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Interactive comment on “Flow climatology for physicochemical properties of dichotomous aerosol over the western North Atlantic Ocean at Bermuda” by J. L. Moody et al.

Anonymous Referee #1

Received and published: 30 September 2013

This is a well-written paper summarizing 3 years of aerosol measurements at Bermuda. The data set is well documented and should be published so that the data are available to the scientific community.

The data are compared with previous measurements in Bermuda and other data sets in the literature. The data are divided into 2 seasons and 5 transport sectors for comparison. There are no surprises. The data compare well with previous data sets with perhaps a decrease in SO₄ from reduced emissions in the US.

The only real issue I have with the paper is the calculation of a mass scattering effi-

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ciency based on total scattering and sulfate mass. The authors do define what they have done but this number is really meaningless. I fear someone will use the number as a real MSE without understanding how the authors have re-defined the term. Can you apportion the scattering to the major mass fractions and compare the different MSE for each component?

Table 2. the super scripts 2 & 3 from table 1 carry over here.

Table 5. Are 3 significant figures really appropriate here?

Figure 6. See above issue with this plot but if you use it, what are the correlation coefficients.

Figure 7. Same argument.

Figure 10. I see no benefit from this figure. The correlation explains only 25% of the variance.

Interactive comment on Atmos. Chem. Phys. Discuss., 13, 22383, 2013.

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