

Interactive comment on “Repeated electromagnetic induction measurements for mapping soil moisture at the field scale: validation with data from a wireless soil moisture monitoring network” by E. Martini et al.

E. Martini et al.

edoardo.martini@ufz.de

Received and published: 10 June 2016

We are grateful for the comments received from all the reviewers. In the following, we summarize the most significant changes that we would like to make in the revised manuscript according to the open discussion phase. For more detailed answers we refer to the authors' response to the specific reviewers' comments.

In the introduction section, we will state more clearly the aim of the work as anticipated in our response to RC3.

In the material and methods section, we will improve the description of the data set ad-
C1

ressing the doubts raised in SC1 about available information on electrical conductivity of the soil solution (EC_w), clarifying how the interpretation proposed is supported by available data.

In the results and discussion section, we will add a new paragraph in which the issues related to EMI calibration procedures will be discussed. There, we will introduce the characteristics of an ideal calibration of EC_a data as anticipated in the response to RC1. The main focus will be on the fact that the procedure proposed in SC1 may enable to resolve electrical conductivity (EC) profiles only, whilst the major challenge with respect to field-scale mapping of soil moisture is rather the separation of soil moisture from all the other soil properties and states that influence EC.

In the conclusion section, we will highlight the main contributions of our work to the field as discussed in our response to RC3.

Figure 4 will be increased in size (landscape orientation) as suggested in RC1 and RC2, and additional changes proposed therein will be made.

References will be updated following the recommendations of the four reviewers, and citations in the text will be added or removed accordingly.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., doi:10.5194/hess-2016-93, 2016.