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Short-term precursors of the M=5.5-7.2 earthquakes in South California revealed from the simulated stress-strain state patterns

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Since 2009, the stress-strain state of the earth's crust in South California region is being tracked utilizing the geomechanical model accounting for all the current seismicity. Every new earthquake is treated as a new defect in the Earth's crust, causing the stress-strain state redistribution. Through the continuous stress-strain state update, we found that all the significant earthquakes in the area, including those with M ~ 7 in 2010 and 2019, had been preceded by the anomalies in the strength parameter