Earth Syst. Sci. Data Discuss.,
https://doi.org/10.5194/essd-2019-116-RC2, 2019

Open Access Earth System Science Data Discussions

Interactive comment on "A 16-year dataset (2000–2015) of high-resolution (3 hour, 10 km) global surface solar radiation" *by* Wenjun Tang et al.

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Received and published: 11 November 2019

This paper describes a 16-year global Surface Solar Radiation (SSR) dataset that is produced using the newest ISCCP cloud products. The new SSR data is more accurate than ISCCP-FD, CEWEX-SRB, which may provide a better alternative for surface studies of hydrology, ecology and land processes because SSR is a basic input for them. The paper is well written and organized. Therefore, I recommend its publishing on the Earth System Science Data.

Detailed review 1. Line 22 with -> using 2. Line 31-34, please rephrase this sentence. 3. Line 78-79. This sentence seems awkward, please rephrase it. There is a high-level

discussion on the category of how to derive SSR from satellites in the review paper of Huang et al (2019). Huang, G.H., Li, Z.Q., Li, X., Liang, S.L., Yang, K., Wang, D.D., & Zhang, Y., 2019. Estimating surface solar irradiance from satellites: Past, present, and future perspectives. Remote Sensing of Environment, 233. 4. Line 344. I would suggest you delete the word of "retrieval". 5. The first paragraph of Section 6 seems a little bit wordy and boring. Please consider to condense it.

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