

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 #1

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General comments

I would like to thank authors for trying to address my concerns, although they mostly remain. The manuscript needs further clarifications and improvements before I can recommend it for publishing. Please see below.

Specific comments

1. The equation showed at (VI) is wrong. The equation indicates autocovariance not about covariance. Please show the correct an equation used in the study.

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2. The equation (VII) is same to the equation (VI). Is S a matrix? The equation does not show the size of the matrix and the element, i-th row and j-th column. Please show the correct an equation used in the study.

3. Regarding lines 255-264. Kumar et al. 2015 does not claim “The periodic and aperiodic component mostly corresponds to diurnal and semidiurnal variation.”. They claim that periodic components of radon data extracted by SSA consist of diurnal and semidiurnal components, since the components includes variation of 24-hour and 12-hour period. Therefore, lines 255-264 is not correct.

4. Regarding Fig. 4, 5, 8, 9, 12 and 13. The period in the eigenfunction components 3-9 (Fig. 4) is not clear, since no information about the unit of x-axis of the figure. The other figures 5, 8, 9, 12 and 13 have same problems.

Technical comments 1. Line 187. The equation is not correct.

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

C2