Network





HPWREN

High Performance Wireless Research & Education Network

An interdisciplinary collaboration for research and infrastructure

University of California, San Diego:

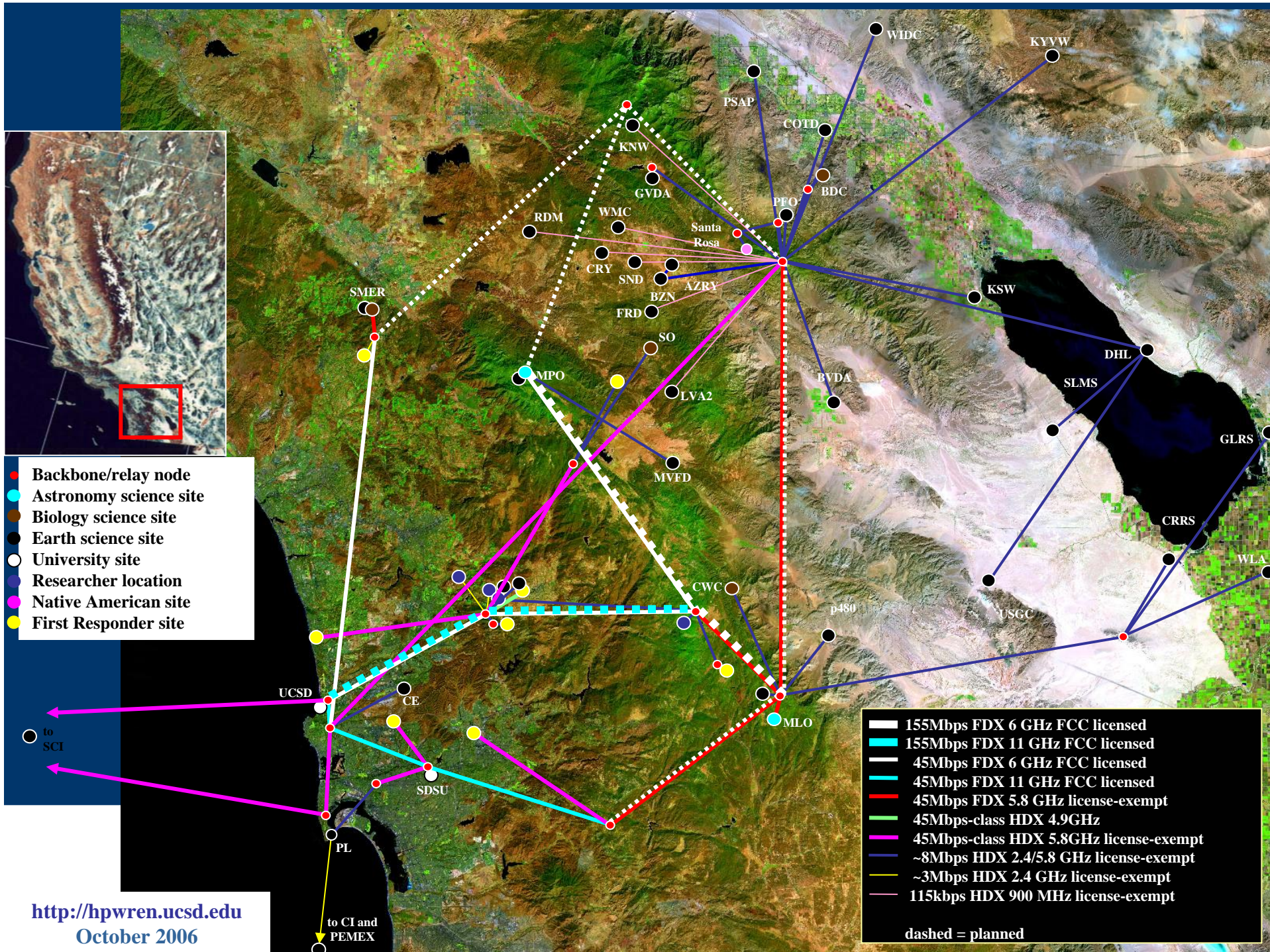
San Diego Supercomputer Center

Scripps Institution of Oceanography

funded by the National Science Foundation

awards numbers 0087344 and 0426879



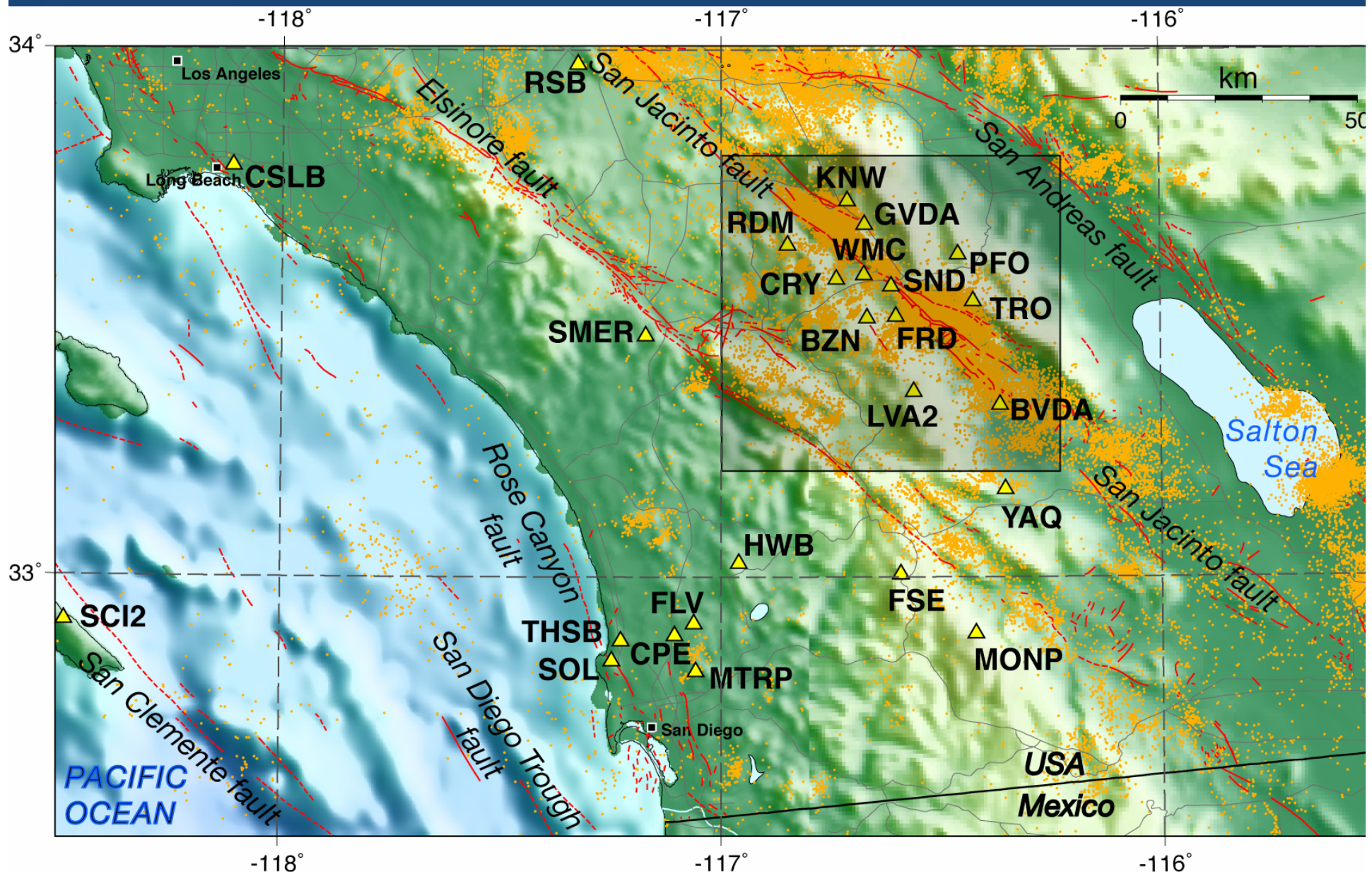


ANZA Performance Metrics

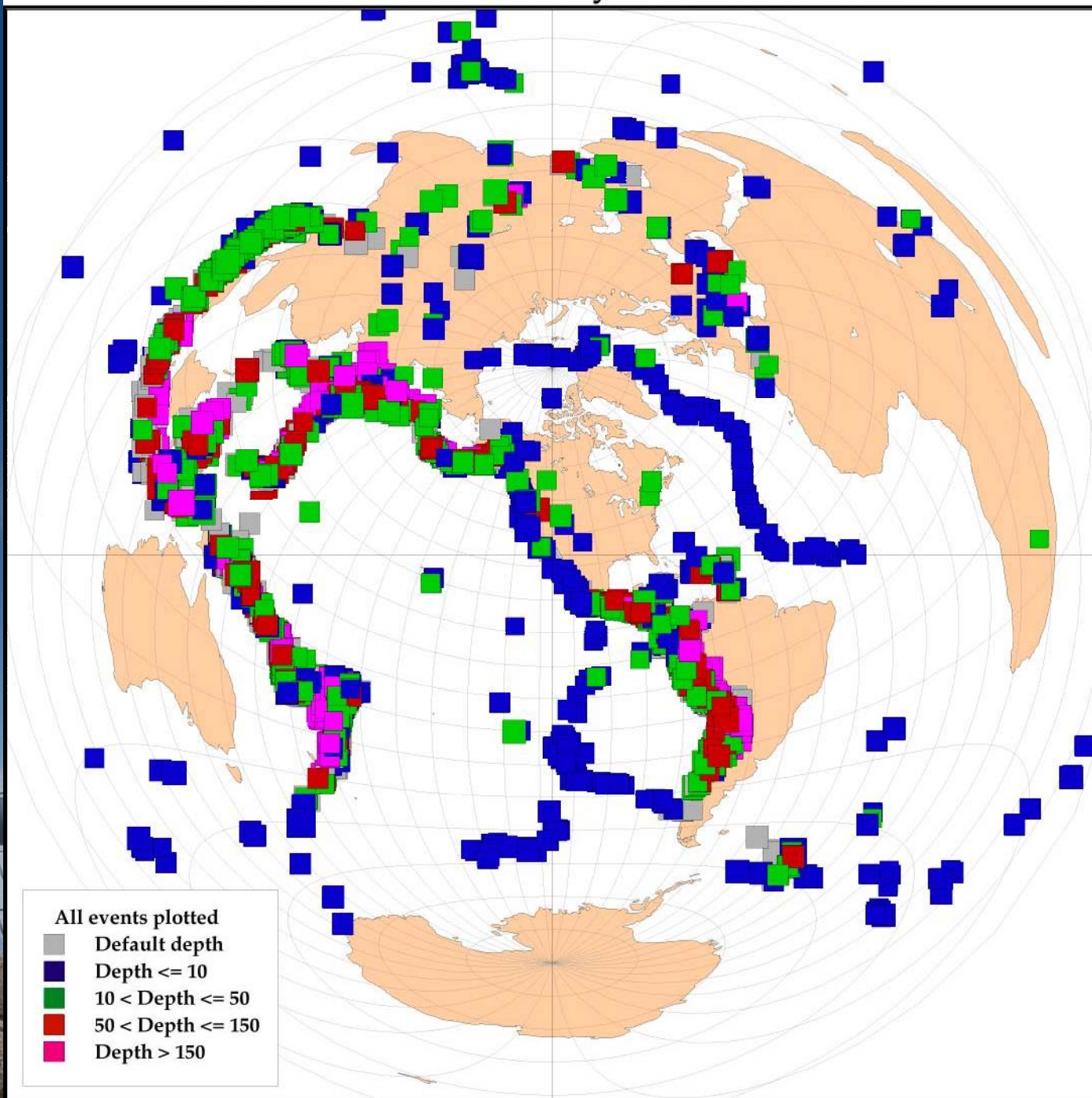
- Network uptime (April 2005 - April 2007)
 - 99.7% (Average)
 - 100% (Monthly Median)
- Network Data Return
 - 97.5% (Average)
 - 99.3% (Station Median)
- Network Latency
 - 98.92% packets less than 10 seconds
 - 99.69% packets less than 60 seconds
- Magnitude Completeness
 - 1.6 Ml - Whole network
 - 0.5 Ml - Anza gap



ANZA Network



All events $M > 5$ recorded by Anza 1/2000 - 11/2005



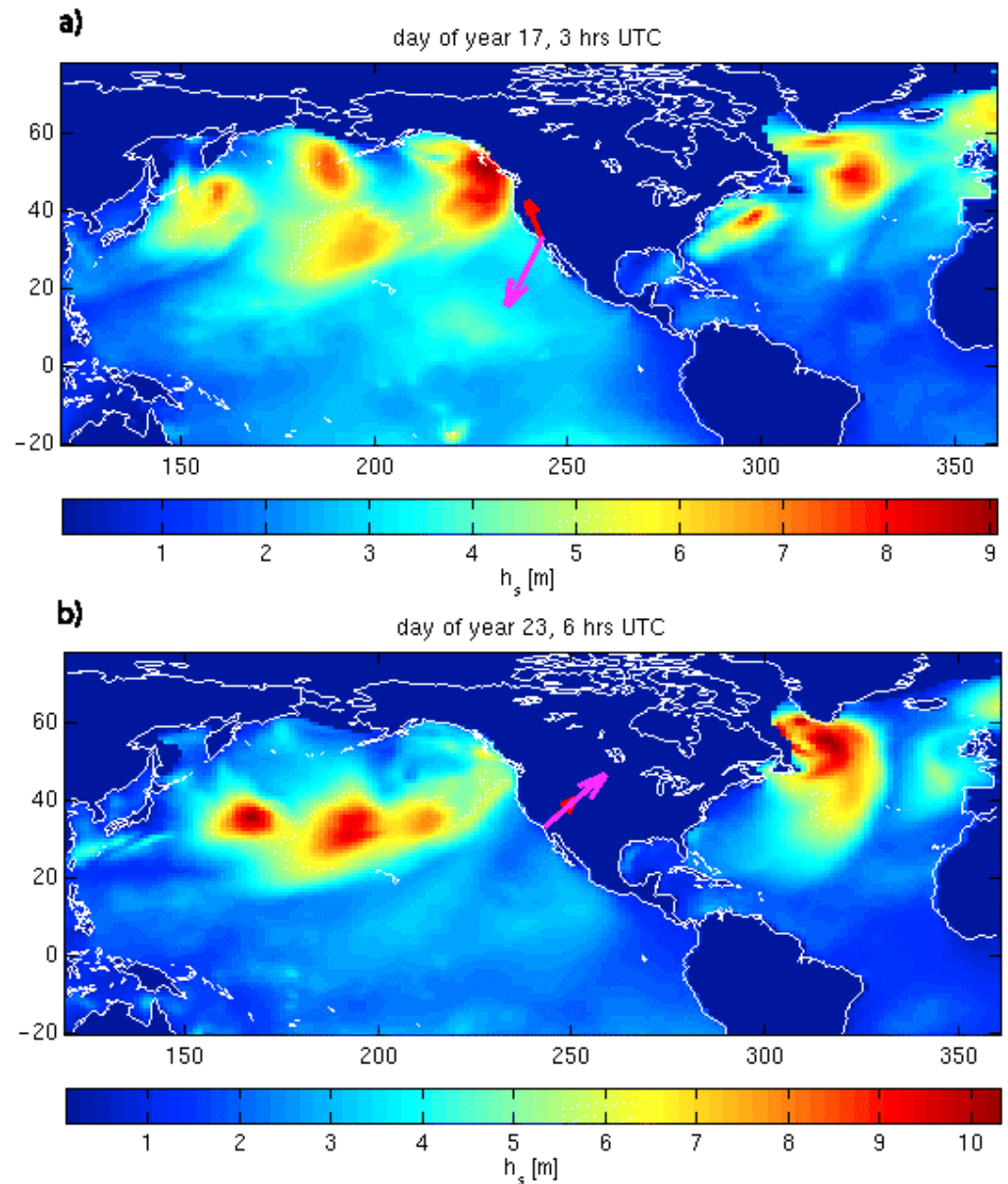
ANZA Data Uses

- Monitoring
 - Locations
 - Magnitudes
 - Real time data delivery
 - Information to public
- Earthquake Science
 - Source parameters
 - High frequency spectral characteristics
 - Empirical Greens functions
 - Scaling and self-similarity
 - Attenuation and scattering
 - Temporal evolution of aftershocks
 - Remote triggering



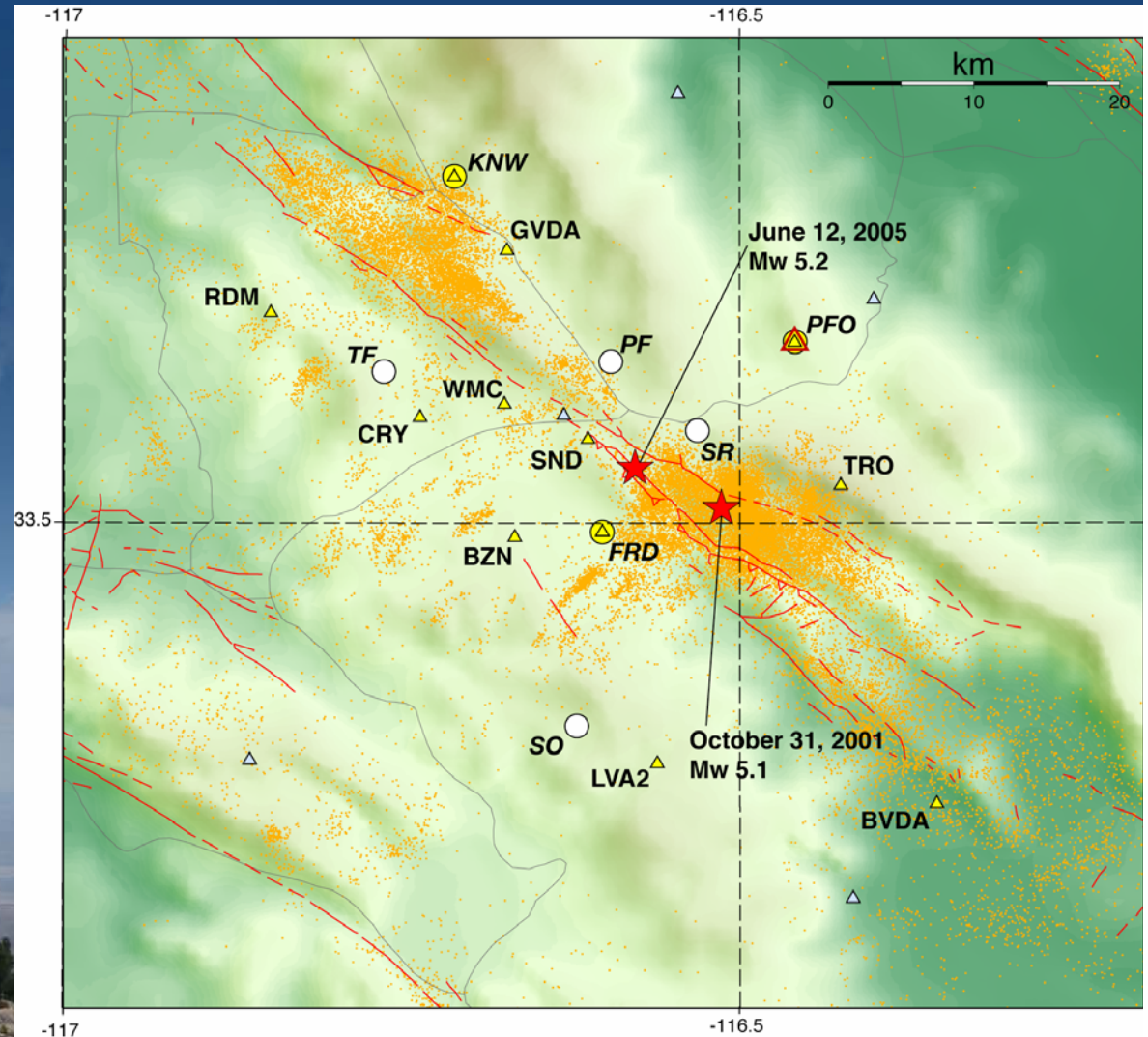
Array studies of microseisms

- Slant stack beamforming
- 7 second peak
- 14 second peak



ANZA and PBO borehole strain and seismic stations

- $M \sim 5$ events are red stars
- Seismicity are orange dots
- ANZA stations are yellow triangles
- PBO stations are circles



http://eqinfo.ucsd.edu

