

## ***Interactive comment on “A remote sensing technique for global monitoring of power plant CO<sub>2</sub> emissions from space and related applications” by H. Bovensmann et al.***

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Congratulations on this very interesting and topical paper.

I wanted you to be aware that there is a recent paper on a new CO<sub>2</sub> product from TES that would be good to cite on page 60. The citation is:

Kulawik, S. S., Jones, D. B. A., Nassar, R., Irion, F. W., Worden, J. R., Bowman, K. W., Machida, T., Matsueda, H., Sawa, Y., Biraud, S. C., Fischer, M., and Jacobson, A. R.: Characterization of Tropospheric Emission Spectrometer (TES) CO<sub>2</sub> for carbon cycle science, Atmos. Chem. Phys. Discuss., 9, 27401-27464, 2009.

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One other comment I had is that Table 5 gives the impression that plume concentration uncertainties of  $\sim 2$  ppm are required to estimate emissions to about 10%. However, at a 2 km footprint, the enhancement from the plume is 3%, or 12 ppm. An uncertainty of 2 ppm in XCO<sub>2</sub> would be about a 17% uncertainty in the plume amount if the rest of the profile is known. Could the authors comment on this, and/or discuss the uncertainties required for the plume concentration itself rather than the XCO<sub>2</sub> value which includes a lot of non-plume atmosphere? Hopefully you can follow the above— thanks!

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Interactive comment on Atmos. Meas. Tech. Discuss., 3, 55, 2010.

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