Completion of AACSE: The Alaska Amphibious Community Seismic Experiment

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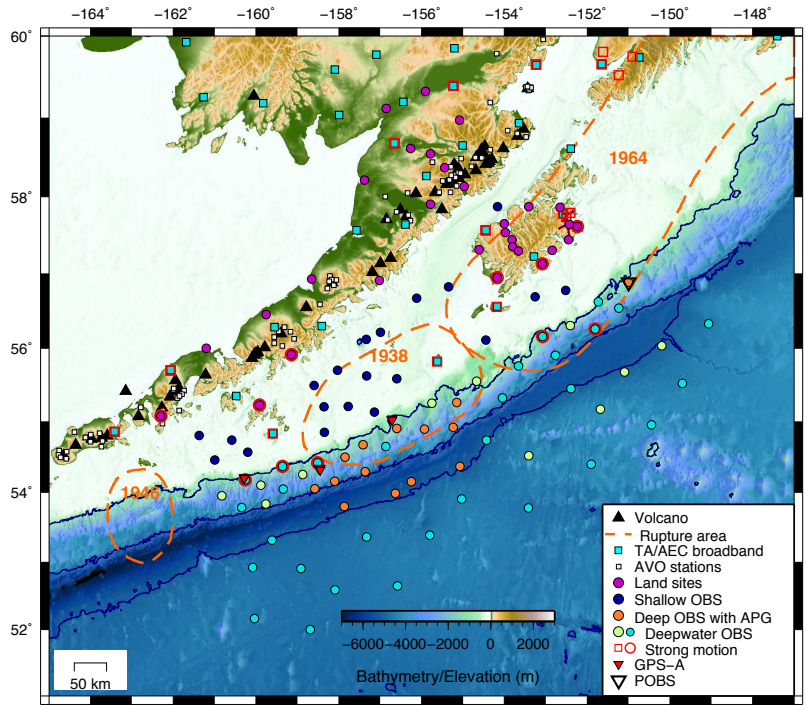

The Alaska Amphibious Community Seismic Experiment (AACSE) represents one of the first shoreline-crossing seismic arrays focused on a subduction zone with prolific earthquake behavior and a complex volcanic arc. AACSE has deployed 75 ocean-bottom (OBS) and 30 land broadband seismometers along the Alaska Peninsula for approximately 15 months, from May 2018 to September 2019. This array extends from east of Kodiak Island through the Shumagin Islands, and from the backarc to more than 200 km outboard of the trench. The AACSE array is complemented by more than a dozen TA and Alaska network stations on land, several hundred nodal sensors on Kodiak in May-June 2019, and 17 days of airgun shooting into the array in June 2019. This effort represents an unprecedented deployment of seismic sensors over the seismogenic zone, sampling a region that that spans a hypothesized change in interseismic coupling along the subduction plate boundary and a systematic change in chemical compositions of arc volcanoes. Better understanding structure and seismic behavior across these kinds of transitional boundaries helped to motivate this community effort, and should be made possible by analysis efforts currently being planned across the seismic community using this open-access data. Here we will provide an overview of the current state of the AACSE, immediately after the demobilization of land and OBS instruments. We will summarize instrument performance across the array, and also provide some initial assessments of onshore data quality and seismicity rates. Many complementary and add-on experiments have been coordinated in the final year of the experiment, and we will also provide an update on those opportunities.