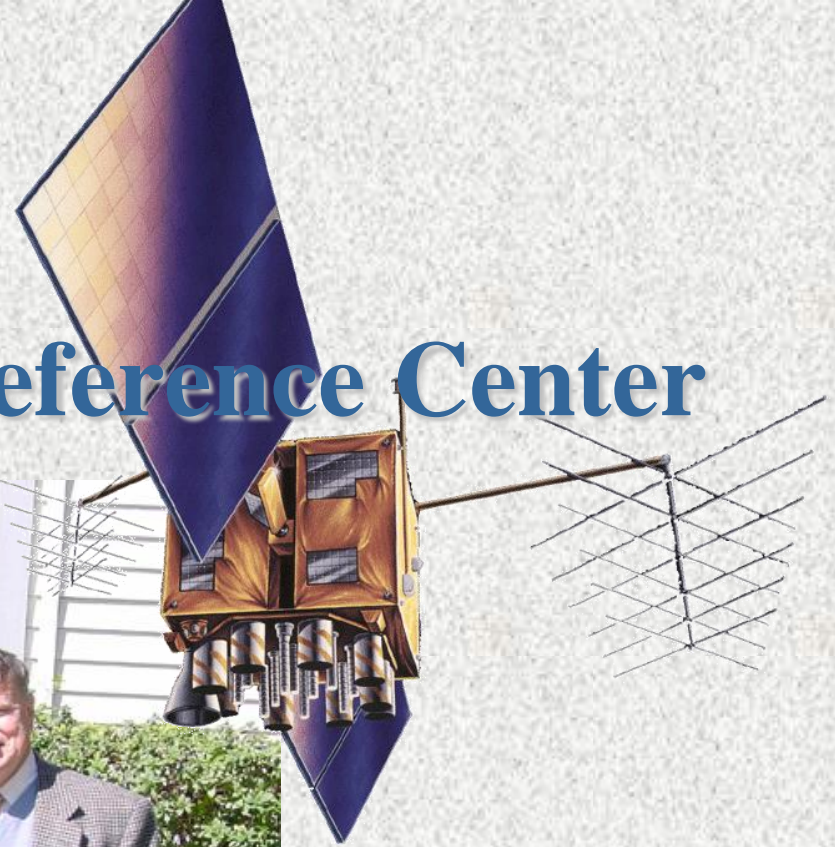




California Spatial Reference Center



CORS Users Forum

**Gregory A. Helmer
&
Yehuda Bock**

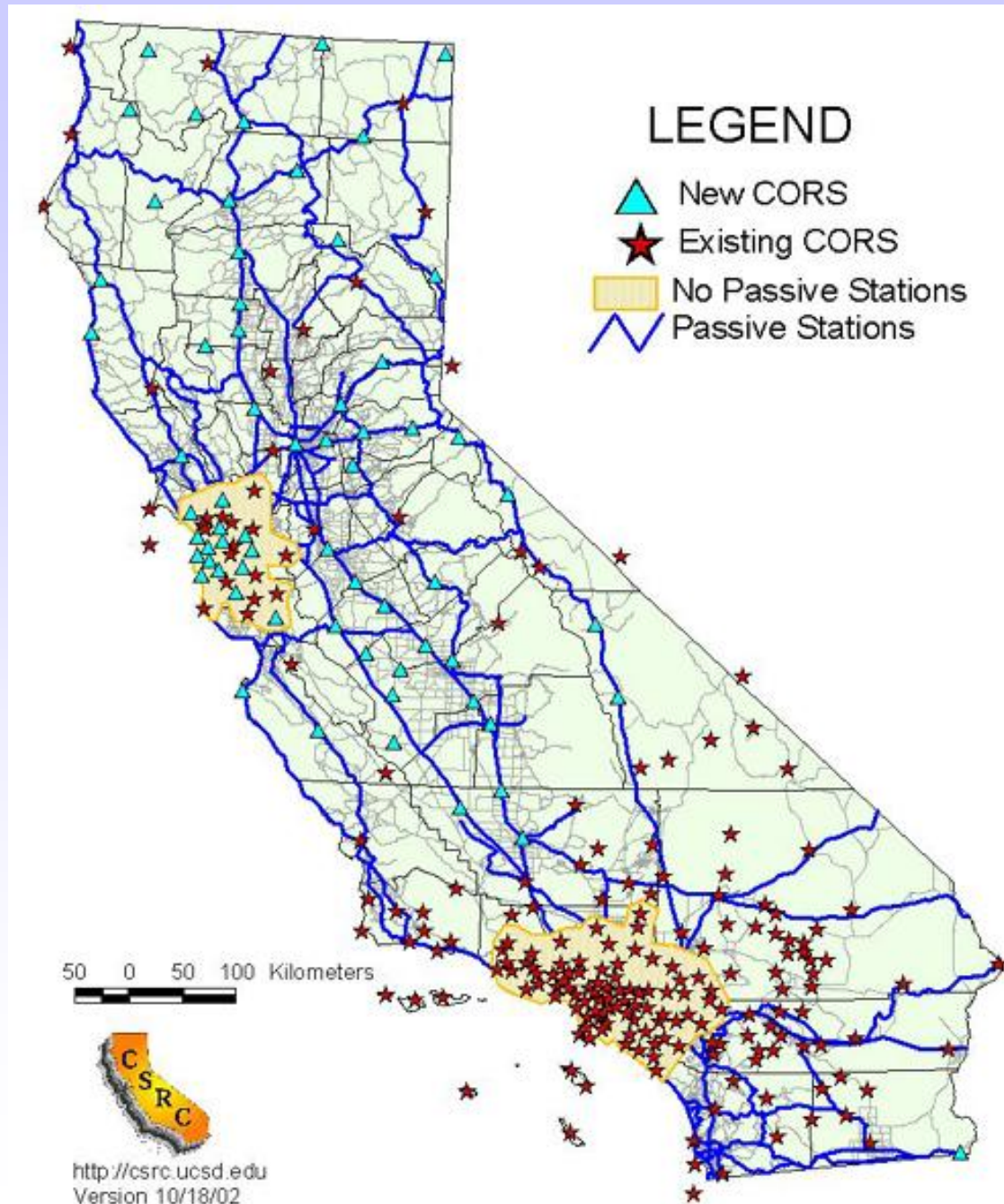
CSRS Master Plan

The Network

- 50 Km CORS
- 7 Km Corridors

The System

- 4 Dimensional
- Geodetic Models
- Height Datum
- Data Distribution
- Education & Outreach



CSRC Data Portal

<http://csrc.ucsd.edu>

Map Browser
RINEX Data
Coordinates
NGS Database Access

Site: sio3 Go To -Site Functions- -Site Metadata-

Site Metadata Type : Antenna / Dome
Site : sio30000
SIM User : anonymous

Effective Date 04/12/2000:01:50:00
Antenna Type ASH701945B_M
(scroll to current model)
Antenna Serial Number CR519991721
Antenna Reference Point BPA
Marker->ARP Up Ecc. (m) 1.7452
Marker->ARP North Ecc. (m)
Marker->ARP East Ecc. (m)
Alignment from True North (deg) 0
Antenna Radome Type SCIS
Radome Serial Number 79
Antenna Cable Type
Antenna Cable Length (m)

Print Query Contact User Login Help

Site Information Manager



Instructions

Map Mover

Map Layers

Large Plots (static)

750 x 750
1250 x 1250
1750 x 1750
2000 x 2000
2500 x 2500

ALL-2000
CORs-2000
HPGN-2000
ALL-1998
CORs-1998
HPGN-1998

Lat 33.07 Lon -116.78 Scale 1:1000000 Submit

Horizontal Reference System



1983, M6.4

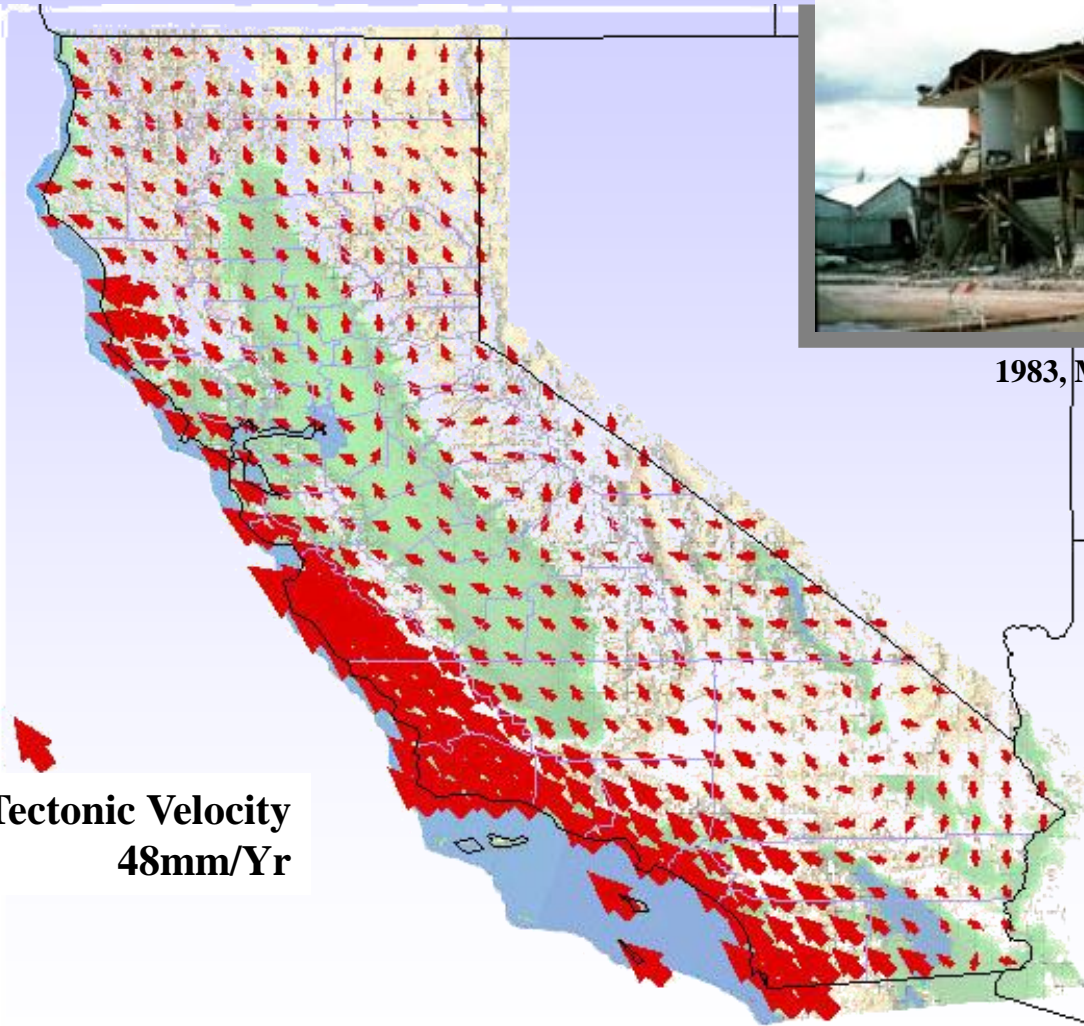
Velocity Models

HTDP

SCEC

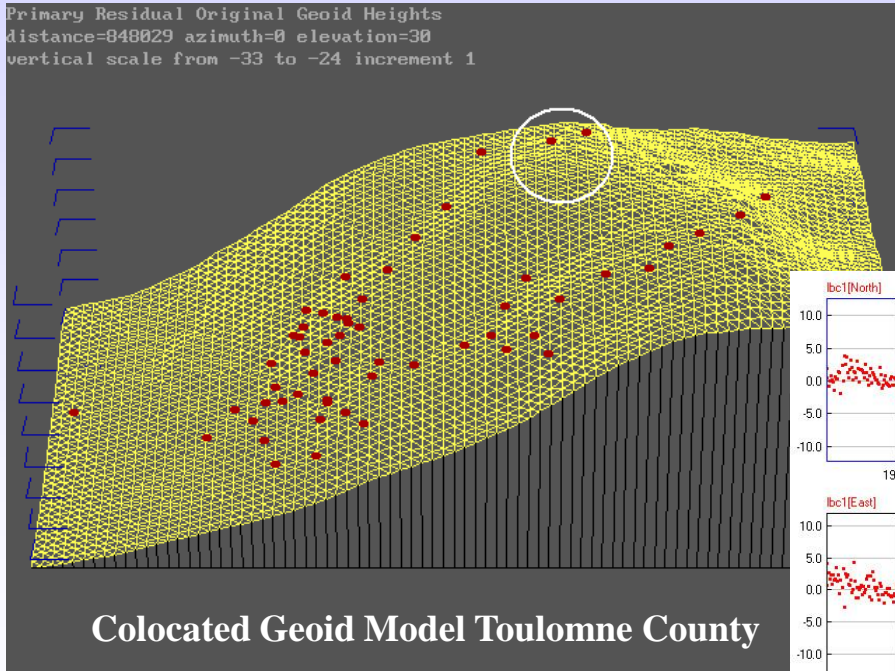
SCOUT

Secular Tectonic Velocity
48mm/Yr

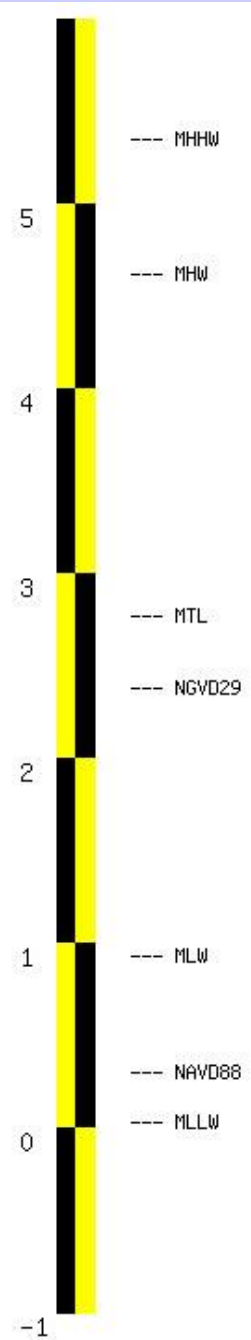
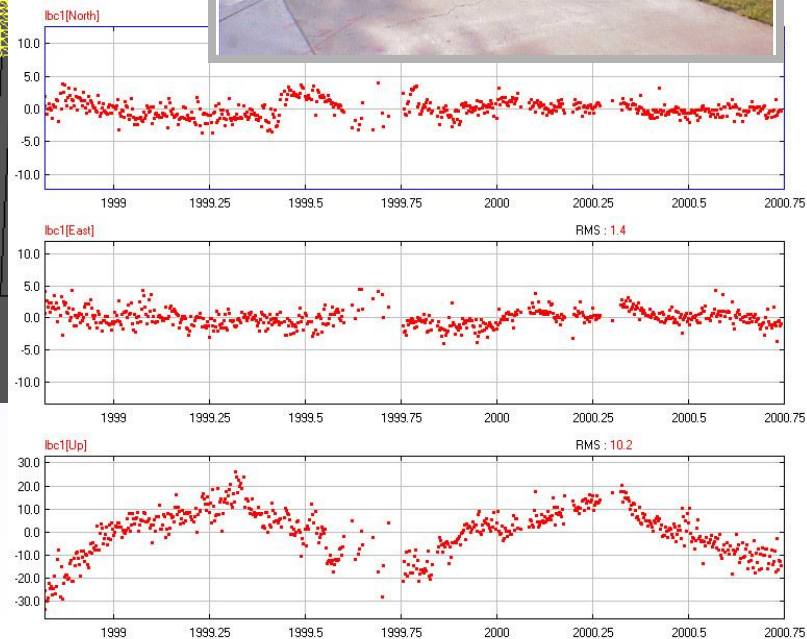
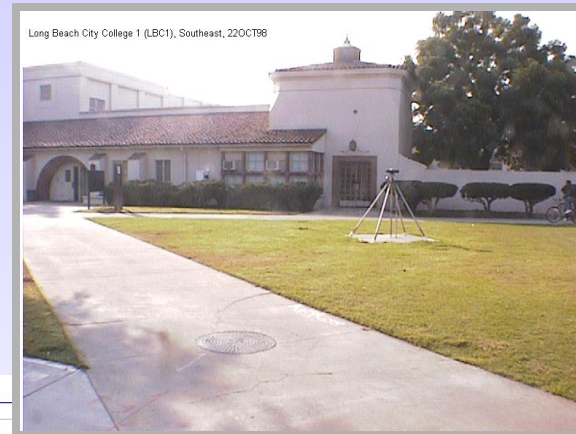


Vertical Reference Frame

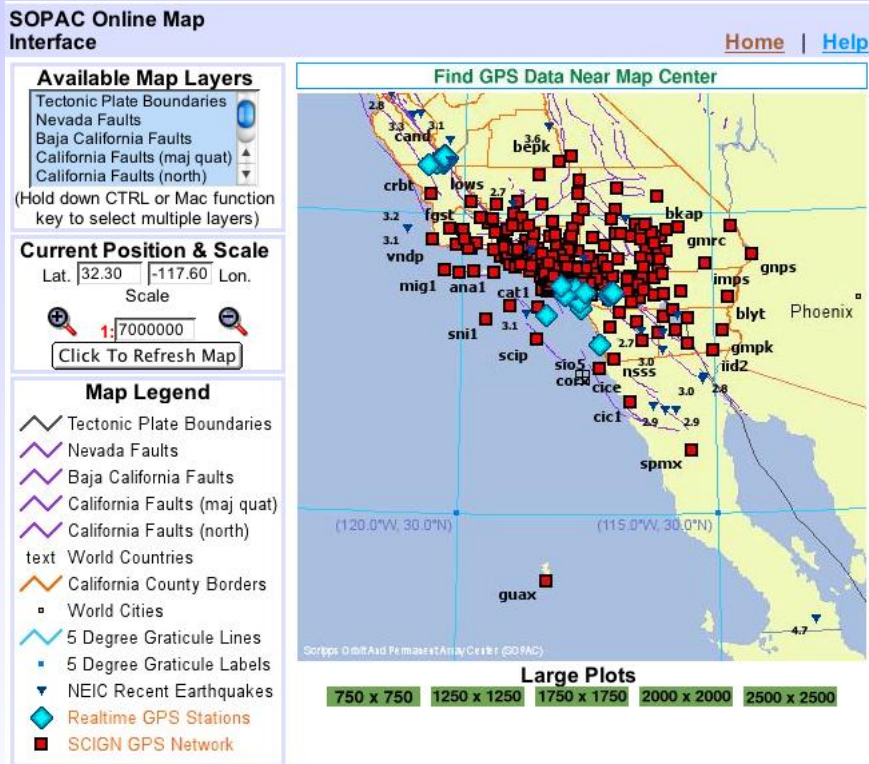
**Subsidence
Tidal Datum
High-Precision Geoid**



GPS Long Beach City College



SCIGN Real-Time Upgrades

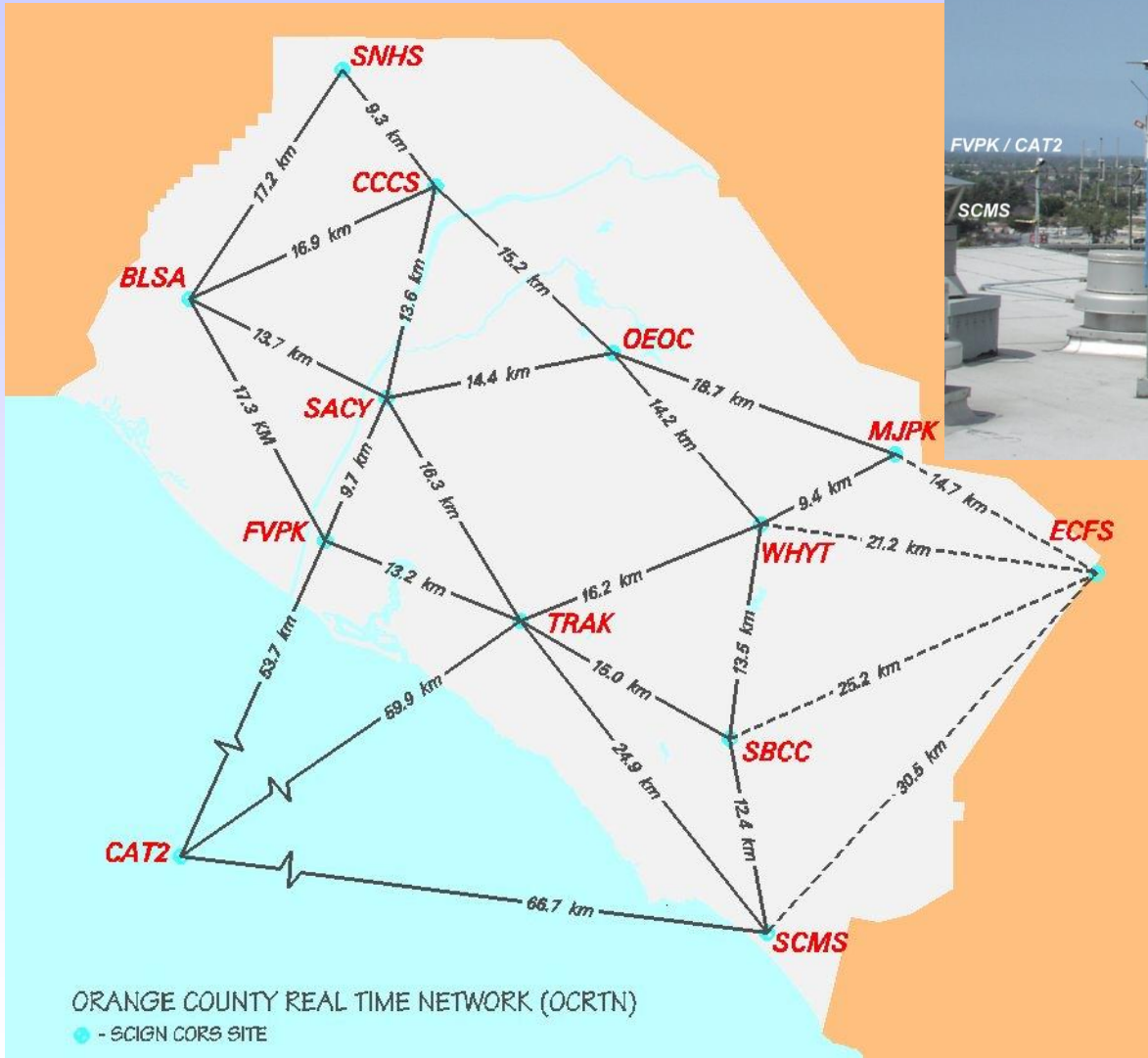


Diamonds:

Real-Time High-Rate Sites

Orange County- Complete
 Riverside County- Ongoing
 San Diego County- Ongoing

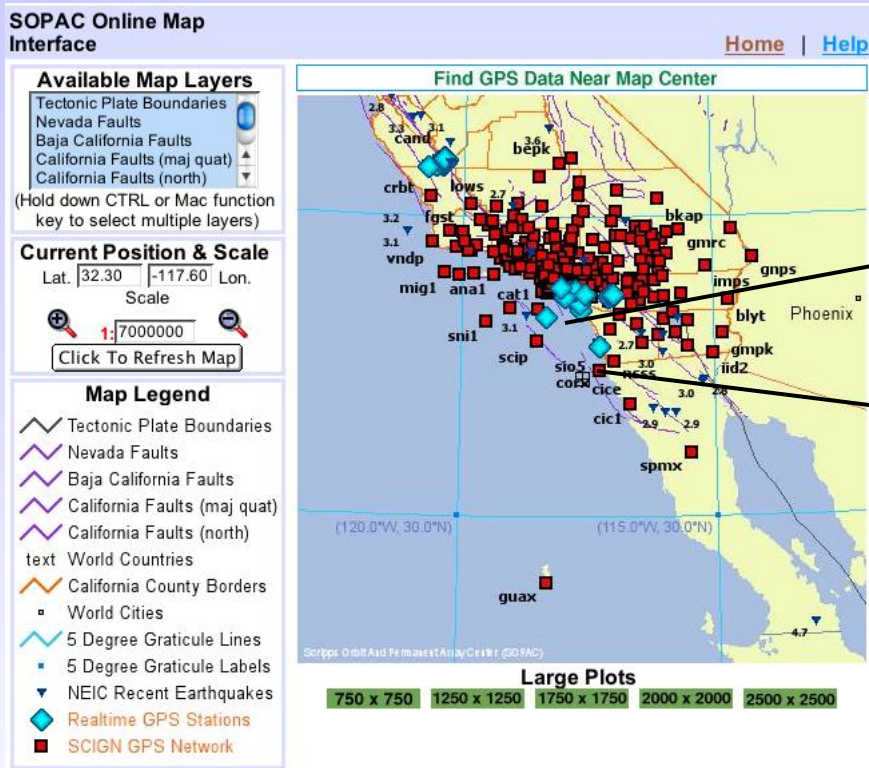
Real-Time Networks



OCRTN – Operational
Riverside County
San Diego County
Bay Area

SCIGN

OCRTN



The purpose of the SCIGN upgrades is twofold: (1) to provide high data rates (1 Hz) for measuring strong ground motions to complement traditional seismic instruments in the event of medium to large earthquake and low data latencies (< 1 sec) for seismic response, risk mitigation, and rapid earthquake model determinations based on coseismic displacements; (2) to provide real-time access to high-rate data to surveyors, GIS professionals, structural engineers, transportation engineers and others requiring access to precise positioning and navigation information, under the umbrella of the California Spatial Reference Center (CSRC). The first upgrade was the Orange County Real Time Network (OCRTN) - *now operational*.

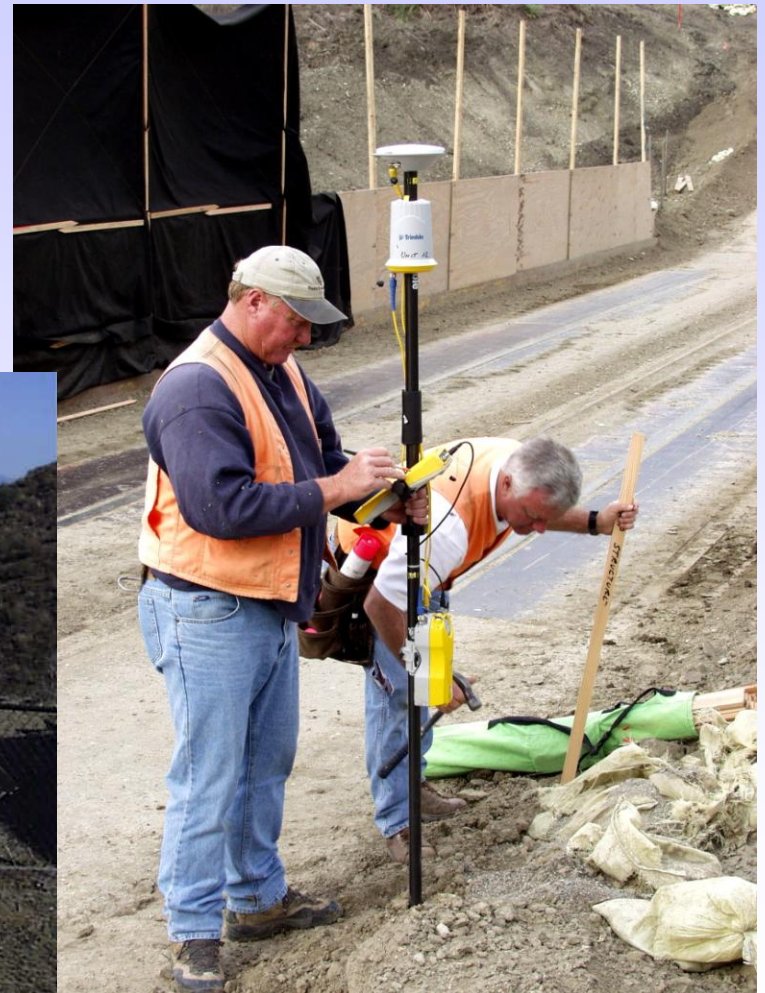
Typical OCRTN RTK Equipment

- Ashtech Z-Xtreme receiver
- Ashtech Geodetic-IV antenna
- TDS Ranger data collector
- Raven II CDPD modem (to be replaced with CDMA technology)
- 2-meter bi-pod



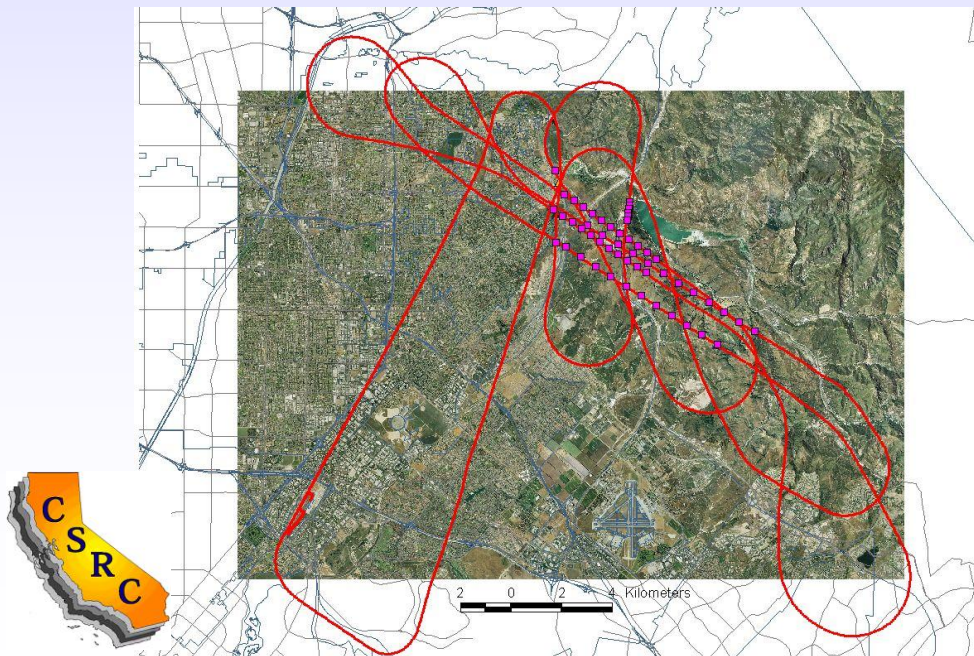
Spatial Referencing Applications

- Surveying & Mapping
- GIS Database
- Deformation Monitoring



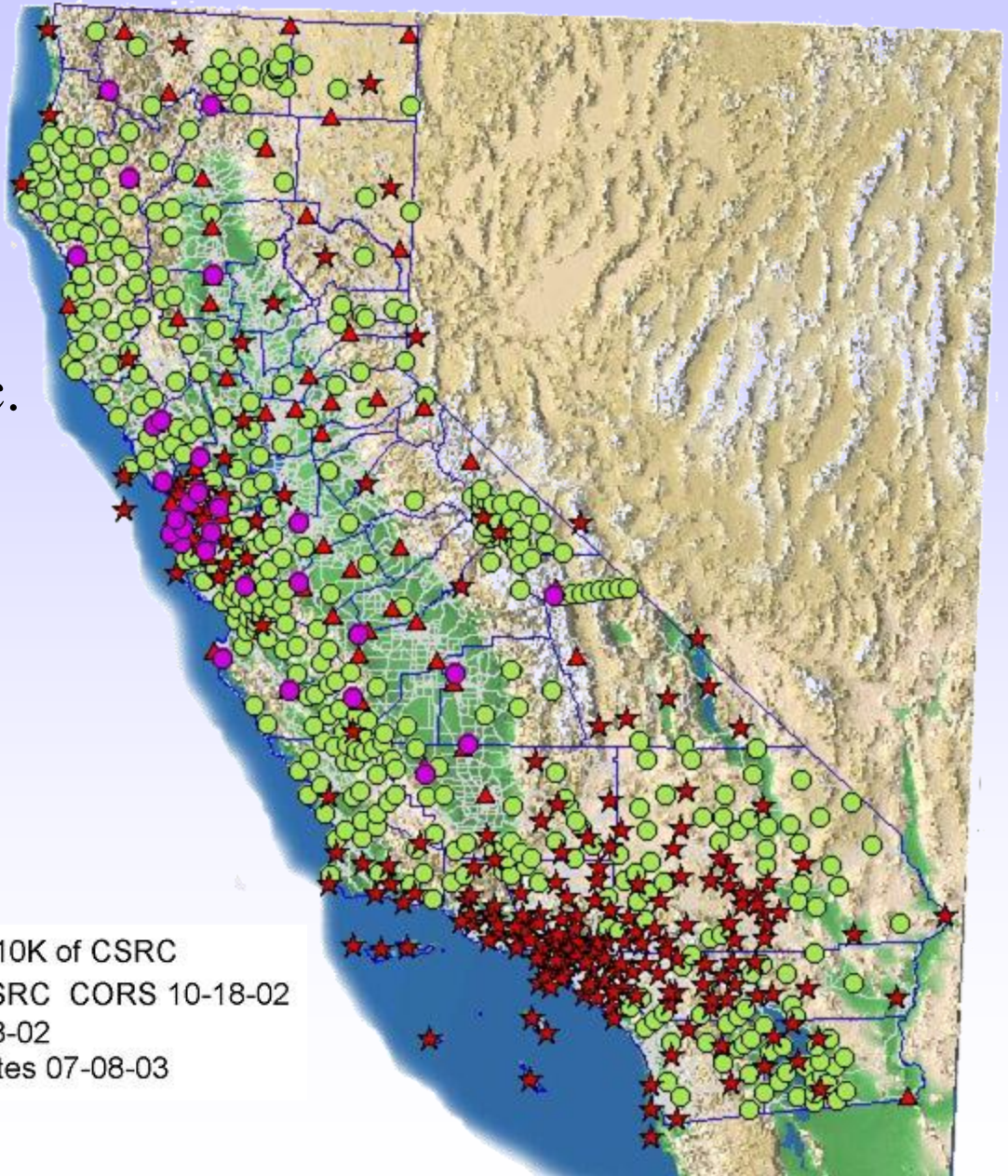
Real-Time Applications

- Machine Guidance
- Intelligent Vehicles
- Precision Navigation
- Emergency Warning Systems





- NSF / UNAVCO, Inc.
- 12 Years 800 CORS
- High-Speed Data



- PBO Sites within 10K of CSRC
- ▲ Proposed New CSRC CORS 10-18-02
- ★ Exist CORS 10-18-02
- Proposed PBO Sites 07-08-03

