Atmos. Meas. Tech. Discuss., 8, C4283–C4284, 2015
www.atmos-meas-tech-discuss.net/8/C4283/2015/

Atmospheric Measurement Techniques Discussions

Interactive comment on "The Austrian radiation monitoring network ARAD – best practice and added value" *by* M. Olefs et al.

C. Ammann (Editor)

christof.ammann@agroscope.admin.ch

Received and published: 11 December 2015

I agree with the two reviewers that the present manuscript represents a very useful contribution to the methodology of ground based radiation measurement networks, and that it deserves publication in AMT. However, in addition to the reviewer comments, the following two issues need to be considered in the revised version:

1) The error/uncertainty characterization for the radiation measurements given in this manuscript (relative error for one high and one low radiation level) is very uncommon and not consistent with the target error characterization of the BSRN. In my view this kind of error characterization is suboptimal because it does not quantitatively describe the error over the entire measurement range. Instead the errors should rather be char-

acterized by a combination of a relative and an absolute error, which is common practice. For example, according to the BSRN operation manual (McArthur, 2005), the target measurement uncertainty for global radiation is "2% or 5 W m-2" (whichever is larger). The authors should consider to use this more common and more suitable error description, or they have to give a very good motivation why they deviate from the standard approach.

2) The term "expanded uncertainty" is very uncommon in scientific literature (I have never met it before). Therefore the authors should think about replacing it by common statistical terminology. As far as I understand, the authors mean the 95% confidence interval. At least the expression needs a very clear introduction and definition at the first appearance in the manuscript (last paragraph of Section 1) and in the abstract. I also recommend to either use the standard error range or the 95% confidence interval consistently throughout the manuscript.

Interactive comment on Atmos. Meas. Tech. Discuss., 8, 10663, 2015.