

Cascadia forearc earthquakes studied

by UPI

CORVALLIS, Ore. - U.S. geologists have reported evidence of probable low-angle thrust earthquakes on the Juan de Fuca-North America plate boundary. Anne Trehu and colleagues at Oregon State University said two 2004 clusters of earthquakes occurred in the central part of the Cascadia forearc -- a northwestern Washington-southwestern British Columbia region. The researchers' analysis suggests both events, which had magnitudes of 4.9 and 4.8 on the Richter scale, resulted from low-angle thrust motion between the North America and Juan de Fuca plates in the zone that is generally thought to be locked. The geologists said Paleoseismic data indicate the locked part of the plate boundary ruptures in large earthquakes every several hundred years, most recently in 1750. Trehu said her team's observations represent the first instrumentally recorded events on the Cascadia plate boundary, with the possible exception of the Petrolia Earthquake of 1992 at the southern end of the subduction zone. The study is detailed in the current issue of the journal *Geology*.

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