

## ***Interactive comment on “Using O<sub>2</sub> to study the relationships between soil CO<sub>2</sub> efflux and soil respiration” by A. Angert et al.***

**R. Keeling**

rkeeling@ucsd.edu

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I quibble with the statement on line 27 of page 12052 that "this is the first report of directly observing this discrepancy (i.e. Co<sub>2</sub> flux versus respiration), based on O<sub>2</sub> measurements."

Figure 4.4 of Severinghaus (1995) provides a very graphic demonstration of this effect using O<sub>2</sub> measurements, where the effect is also explained in terms of complications of CO<sub>2</sub> chemistry in soil water. In some ways, the Severinghaus approach is even more compelling as an iconic demonstration because it shows that CO<sub>2</sub>, rather than O<sub>2</sub> is the impacted species based on the much stronger temporal trend for CO<sub>2</sub>.

I therefore think the above statement needs to be revised. A fairer statement might be

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that this BGD paper provide the first quantification of this effect using O<sub>2</sub> for intact soil profiles.

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Interactive comment on Biogeosciences Discuss., 11, 12039, 2014.

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