

Interactive comment on “Singular spectrum and principal component analysis of soil radon (Rn-222) emanation for better detection and correlation of seismic induced anomalies” by Timangshu Chetia et al.

Anonymous Referee #2

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The paper doesn't present new results and methodologies. The correlation between radon and seismicity, that seems to be the goal of the paper, is treated in a very poor way, and the results seem to be mixed among the various earthquakes.

More specifically:

- Singular Spectrum Analysis: this chapter needs absolutely an explanation more detailed and a check about formulas.
- Results: line 179..from April to September... Add a little table instead of putting the

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monthly average radon values in the text. line 204: Explain why the groups are 9.

- Discussion: it's difficult to understand to which event is related each explanation. You write about close events, even a few hours or days of difference and that theoretically the radon anomaly is linked to the major. I think that one purpose of this article could be precisely to try to identify possible time and space windows, which make it possible to understand if radon anomalies are possibly linked to a single event or if they are the cumulative effect of several earthquakes; it is sort of declustering as it's done in the probabilistic seismic hazard computations.

- References: must be re-checked: some references are missing and for some there is a difference between the text and the references (different number of authors, wrong year of publication ...)

- Figures: - 1 it would be useful to add a window showing the study area of 100 km around Tezpur, and the 9 earthquakes studied; - 3 to 14 more explanations in the captions were necessary, but I see you already add them in the corrected version; - maybe it is possible to accorpate some figures (the matrix ones...for example...).

Minor corrections:

100 earethquakes...correct as earthquakes 136 the common most algoritm....correct as...the most common algoritm; 202 form.....correct as....from

Interactive comment on Nonlin. Processes Geophys. Discuss., https://doi.org/10.5194/npg-2019-37, 2019.

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