The Episodic Tremor and Slip 2005 (ETS05) GPS campaign, Cascadia Subduction Zone

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We deployed 29 GPS units to capture the 2005 Cascadia Episodic Tremor and Slip (ETS05) event. This experiment represents the first large-scale EarthScope-supported campaign GPS system deployment. The project was conducted with extensive UNAVCO facility and PBO field- and archiving-support. The 29 Topcon GB1000-based systems, designed to be entirely self-supported, were configured in semi-permanent mode on temporary monuments, designed to comply with Olympic National Park requirements. The systems and data were retrieved in October with support from UNAVCO. We are in the process of installing permanent markers that can be used for annual semi-continuous measurement. As of July 2006, four of these had been built, and several additional sites had been permitted as of September 2006. The ETS05 experiment was a success; data retrieval rate was near 90% and time series from this network clearly indicate transient displacements associated with the slow slip event. Results from station OL28 at Hurricane Ridge are shown in Figure 2 as an example.