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Interactive comment on "Diversity II water quality parameters for 300 lakes worldwide from ENVISAT (2002–2012)" *by* Daniel Odermatt et al.

Anonymous Referee #3

Received and published: 12 March 2018

This paper presented a comprehensive and highly valuable satellite water quality dataset derived from MERIS sensor for 300 lakes around the world. The dataset is a great addition to collection of publicly available datasets for the international community of inland water quality research and applications. The manuscript is well written. I have several minor points for the authors to consider.

1. It is concluded that "the Diversity II dataset is the first ... information source for inland water quality ..." (p. 10, line 27). I would be more cautious to make such a statement. It is somewhat subjective to define the standards based on which something can be called the first. Someone else may argue that datasets of the same kind have been around for many years. So I suggest to reword this statement.

2. Likewise, I would also not claim that the dataset "represents the state-of-the-art"

(p. 11, line 4), which again is subjective and invites arguments. When it comes to water quality algorithms, I do not think that the scientific community have reached an agreement on which ones are the state of the art yet. Instead, all algorithms have their "plus and cons". Therefore, I would remove this statement. In addition, I would add discussions in section 4.1 and 4.2 about key assumptions of each water quality algorithm and atmospheric correction algorithm used in developing this dataset, and implications about when the Diversity II products are most robust, and when they should be used with greater caution. This way the data users will have a clearer idea about the strength and limitations of the dataset and have more confidence in using the data.

3. I note that DINEOF was used to fill data gaps (section 3.3). Is there a place in the dataset to tag the DINEOF-interpolated data so that they can be differentiated from "real" data measured by satellite? If not I would strongly recommend to add such a funtionality, which will increase user's confidence in data quality.

Interactive comment on Earth Syst. Sci. Data Discuss., https://doi.org/10.5194/essd-2018-2, 2018.