Atmos. Chem. Phys. Discuss., 6, S2805–S2806, 2006
www.atmos-chem-phys-discuss.net/6/S2805/2006/


Atmospheric Chemistry and Physics Discussions



# *Interactive comment on* "Characterization of aerosol pollution events in France using ground-based and POLDER-2 satellite data" *by* M. Kacenelenbogen et al.

**Anonymous Referee #2**

Received and published: 30 August 2006

This is a well written paper on using POLDER Aerosol Optical Thickness data for examining particulate matter air quality over France. The authors combine ground-based PM2.5 data with POLDER data and use regression relations to infer air quality over regional scales. This is the first attempt at using POLDER data for this type of research since previous studies have all used MODIS data.

This paper is publishable but I would like the authors to address the following issues.

1. What instruments were used and what are the uncertainties in the daily values of PM2.5? Was hourly PM2.5 data available? 2. Figure 1 discussion could be expanded. There are numerous 'events' where the AOT is much higher than the PM2.5 (April-

June) and equally if not more AOT values much smaller than the PM2.5 values. The analysis can be drawn out better for these cases. 3. A discussion of sources and probable aerosol types will be beneficial. 4. Finally, I would like to see a section discussing the uncertainties in using satellite data for PM2.5 air quality research. 5. Minor points: The authors may want to do a literature survey for more recent papers for using satellite data for air quality work. Several peer reviewed papers have appeared since Wang and Christopher, 2003 and Engle-Cox et al., 2004. Figure 1 needs relabelling in English.

---

Interactive comment on Atmos. Chem. Phys. Discuss., 6, 6299, 2006.