

Upper Plate Response to Flat Slab Subduction Processes in Southern AK and Outreach Opportunities with Native Alaskan Communities

Ken Ridgway, Purdue University

Southern Alaska contains a rich record of upper plate processes related to active subduction of a flat slab. Shallow subduction of thick oceanic crust along this convergent margin has prompted crustal shortening, exhumation, inversion of sedimentary basins, and cessation of magmatism above and around the area of ongoing flat slab subduction. Surface uplift and erosion above the flat slab results in deposition of thick, clastic wedges in sedimentary basins located along the western and northern perimeters of the flat-slab region. Along the eastern perimeter, northwestward-propagating Oligocene–Quaternary slab-edge volcanism and transtensional basin development along dextral strike-slip faults record progressive northwestward insertion of a shallow slab against the curved continental margin of eastern Alaska. In the second part of the talk I will discuss potential educational outreach strategies for developing a relationship between the EarthScope program and Native Alaskan communities and students.