Correction to "A joint atmosphere-ocean inversion for surface fluxes of carbon dioxide: 1. Methods and global-scale fluxes"

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[1] In the paper "A joint atmosphere-ocean inversion for surface fluxes of carbon dioxide: 1. Methods and global-scale fluxes" by A. R. Jacobson et al. (*Global Biogeochemical Cycles*, *21*, GB1019, doi:10.1029/2005GB002556, 2007), errors were introduced into the three *Takahashi et al.* [1999, 2002] entries in the final column of Table 2. The corrected table is as follows.

Table 2. Summary of Global Estimates of Air-Land and Air-Sea Fluxes[a]

		Global Air-Sea Flux		
Source	Global Air-Land Flux	Anthropogenic Φ_{anthro}	Preindustrial $\Phi_{preindust}$	Contemporary $\Phi_{contemp}$
IPCC TAR	-1.4 ± 0.7[b]			-1.7 ± 0.5[b,c]
T3L1	-1.3 ± 1.4			-1.5 ± 1.4
T3L2	-1.5 ± 1.0			-1.3 ± 1.0
Bopp O_2/N_2	-1.7 ± 0.9[d,e] (-1.2 ± 0.9)[d]			-1.9 ± 0.9[c,e] (-2.3 ± 0.7)[d]
Keeling O_2/N_2	-1.7 ± 0.8[b,e] (-1.3 ± 0.8)[b]			-1.4 ± 0.6[c,e] (-1.9 ± 0.6)[b]
Joint	-1.1 ± 0.2	-2.1 ± 0.1	0.4 ± 0.2[e]	-1.7 ± 0.2
Gloor inverse		-1.9 ± 0.3 (-1.7 ± 0.3)[c,f]	0.4 ± 0.3[e]	-1.5 ± 0.4 (-1.8 ± 0.4)[c,e,f]
McNeil CFCs				-1.5 ± 0.4 (-2.0 ± 0.4)[b,c,e]
Matsumoto OCMIP				-1.7 ± 0.2 (-2.2 ± 0.2)[b,c,e]
Tak99 $k \sim u^2$				-2.1[c]
Tak02 $k \sim u^2$				-1.6[c]
Tak02 $k \sim u^3$				-2.3[c]
MOM3 forward		-2.2 ± 0.2	0.4 ± 0.1[e]	-1.7 ± 0.2[e]

[a]Estimates have been corrected so that river carbon flow is manifested as a land sink and a preindustrial ocean source of 0.45 PgC yr^{-1} (see auxiliary material). Contemporary air-sea fluxes ($\Phi_{contemp} = \Phi_{preindust} + \Phi_{anthro}$) have been scaled to the 1992–1996 period by assuming the anthropogenic component is proportional to the atmospheric concentration perturbation, but air-land fluxes are not scaled. Original estimates, uncorrected for river carbon and unscaled in time, are given in parentheses. "IPCC-TAR 90s" is the estimate of *Prentice et al.* [2001] for the 1990s; "T3L1" and "T3L2" are the TransCom3 control inversions for level 1 [*Gurney et al.*, 2002] and level 2 [*Gurney et al.*, 2004], respectively, both for the period 1992–1996. "Bopp O_2/N_2" and "Keeling O_2/N_2" represent the oxygen analyses of *Bopp et al.* [2002] for the period 1990–1996 and *Keeling and Garcia* [2002] for the 1990s, respectively. "Joint" is the current joint inversion for the period 1992–1996. "Gloor inverse" is the previous ocean inversion of *Gloor et al.* [2003] scaled to 1992–1996, a result nearly identical to that of *McNeil et al.* [2003] from CFC analysis. "Matsumoto OCMIP" is the summary of forward ocean carbon cycle simulations [*Orr et al.*, 2001], as reported by *Matsumoto et al.* [2004], also scaled to 1992–1996. "Tak99" and "Tak02" represent estimates based on the ΔpCO_2 analyses of *Takahashi et al.* [1999, 2002] respectively, using quadratic ("$k \sim u^2$" [*Wanninkhof*, 1992]) and cubic ("$k \sim u^3$" [*Wanninkhof and McGillis*, 1999]) gas transfer velocity parameterizations. "MOM3 Forward" are the 1992–1996 fluxes from OCMIP2 biotic simulations for the five models of the MOM3 suite used in the present study (see Table 1 of *Jacobson et al.* [2007]).

[b]For the period of the 1990s.

[c]Air-sea fluxes scaled to 1992–1996 by assuming that the anthropogenic flux is proportional to the atmospheric CO_2 perturbation.

[d]For the period 1990–1996.

[e]Includes 0.45 ± 0.18 PgC yr^{-1} to account for river carbon fluxes (see auxiliary material).

[f]For the period 1990–1991.

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