Mysterious tremors detected on San Andreas Fault

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LOS ANGELES (AP) - Scientists have detected a spike in underground rumblings on a section of California's San Andreas Fault that produced a magnitude-7.8 earthquake in 1857.

What these mysterious vibrations say about future earthquakes is far from certain. But some think the deep tremors suggest underground stress may be building up faster than expected and may indicate an increased risk of a major temblor.

Researchers at the University of California, Berkeley, monitored seismic activity on the fault's central section between July 2001 and February 2009 and recorded more than 2,000 tremors. The tremors lasted mere minutes to nearly half an hour.

Unlike earthquakes, tremors occur deeper below the surface and the shaking lasts longer.

During the study period, two strong earthquakes hit—a magnitude-6.5 in 2003 and a magnitude-6.0 a year later. Scientists noticed the frequency of the tremors doubled after the 2003 quake and jumped six-fold after 2004.

Tremor episodes persist today. Though the frequency of tremors have declined since 2004, scientists are still concerned because they are still at a level that is twice as high as before the 2003 quake.

The team also recorded unusually strong rumblings days before the 2004 temblor.

Results of the research appear in Friday's issue of the journal Science. The work was funded by the U.S. Geological Survey and National Science Foundation.

"The fact that the tremors haven't gone down means the time to the next earthquake may come sooner," said Berkeley seismologist and lead researcher Robert Nadeau.

Nadeau first discovered tremors deep in the San Andreas Fault in 2005. Before that, the phenomenon was thought only to occur in Earth's subduction zones, where one tectonic plate dives beneath another.

USGS seismologist Susan Hough found the latest observations intriguing, but said it's too soon to know what they mean.

"We don't have enough data to know what the fault is doing in the long term," said Hough, who had no part in the research.

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