

Interactive comment on “Radon monitoring as a possible indicator of tectonic events” by V. I. Outkin et al.

Anonymous Referee #2

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The paper is quite difficult to read due to poor English and several typos. Some examples: "but for all the curves is possible to distinguish to tell two zones"

"The last zone is characterized by the almost constant values of the United Arab Republic in time."

"When the concentrated stresses in the rock matrix create new micro-cracks and the area and/or volume of pre-existing dilatant volume of cracked rock that drives pore fluids to flow upward through crack network when a vent-like path occurs due to the change of strain leads to dislocation of mineral assemblage in the crystal lattice"

"Obligatory condition of tectonic earthquake is the availability of the required voltage in the Earth's crust, which is called deformation lithological unit or well plates."

C16

There are inconsistency in data, which are said to be from California and then the United Arab Republic appears out of the blue.

The acronym for the would-be precursor is VAR, then appears a UAR that is not spelled out.

"Array" is used both to refer to the instrumentation deployed and to the area covered by instruments. However some sentences remain obscure, such as "Compression process ends the earthquake, destruction (changing) array structure (Fig. 2)...The compression process ends earthquake destruction (change) the structure of the array."

At line 5 it is said that the data base used is 78-81 gg. What does it mean?

The data used cover from mid March to mid September, that is about 180 days. Fig. 3 reports cycles whose length is 140 gg. So no conclusions can be drawn about the repeatability of the observation because the length of data base barely accommodates one cycle. Literature is plenty of larger variation of radon over longer periods without any correlation with seismicity (see e.g. doi:10.5194/nhess-10-1373-2010).

The authors consider earthquakes $M > 4$ in California (from Hayward fault to Parkfield). A search on NEIC catalogue for that area reveals that 313 events of that size occurred in 29 years, which is roughly one per month. This makes meaningless the search for any correlation with time windows longer than this. Moreover the larger event ($M = 5.8$) is labeled as "20 January 1980" in the text and 1979.05.08 in Fig. 1.

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C17