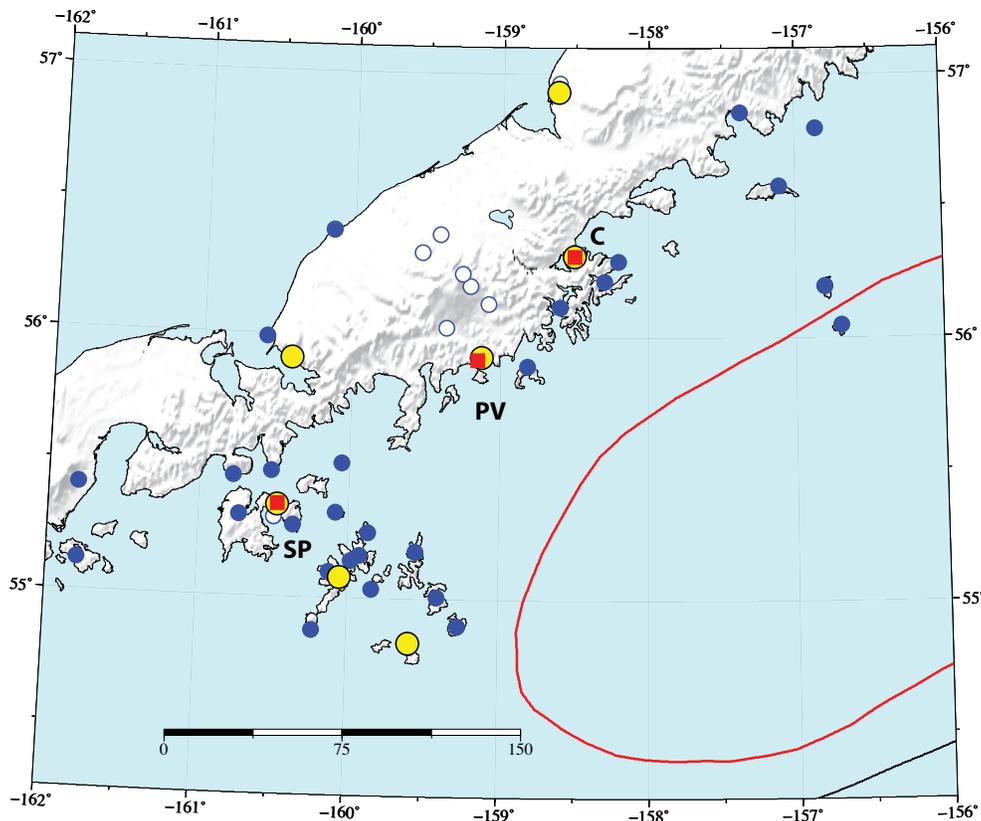


Interseismic Slip Deficit at the Edge of a Locked Patch: Shumagin Islands, Alaska

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This project was funded in spring/summer 2015, and activity so far has focused on obtaining permits needed to go out in the field in late August to early September. Most permits are now in hand, but one key permit appears to be stalled due to personnel changes at the Alaska Maritime National Wildlife Refuge. If permits are obtained in time, we plan to carry out fieldwork in early September.

The primary goal of the project is to begin to study what controls along-strike variations in the behavior of the seismogenic zone, by using a region that shows a substantial lateral variation in this property. The Shumagin segment of the Alaska subduction zone is the ideal location to study the transition from a wide locked region on the plate interface to a dominantly creeping section, and a trench-normal chain of islands in the forearc provides an ideal measurement setting. This data will be used to determine the distribution of slip deficit within the Semidi and Shumagin segments, for the first time providing a detailed view of how the seismogenic zone varies along strike across a locked to creeping transition.



This project will repeat surveys at campaign GPS sites (blue dots) to measure rates of motion from the early 1990s to present. Large yellow dots are continuous GPS sites, and those with red squares have campaign sites nearby that need to be resurveyed for a survey tie to link the measurements together. White dots are other campaign GPS markers that are not planned for repeat surveys (mainly on Veniaminof volcano).