

Earth Syst. Sci. Data Discuss., author comment AC2
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Reply on RC1

Luca Comegna et al.

Author comment on "The hysteretic response of a shallow pyroclastic deposit" by Luca Comegna et al., Earth Syst. Sci. Data Discuss.,
<https://doi.org/10.5194/essd-2020-362-AC2>, 2021

OVERVIEW COMMENTS

Comment by Referee #1

This research paper presents a dataset of hydrological measurements carried out from 2011 to 2012 in a shallow deposit of loose pyroclastic soils located in Campania, Southern Italy.

The work is well written and illustrated with figures and tables, and their conclusions seem to be consistent with the results and discussion. However, the restructuration of some parts of the paper is considered appropriate (see 'line-by-line commentary'). Authors included data and methods in the 'Monitoring site' section. An independent and clear section for 'Data and methods' may be very appropriate, especially in a data description paper like this.

General vote: manuscript may become acceptable after major changes, which are detailed in this review.

Reply by Authors

Dear Referee #1,

many thanks for your suggestions that will undoubtedly improve the quality of the manuscript. In particular, we will re-organize the work for the sake of clarity, including an appropriate "Data and methods" section.

The replies to the specific comments are reported in the follow.

LINE-BY-LINE COMMENTARY

R1 - Line 10: I suggest to change 'had been involved' by 'was involved'.

A1 - The suggested change will be provided.

R2 - Lines 18: (e.g., Mualem, 1976...).

A2 - We will add "e.g." before the list of citations.

R3 - Lines 22: 'specimen' instead of 'sample'?

A3 - We will provide the suggested change.

R4 - Lines 30, 143, 150, 159, 207, 254, 278, 351, Figs. 8 and 10: Please, use the same style of English spelling along the manuscript (American or British English spelling). In some cases, authors have used British English spelling.

A4 - You are right. We will provide the suggested corrections using the same British English spelling.

R5 - Line 52: Remove 'fully'?

A5 - The word "fully" will be removed.

R6 - Line 55: 'was' instead of 'had been'.

A6 - The suggested correction will be provided.

R7- Line 77: (e.g., Fiorillo et al., 2001...).

A7 - We will add "e.g." before the list of citations.

R8 - Line 92: I propose to define a 'Data and methods' section in order to describe data and methods relative to the analysis of the monitored deposit from 2011 to 2012, whose results are presented in this work.

A8 - We will insert a "Data and methods" section after Section 2 ("Monitoring site") in order to help the reader understanding the analysis of the field data described in the following Section 3 ("Results of field monitoring"). Such section will also contain the equations used for the slope stability analyses reported in Section 4 ("Discussion").

R9 - Line 119: Consider to put this paragraph at the end of the 'Data and methods' section.

A9 – Such paragraph will be reported at the end of the “Data and methods” section.

R10 - Line 131: Please, explain what is each variable in the manuscript.

A10 – The meaning of the reported variables will be explained in the text.

R11 - Line 194: Remove 'further and further'?

A11 – We will remove “further and further”.

R12 - Line 342: Consider to re-write the sentence 'which is dependent also on the installation procedures of the soil around the sensors' as follows 'which is dependent also on the installation procedures of the sensors into the soil'.

A12 – The suggested correction will be provided.

R13 - Line 348: 'Extraction' instead of 'extraction'.

A13 – The typo will be fixed.

R14 - Line 348: I suggest to change the sentence 'and this in a different way in the different seasons' by ', which varies throughout the seasons'. Consider to re-write it.

A14 – The suggested modification will be provided.

R15 - Line 349: Consider to remove 'always quite'. It sounds too subjective.

A15 – We agree and we will remove “always quite”.

R16 - Line 361: 'LO' instead of 'LP'.

A16 – “LP” is correctly reported.

FIGURES AND TABLES

R17 - Figure 1: Indicate the measurement unit for s (i.e., kPa).

A17 – As the represented curves are qualitative (i.e. without reference to any real soil or experimental data), we think it is not worth to insert units here (which instead are reported in Figure 2).

R18 - Figure 2: Define Figs. 2a for the diagram and 2b for the upper-right inset in this figure.

A18 – The suggested modifications will be provided.

R19 - Figure 3: Add coordinate grid, North arrow, and scale bar in Fig. 3a. Also indicate the source of the topographic map in Fig.3a and add an inset that shows the location of the study site in the context of Italy.

A19 – Figure 3a (modified after Damiano, 2004) will be changed. In particular, we will insert: North arrow; scale bar; the location of the site reported on the map of Italy (including the geographic coordinates).

R20 - Table 1: Explain the variables in this table along the manuscript or in the table caption.

A20 – The meaning of the reported variables will be explained in the table caption.

R21 - Table 3: The word 'curve' is duplicate.

A21 – The typo will be fixed.