

Probabilities for large earthquakes near Istanbul: Reconsideration of the historical shocks and interaction-based calculation

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We calculate the probability of strong shaking in Istanbul from the reconsideration of historical earthquakes on the North Anatolian fault system in the Marmara Sea during the past 500 years. We also include the time-dependent effect of stress transferred by the 1999 M=7.4 Izmit earthquake to faults nearer to Istanbul, and find that the probability with the effect of 1999 shock is now about 1.3 times higher than the one without the interaction.