



EGUsphere, referee comment RC1  
<https://doi.org/10.5194/egusphere-2022-926-RC1>, 2022  
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## **Comment on egusphere-2022-926**

Angelo De Santis (Referee)

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Referee comment on "Scrutinizing and rooting the multiple anomalies of Nepal earthquake sequence in 2015 with the deviation–time–space criterion and homologous lithosphere–coversphere–atmosphere–ionosphere coupling physics" by Lixin Wu et al., EGU sphere, <https://doi.org/10.5194/egusphere-2022-926-RC1>, 2022

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This paper represents a novelty in the earthquake precursor literature: it intends to scrutinize the series of anomalies preceding the 2015 Nepal earthquake sequence in order to establish the correct chain of processes of the Lithosphere-Coversphere-Atmosphere-Ionosphere coupling (LCAI-coupling) physics. The chosen case study is interesting because it is one the most recent studied earthquakes, so it represents a good example to apply the approach these authors propose. The paper can be published after some minor revision is undertaken, following the suggestions below, that are indicated in the order they appear in the text.

The title: I would avoid acronyms in the title. In addition, perhaps "Scrutinizing" could replace "Screening and rooting". So better: "Scrutinizing the multiple anomalies of Nepal earthquake sequence in 2015 with Deviation-Time-Space criterion and homologous Lithosphere-Coversphere-Atmosphere-Ionosphere coupling physics"

Line 14. Please replace "alternation" with "alteration" (as correctly CSFA defined after in the main text)

Line 78. I would insert "(Nepal)" after "Gorkha", in order to be clear that you are speaking about the same Nepal earthquake, i.e. the mainshock that will be dealt with this paper.

Line 85. I would insert "with a" after "behaved".

Figure 1. It is not clear from which catalogue the earthquake data depicted in the figure have been downloaded. USGS (as indicated in Figure 6; but see also my associated question to that figure)?

Figure 3. A referring table with each abbreviation together with its corresponding literature would be welcome. By the way, the abbreviation "Santis 2017" should be replaced by the complete surname of the first author, i.e. "De Santis 2017". (see also Figure 7 and Line 741)

Line 250. Please replace "LACI" with "LCAI"

Figure 6. In the caption you mention that the seismic activities is taken from USGS with earthquakes  $M_w$  equal to or larger than 2.5. The latter fact is dubious since USGS has, outside USA, a typical magnitude of completeness of 4-4.5. Could you please check is it is true that there are earthquakes with magnitude from 2.5 to 4?

Line 386. Please replace "attribute" with "attributed".

Figure 7. Please replace "Santis 2017" with "De Santis 2017".

Line 404. "eruption"? Probably you meant "rupture".

Line 467. Please replace "LACI" with "LCAI"

Line 529. In the list of references, there are two citations with the journal "Techno" that I think are actually "Tectonophysics". (see also in Line 630)

Line 611. Please write correctly "Lavé".

Line 619. Please replace "teh ionosphere" with "the ionosphere".

Line 707. Please replace "Modication" with "Modification".

Line 741. Please replace "Santis, and A.D." with "De Santis A."

Line 745. Please replace "2009Mw 7.3" with "2009 Mw 7.3"

Lines 746-757. Please remove the " before and after the title of the paper.