

Interactive comment on “Calibration of the DSCOVr EPIC visible and NIR channels using MODIS and EPIC lunar observations” by Igor V. Geogdzhayev and Alexander Marshak

Anonymous Referee #2

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The paper presents two methods to calibrate DSCOVr visible and NIR channels. The first method uses MODIS reflectance vs. DSCOVr digital count regression, while the second method uses MODIS reflectance vs. digital count ratio as a function of MODIS reflectance standard deviation. The paper overall is sound, but to generate the community's excitement, it needs to add the unique sciences that are already published, not only by the authors, but also by others. Furthermore, the text, techniques, and figures/figure captions needs to be improved to increase clarity. The paper needs to address the following concerns before it be accepted.

0. there is little description about the scientific use of EPIC. Why do we need to cali-

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brate EPIC in the first place? Has any interesting work done regarding the retrieval of aerosols, clouds, and surface properties? Any recent publications regarding the use of EPIC?

1. What is the radiometric resolution of MODIS vs. EPIC?
2. Do the spectral band adjustment factors consider the spectral response function difference between MODIS band and EPIC band? This is very important, as the reflectance depends on the spectral response function of each channel.
3. The results show $\sim 10\%$ difference with another independent method. There is little discussion about how to reconcile such difference? Are 10% difference small? How 10% or 3% differences may affect the level-2 products?
4. Some description about MODIS calibration and its accuracy should be discussed.
5. The figure captions should be sufficiently to readers to understand the figure. Figure 6. what are red dots, and what are blue dots? can an example with real data be shown here? Fig. 7. why use absolute values of regression offset? what is the difference between gain coefficient in fig. 8 vs. calibration coefficients in Fig. 10?

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