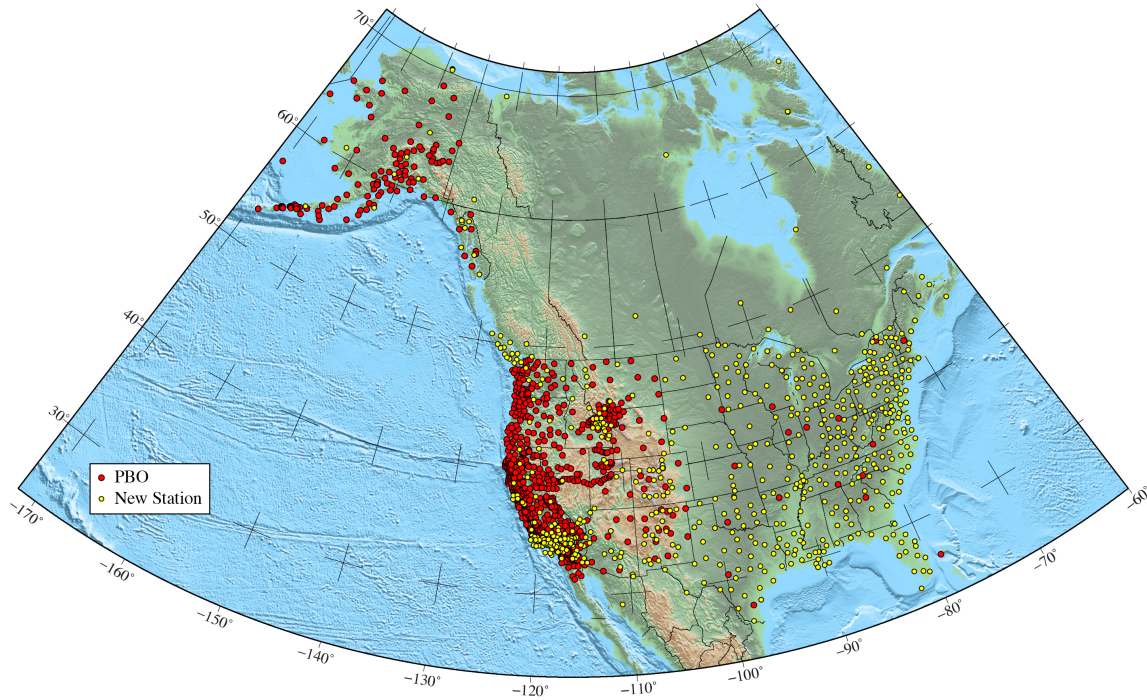


## **UNAVCO Data Products from the EarthScope Plate Boundary Observatory, COCONet, and Regional Networks**

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UNAVCO provides a suite of data products and services to support research and education in the geodetic community. We present here an overview and examples of data products available. UNAVCO manages the EarthScope Plate Boundary Observatory (PBO) and COCONet geodetic networks, which are all open access and archived at UNAVCO in both raw and processed formats. The PBO GPS network consists of 1100 stations that record standard-rate and highrate data, while an increasing subset of these stations stream real-time data. The PBO GPS Analysis Centers and Analysis Center Coordinator generate higher-level data products such as daily station positions and long-term secular velocities for these stations. We are currently expanding the PBO GPS analysis to include an additional 500+ stations from other public networks such as the Southern California Integrated GPS Network (SCIGN), the Scripps Orbit and Permanent Array Center (SOPAC), and the National Geodetic Survey's Continuously Operating Reference (NGS CORS) network. Adding these GPS stations to the analysis stream will improve the resolution and quality of the PBO solutions across the North American Plate and provide regional and local context for the ground motions in the continental interior. The 139-station COCONet array provides similar GPS coverage for the Caribbean plate. PBO also includes a network of borehole strainmeters, borehole seismometers, long-baseline laser strainmeters, pore pressure sensors, and tiltmeters. Through our partner institutions, raw GPS data are being processed and applied in innovative ways. The University of Colorado-Boulder, for example, measures local soil moisture, snowpack, and vegetation growth based on reflected GPS signals and makes results available on the PBO H2O data portal. The University of Nevada-Reno produces data quality parameters for GPS stations, allowing users to judge station state of health. UNAVCO collaborates with community partners to provide geodetic imaging data including satellite InSAR and airborne LiDAR acquired through EarthScope and other projects. Individually and collectively, these data products facilitate research in tectonic and volcanic motions, dynamic and static earthquake ground motions, post-seismic deformation, reference frame determinations, glacial-isostatic adjustments, atmospheric phenomena, and hydrologic processes.



Distribution of PBO station (red) and extra stations to be added to PBO processing (yellow). The new stations NGS CORS, SCIGN, SOPAC, and local networks, will expand geodetic coverage across North America.