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Interactive comment on “Auroral all-sky camera calibration” by F. Sigernes et al.

F. Sigernes et al.

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Dear Anonymous Referee 1,

Thanks for your comments. Nice to know that you like the idea about center pixel calibration. After installing the dome to the input port of the integrating sphere, I realized that the sensitivity calibration is more accurate by using the well-known flat screen distance setup than having to re-calibrate the integrating sphere. Especially, for varying light conditions and exposure time, and the fact that I have to use the spectrometer (FICS) to calibrate the sphere, which again is calibrated by the flat screen method. It all becomes too secondary.

Thanks for pointing out the degradation of the sphere. I checked the Labsphere specifications where they claim the sphere to be coated with of durable Spectrafect, which

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I found out, is a Barium sulfate spray. I initially thought it was the same as the flat screen (Spectralon), which is very good considering aging.

As a response to your concern we propose to add the following sentence (red) into the paragraph starting at line 16 page 6:

“The radiance B of the integrating sphere is per definition uniform in all directions of θ and (x,y) -points with equal R should, due to symmetry, have the same raw data count rate of u . As a consequence, it is useful to transform our (x,y) coordinates to (R,θ) coordinates by Eq. (8) and (9). *It must be emphasized that the above assumption is for an ideal conditioned sphere with no deterioration over time of the inside coating (Barium sulfate).* A functional fit to the data for each wavelength channel then be found as...”

I hope this clarifies and is acceptable to you.

Sincerely

Fred Sigernes

Interactive comment on Geosci. Instrum. Method. Data Syst. Discuss., 4, 515, 2014.

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