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Dear OATS Participants,

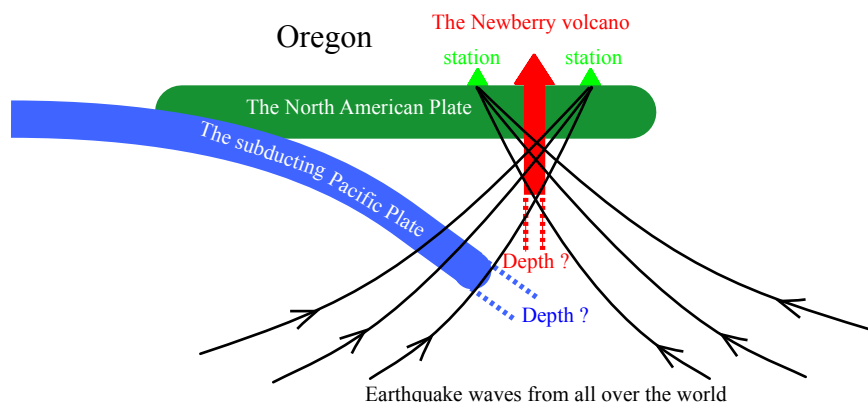
We want to thank you again for helping us with this project. The project has been going very well, all 11 stations are working properly and recording earthquakes from all around the world. We have processed the data collected from the OATS stations and have some terrific preliminary results! Our stations also recorded some Oregon earthquakes located near the Three Sisters this spring and another near Lakeview this summer. Both of these are shown on the next page.

Once again, thank you for your help and cooperation with this project. We look forward to seeing you soon in this November.

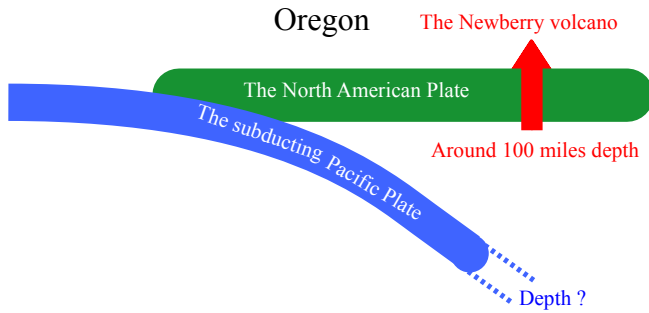
- The OATS team

What is OATS for?

Everytime when you see the logo of OATS, you may wonder what it represents? Here is a little background information: the dipping blue bar represents the subducting Pacific Plate, the green horizontal strip indicates Oregon located on the North America Plate, and the red column shows the source for the Newberry volcano.

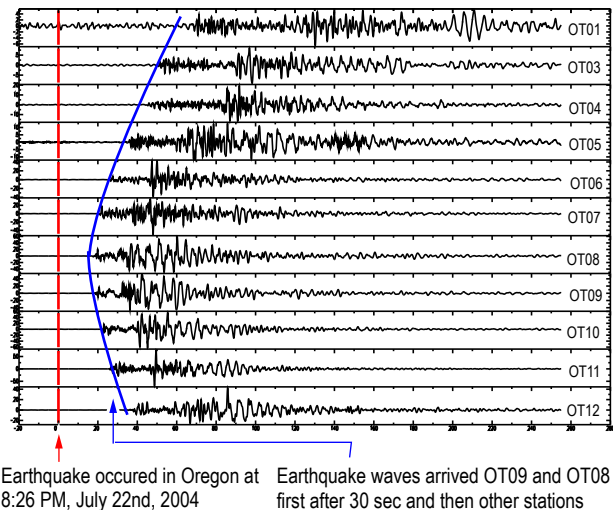
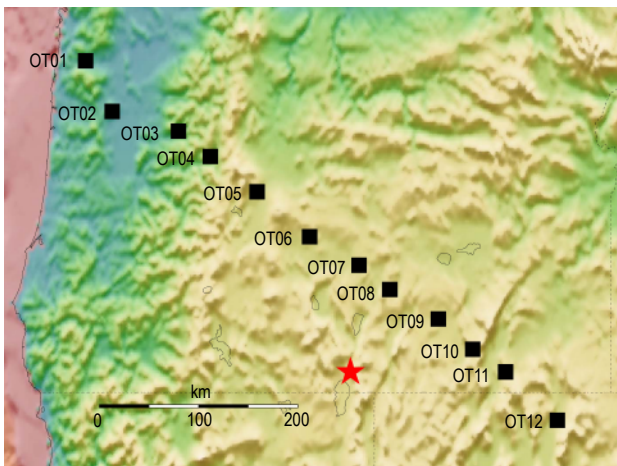


By analyzing earthquake waves propagating through the slab and the upwelling region, we can use a technique called tomography (similar to X-ray imaging) to view the structure of the Earth beneath Oregon. We can then answer questions such as to what depth does the subducted plate reach beneath Oregon and what's the source depth of the Newberry volcano?



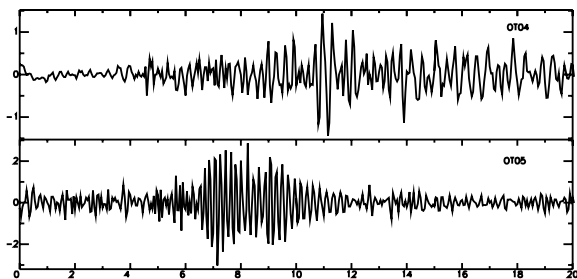
Preliminary results show that the source of the Newberry volcano is shallow in the upper 100 miles or so, and it may be constrained in the North American Plate. This is very interesting as many scientists expect it to have a very deep source, perhaps many hundreds of miles deep.

A local earthquake occurred in Oregon on July 22nd, 2004 - Did you feel it?



Earthquake occurred in Oregon at 8:26 PM, July 22nd, 2004 Earthquake waves arrived OT09 and OT08 first after 30 sec and then other stations

Michelle Miller at OT09 told us that her mother in law living nearby had dishes shaken off a table during a local earthquake. The above left figure shows the earthquake location (red star) and our OATS stations. The earthquake occurred at a depth of 3 miles with a magnitude of 4.6 at 8:26 PM, July 22nd, 2004. Did you feel it? Our stations did. The ground shaking recorded by each station is shown on the above right figure. Notice the blue line showing the approximately arrival times of the earthquake wave is curved due to the different distance of each station with respect to the earthquake location.



Our stations picked up an earthquake occurred in the Three Sisters volcanic center. This earthquake occurred at 7:44 PM, March 25th, 2004. Since the amplitude of this earthquake is small about 1.9, only nearby stations of OT04 and OT05 recorded it.

Seismic signals from Three Sisters area of uplift

Three Sisters volcanic center is located between station OT04 and OT05. The ground of the Three Sisters volcanic center has been uplifted by as much as 10 inches since late 1997. Scientists infer that the cause of the uplift is the continuing intrusion of a modest volume of magma (molten rock) accumulating at a depth of about 4 miles below the ground surface. The processes could eventually lead to shallower intrusion of magma or even a volcanic eruption; however, both are unlikely without significantly more intense precursory activity. The whole process is currently being monitored.