

## ***Interactive comment on “Assessing the performance of a plastic optical fiber turbidity sensor for measuring post-fire erosion from plot to catchment scale” by J. J. Keizer et al.***

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Received and published: 11 August 2015

General comments

Authors: thank you for your positive overall evaluation of our manuscript

Specific comments

Referee: 2 Study area and sites section. Since the authors collected samples in a variety of situations, a table summarizing the number, size, substrate, cover, treatment or not and type (unbounded or bounded) of plots would be welcome.

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Authors: we agree that the suggested table would be useful and we will add it to the revised version of the paper.

Referee: 3.2 Laboratory analysis of runoff samples Line 10. Please clarify here the meaning of “normalized”.

Authors: We will rephrase this sentence, in the revised version, to clarify that normalization was done by dividing the signal measured for a runoff sample by the reference signal measured previously for bi-distilled water (see pg 455, lines 3-7).

Referee: 4 Results and discussion Maybe the authors can simplify the first paragraphs of the subsections 4.1.1, 4.1.2, and 4.2.1 and 4.2.2, simply with a comparison of the respective populations by a non parametric test. This would also reinforce the statements they do, when comparing in fact the respective medians. Maybe part of the variability detected could be a consequence of different levels of fire severity and could be convenient to mention it in the discussion.

Authors: We have some doubts as to whether the different medians are statistically significant, due to the generally large range of values for each data set, but we agree that statistical test results could be helpful to simplify the first paragraphs of subsections 4.1.1, 4.1.2, and 4.2.1 and 4.2.2, and we will therefore carry out such tests for the revised version of the paper. We don't believe that the difference in median sediment concentrations are related to fire severity, as fire severity was similar at all study sites, but we agree that the revised paper should refer the possible role of fire severity in the between-site differences.

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Interactive comment on SOIL Discuss., 2, 449, 2015.

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