

Interactive comment on “Use of cosmic ray neutron sensors for soil moisture monitoring in forests” by I. Heidbüchel et al.

Anonymous Referee #3

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The manuscript describes an improved calibration of cosmic-ray soil moisture probes. The problem of calibration has surfaced many times before and different scientists have proposed improvements. But even with those improvements, some problems have remained. This paper adds a valuable component to the growing body of knowledge of how cosmic-ray neutrons respond to surface moisture and how best to calibrate the response functions. The work described in the paper is thoughtfully designed and carefully executed and analyzed. The conclusion is simple, but important: calibration function is different than that originally proposed, and that difference can be captured by doing only two calibrations at two different levels of soil moisture. The good quality of work and the important conclusion make the paper important. I recommend that it be published with minor revisions suggested on the annotated copy (attached).

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Detailed comments and suggestions are in the annotated copy of the manuscript that I attached to this review.

Recommendation: publish with minor revisions.

Please also note the supplement to this comment:

<http://www.hydrol-earth-syst-sci-discuss.net/12/C4347/2015/hessd-12-C4347-2015-supplement.pdf>

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 12, 9813, 2015.