Atmos. Chem. Phys. Discuss., 6, S2349–S2350, 2006
www.atmos-chem-phys-discuss.net/6/S2349/2006/

Atmospheric Chemistry and Physics Discussions

Interactive comment on "Comparison of CO_2 fluxes estimated using atmospheric and oceanic inversions, and role of fluxes and their interannual variability in simulating atmospheric CO_2 concentrations" *by* P. K. Patra et al.

B. Pak

bernard.pak@csiro.au

Received and published: 8 August 2006

Within your first aim, I would suggest using the SMF06 ocean flux and corresponding tight uncertainties as prior to obtain another set of atmospheric inversion results. Since this set of ocean flux is your "truth", you can then investigate how it constrains the land fluxes. Will this still agree with your previous atmospheric inversion?

The main inversion in this work involves the 64-region case. It is a pity that the readers have to dig up your 2005 paper to find out how those regions are defined. Can the land

regions be marked in Figure 1 instead of showing the national boundaries?

Some of the claims are wrong or biased. e.g. on p6810, "results for Tropical S American flux anomaly are in good agreement * * * until about Dec 1997" neglected the big differences in the early 1990s.

As most land regions are subdivided into 4 smaller regions, I am interested in how the sub-regions fare in your "IAV vs cyclostationary" comparison. However, you just touch on the subject for the European region, not even showing the graphical results. What about the others?

Interactive comment on Atmos. Chem. Phys. Discuss., 6, 6801, 2006.