

The Southwest Region of the Plate Boundary Observatory manages 480 continuously operating GPS and GNSS stations located principally along the transform system of the San Andreas Fault, Eastern California Shear Zone and the northern Baja Peninsula (Figure).

In an effort to modernize the network, we have started to replace Trimble NetRS receivers with GNSS capable NetR9 receivers and antennas. This will allow access to additional data from GLONASS and other GNSS systems. Currently, 68 stations (14%) in the Southwest region are fully GNSS capable and 7 are collecting GLONASS observations.

We have continued to upgrade critical radio networks to improve data download rates, dependability, and capability of high rate downloads. Data transfer rates are commonly improved ten to fifty-fold. 115 stations (24%) are now streaming 1 Hz data over the VRS3Net typically with <0.5 second latency and an average completeness of >92%. 44 stations are collocated with Vaisala meteorological sensors and 30 of these are streaming GPS/Met.

UNAVCO and Scripps have been working in collaboration to augment a subset of GPS stations with low-cost strong-motion sensors for use in Earthquake Early Warning applications. To date 22 PBO stations have been upgraded with MEMS accelerometer packages, 12 along the San Andreas and San Jacinto Faults in Southern California, and 10 along the San Andreas Fault system in the San Francisco Bay Area.

The Southwest region is currently developing an agreement with Caltrans to augment the network with full GNSS systems at about a dozen stations. The upgrades will consist of a select number of Caltrans-provided receivers and GLONASS activation keys to be completed by early 2016.

UNAVCO is working to create outreach materials for private landowners hosting PBO stations. These will consist of an annual mailing that includes a site-specific insert featuring the landowner's station.

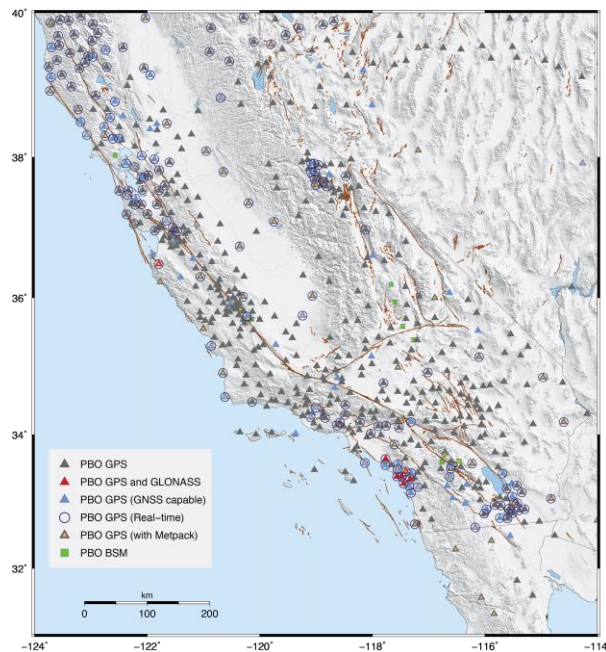


Figure: PBO Southwest network