

Is Coulomb stress the best choice for aftershock forecasting?

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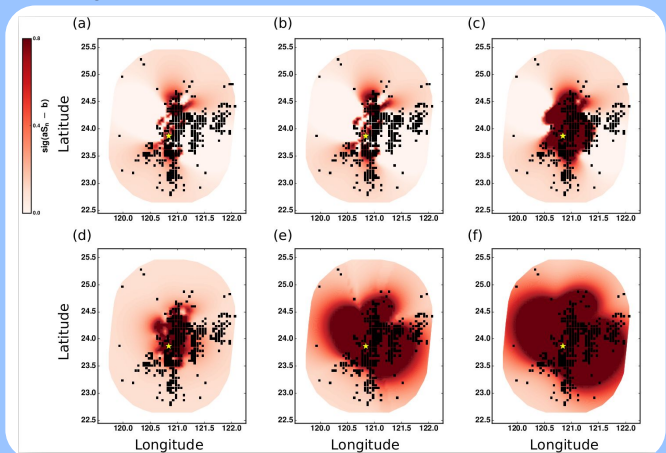
Data: SRCMOD Database for 188 events (406 models)

Models tested (with stress tensor solved using Green's Function):

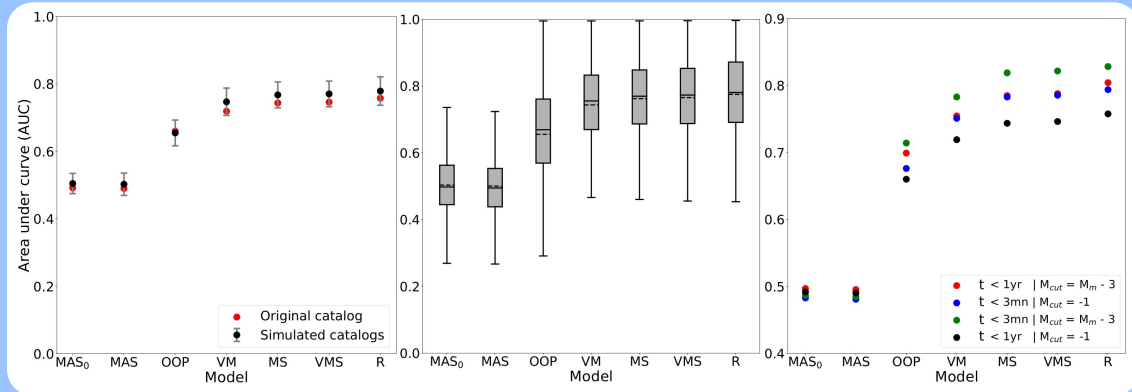
1. Δ CFS on master fault orientation (**MAS**)
2. Δ CFS on optimally oriented planes (**OOP**)
3. Δ CFS assuming fault variability (**VM**)
4. Maximum Shear (**MS**)
5. von-Mises stress (**VMS**)
6. Distance-slip probabilistic model (**R**) [Mignan and Broccardo (2019)]

MAS₀ is Δ CFS on master fault orientation with stress tensor calculated using Okada's solution

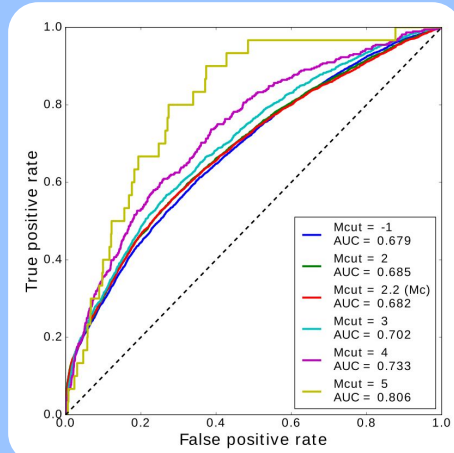
Results: Stress maps for 1999 Chi-Chi earthquake passed from Sigmoid filter.



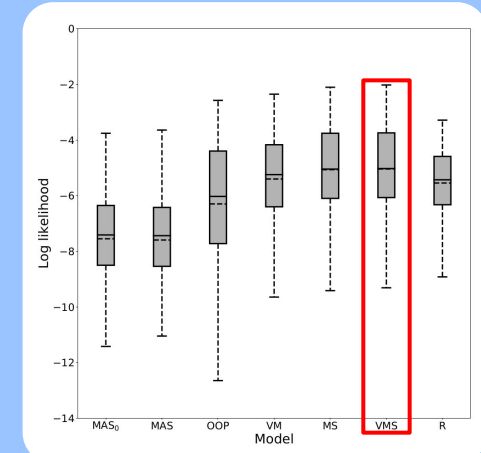
Area under the curve of ROC analysis for tested models



Magnitude cut-off test



Log-likelihood test



Project #: GRK 2043/1 GRK 2043/2