

Atmos. Meas. Tech. Discuss., 3, C2946–C2948, 2011

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AMTD

3, C2946–C2948, 2011

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Comment

***Interactive comment on* “A network of autonomous surface ozone monitors in Antarctica: technical description and first results” by S. J.-B. Bauguitte et al.**

S. J.-B. Bauguitte et al.

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Response to Reviewer 1

Abstract: “A suite of 10 autonomous ozone monitors” now changed to “A suite of 10 autonomous ozone monitoring units”

P 5798: Acronym BAS added as requested

P5799: The word “cheap” replaced with “cost-effective”

P5800: The test were carried out in a freezer at BAS in Cambridge, and we have now

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added this in to the manuscript.

P5800 line 27: accuracy and precision are given for ozone, as it now says in the manuscript.

P 5801 line 19: The heater operation was controlled by the logging and control software, and we have now stated this in the manuscript

P 5802 line 1-8: The minimum wind speed requirement for wind power generation is wind generator dependant. For the Forgens used in this study they don't spin below 4ms⁻¹. At low temperatures even higher windspeeds can be required as the lubricants in the bearing become more viscous in the cold.

P 5802 line 25: BAS acronym now spelled out earlier (see response to P5798 comment above)

P 5803 line 14-15: The GPSs had dedicated lithium back-up batteries as described on P 5804 line 20

P 5805 line 5-7: The calibration section (Section 4.1) has been re-written to clarify what was done before and after deploying the ozone monitors. A new table presenting the calibration parameters has now been included (Table 2).

P 5805 lines 8-12: clarified in the changes made to the calibration section

P5805 lines 18-22: the inlet lines were not dirty as there were no potential sources of dirt in the area; they were checked for damage rather than dirt, but no damage was evident

P 5807 line 1: "Practically, this meant making a measurement..." changed to "Practically, this meant recording a measurement..."

P5807: What the reviewer requests is already shown in Figs 9 (for winter) and 10 (for spring), but we now refer to this fact on P5807.

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P5814: We have included the following sentences in the Summary and Conclusions section: “A scientific analysis paper is in preparation that will fully describe the features in the data.” and “A subset of the network instruments will be re-deployed to Antarctica to study outflow from the Antarctic Plateau as part of the OPALE (Oxidant Production from Antarctic Lands and its Export) project.”

Table 1: We do not feel that adding precise dates for deployment and retrieval will add anything to the paper at all, and will merely clutter Table 1. We describe that the instruments were deployed between December 2007 and January 2008 and retrieved a year later. Exact dates can be given in the data paper where this information is more relevant.

Figs 3-7: we have adjusted the figure captions to give the temporal resolution of the data shown.

Figures 9 and 10: We have adjusted the figure caption to more clearly describe which data is on which axis, and also describe the sampling frequency. Data are shown as 1 min averages and we have included this information in the figure captions.

Fig 11. The reason for two clusters for Sites F and J but not for Site G is likely because Sites F and J are more environmentally challenging sites, so that the instruments are more “stressed”. For Site F, for example, there are many occasions where the standard error of the measurements is very high, because the instrument has not coped with the very low temperatures, and, even when temperatures rise, the equipment still struggles.

Font sizes have been adjusted as suggested by the Reviewer.

Interactive comment on Atmos. Meas. Tech. Discuss., 3, 5795, 2010.

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