

Comments for paper “A more representative “best representative value” for daily total column ozone reporting” by Andrew R.D. Smedley, John S. Rimmer, Ann R. Webb

This paper is well written and raises a very important question of the daily mean total ozone reporting protocol from the ground-based network of the Brewer spectrophotometers with implications to other type of ground-based instruments. The paper is well written and easy to follow.

The proposed method for calculating the best representative value for daily total column ozone (BRV) using a weighted combination of the direct-sun and the zenith-sky observations will improve the “representative” part of the reported values.

The paper correctly states that the ground-based observations are used in a variety of ways and need to serve the entire ozone monitoring community in the best possible way.

p.1 says that reporting to WOUDC “has traditionally been predicated upon a binomial choice between direct sun and zenith sky observations”. This is not quite accurate – there are codes available for many observation types including the focused moon and the ozone values derived from the global irradiance measurements. In fact, WOUDC offers a simple way to register new observation types and report those. Please address this and maybe show how your proposed method can include more than 2 observation types (seems straight forward with weightings).

The results of applying the proposed method shows some differences compared to the “traditional” method. The paper does provide some comments, but this may require a more detailed discussion. For example, is there a correlation between more ZS only data and high ozone variability during a day that may produce significantly different daily mean depending on when the observations took place?

The paper makes a good point of suggesting some improvements to the data reporting. What about submission of the individual data points rather than daily averages? Would this not be better for all purposes? WOUDC has a format for this in place.

With minor revision/expansion this paper should be published and will provide a good argument to start a larger discussion on the data submission from the Brewers.