

Interactive comment on “Geosystems and Earthquakes” by Angelo De Santis et al.

Anonymous Referee #2

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This article lists several possible candidates of possible earthquake precursors, including M8, RTP, PI, Shannon Entropy (information), R-AMR, LAIC, with focuses on the latter three, and suggest using mutual information as the index of correlation between these phenomena and earthquakes.

The paper has been clearly written, but the shortcoming of this study is also clear. As written in this article (Lines 4 to 18, Page 6), statistical seismology has been developed for many years and provides us with tools for evaluating predictive powers of earthquake predictions and forecasts. It is possible for the authors to evaluate their precursor candidates in rigorous statistical tests. But such tests are absent from this article. Especially, the entropy studies can be applied systematically to a larger catalog, like the SCEDC catalog or the JMA catalog, to evaluate its overall performance, while the author only apply it to 2 cases in Italian catalog. It is hardly believable that we can draw important conclusions only based on these two cases.

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Another important issue is that in Sections 8 and 9, the completeness of earthquake catalogs is not considered for the given magnitude thresholds.

Minors.

Lines 13-22, Page 7. RTP has already evaluated by the gambling score, showing only marginal or no significance in predicting Eqks.

Lines 21-27, Pages 32. Please note that big data cannot do everything. Within the big data, there are many pairs of things that have statistical correlation by chance, but not causalities between them.

Interactive comment on Solid Earth Discuss., <https://doi.org/10.5194/se-2017-120>, 2018.

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