JOURNAL HIGHLIGHTS

How long until next big San Francisco quake?

In order to determine how much longer the San Francisco area may remain safe from another devastating earthquake, Tom Parsons modeled the San Andreas Fault since the last "big one." Using a three-dimensional simulation to estimate the stress collected in the ground after the great 1906 quake, his model projected smaller odds of a repeat quake over the next 30 years because of residual effects from the previous event. Before 1906, such strong earthquakes occurred nearly every five years. Parsons' analysis concluded that the pressure that led to the original quake came from the relatively shallow plates grinding against one another, rather than from deep slip beneath the fault. His model estimated that it took until the 1980s for enough energy to rebuild in the region for a new earthquake, which translates into a 7–12% reduction in the chances for another large Bay area earthquake over the next three decades. [Published online: 22 August 2002 in *Journal of Geophysical Research-Solid Earth* (JGR-B)]

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