

Dear Editor,

We appreciate the clear language of the two Anonymous Referees and the opportunity to further clarify and revise the manuscript.

Besides the changes in the manuscript, we have added a supplement containing the comparison against the analytical solution presented by Srivastava and Yeh 1991 using different time step size and spatial discretizations, and the infiltration excess and saturation excess simulations considering the effect of temperature on the saturated hydraulic conductivity.

Since our work aims to present a new software, we added as asset the material of the recent GEOframe Summer School we held on WHETGEO-1D. The material we shared consists of the slides of lectures as well as the recorded videos, and the tutorials to use WHETGEO-1D. This is meant to make it easier to use and disseminate WHETGEO-1D.

Kind regards,
Niccolò Tubini and Riccardo Rigon

List of relevant changes

- Line 101-102 we change the unit.
- We added Line 111 to clarify the meaning of T_1 and T_2 .
- We added Section 1.5 *Informatics* where we explain the problems related to the informatics. This section anticipates and extends what was written in Lines 374-384 of the submitted manuscript accordingly with the comments of the Anonymous Referee #1 comments. Please note that in new version Lines 374-384 of the submitted manuscript has been removed. Consequently Section 3 has been renamed as *Design and deployment of WHETGEO-1D*.
- Section 1.6 we clarified that the 3 requirements and the 7 observations are necessary to properly ground the software design. Moreover, here we specified that one of the novelties of WHETGEO regards the adoption of new numerical tools in order to overcome some numerical issues of current solvers. The changes in Section 1.6 answer to the observations of the Anonymous Referee #1, specifically *Detailed comments 1*.
- Line 150-151 we reformulated the sentence.
- In Section 2.2.2 we fixed the signs of the equations.
- In the Conclusions we summed up the novelties within WHETGEO specifying that we coped with all the 3 requirements, and we solved only observation 1-4, whereas 5-7 are not fully addressed.
- Figures 1, 5, 6 we changed index k to i .
- Figure 2 we fixed the y-label in panel (b).
- Section C1.1 C1.2 we added the unit to physical quantities.
- Figure C2 we fixed the unit in the x-label.
- Figure C3 we fixed the y coordinate values.
- Table C1 we fixed the units in the heading.
- Figure C4 we fixed the unit in the x-label and the y coordinate values.
- Figure C6, C7, C8, C9, C11 we fixed the units in the y-labels.
- Figure D1 we fixed the units in the x-labels.