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Assessment of intermediate-term earthquake prediction algorithms

This SCEC research was targeted at SCEC Task 4: Intermediate-Term Earthquake Prediction. In support of the activities of Working Group A (Master Model). Our goal was to advance and finalize our ongoing worldwide test of the M8 algorithm, originally developed for intermediate-term prediction of large events, which uses a catalog of mainshocks to identify large scale seismicity patterns before large earthquakes in a given region

Preparation of this manuscript is advancing, but is proceeding very slowly. The PI's co-investigator is now enrolled in graduate school in another department, and is employed part-time as a system administrator, and does not have much time for this effort.

Additional calculations are not needed at this stage. Existing ones cover the period 1963-1998, and results presented at the ACES inaugural workshop in Brisbane Australia in Feb, 1999, and at the Erice, Italy, workshop in July, 1999 remain current. A significant new result, which is still under evaluation, is that although the M8 algorithm performs better than one which samples the available space-time according to a uniform probability distribution, it performs not nearly as well as an algorithm wherein recent seismicity levels are the indicator used to predict future levels. This hypothesis test is consistent with the one proposed by Jackson and Kagan as a null hypothesis.

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