

## Statement of minor late-stage changes required

At the final stage of checking the submission files, I have noticed an error in the data flags that were included for the “High Sedimentation” interpolation scenario. This affects the numbers included in Table 1 for this scenario very slightly (the differences are generally almost indistinguishable, and within error of the previously listed numbers – see below). The correction also affects the data table included in the supplement, though only with respect to the flags that are listed there for the ‘High sedimentation’ scenario.

Obviously, these adjustments do not affect our findings in any way. Nevertheless, although the changes are extremely small, I feel it is important to update the supplement and Table 1 of the manuscript to ensure that everything is completely accurate.

Below is shown the original Table 1 and the proposed revised version:

Original:

Time slice	Baseline (n = 2579, ave. z = 1407m)			Low sedimentation (n = 2688, ave. z = 1472m)			High sedimentation (n = 2036, ave. z = 1244m)			Max. attenuation bias in model (CONST)	"Corrected" D(B-Atm), baseline	Estimated pCO2 impact, baseline	Obs pCO2	Obs D(pCO2) vs PI	err
	Mean ocean B-Atm	D(B-Atm) vs PI	err	Mean ocean B-Atm	D(B-Atm) vs PI	err	Mean ocean B-Atm	D(B-Atm) vs PI	err						
	14C yrs	14C yrs	14C yrs	14C yrs	14C yrs	14C yrs	14C yrs	14C yrs	14C yrs						
HOL	1335	-24	22	1328	-31	24	1340	-19	19	25	-49	3	281.9	-3.6	0.5
EHOL	1359	0	26	1360	1	39	1320	-39	31	-52	52	-3	268.2	-17.3	0.4
YD	1484	125	37	1515	156	37	1494	135	40	28	97	-6	253.7	-31.8	0.7
BA	1435	76	32	1487	128	37	1430	71	35	-217	293	-18	241.5	-43.9	0.5
HS!	1877	518	40	1981	621	55	1795	436	58	-107	625	-39	219.7	-65.8	1.5
LGM	2123	764	32	2185	825	36	1990	631	46	-26	789	-50	194.7	-90.8	0.6

Revised:

Time slice	Baseline (n = 2579, ave. z = 1407m)			Low sedimentation (n = 2688, ave. z = 1472m)			High sedimentation (n = 2072, ave. z = 1258m)			Max. attenuation bias in model (CONST)	"Corrected" D(B-Atm), baseline	Estimated pCO2 impact, baseline	Obs pCO2	Obs D(pCO2) vs PI	err
	Mean ocean B-Atm	D(B-Atm) vs PI	err	Mean ocean B-Atm	D(B-Atm) vs PI	err	Mean ocean B-Atm	D(B-Atm) vs PI	err						
	14C yrs	14C yrs	14C yrs	14C yrs	14C yrs	14C yrs	14C yrs	14C yrs	14C yrs						
HOL	1335	-24	22	1328	-31	24	1350	-9	20	25	-49	3	281.9	-3.6	0.5
EHOL	1359	0	26	1360	1	39	1329	-30	31	-52	52	-3	268.2	-17.3	0.4
YD	1484	125	37	1515	156	37	1478	119	41	28	97	-6	253.7	-31.8	0.7
BA	1435	76	32	1487	128	37	1432	73	32	-217	293	-18	241.5	-43.9	0.5
HS!	1877	518	40	1981	621	55	1793	434	55	-107	625	-39	219.7	-65.8	1.5
LGM	2123	764	32	2185	825	36	1993	634	46	-26	789	-50	194.7	-90.8	0.6

I therefore proposed to provide a new Table 1, and a new supplement zip file. The changes will also be implemented at PANGEA.

I sincerely hope that these minor changes can be approved without much ado.

Sincerely,

Luke Skinner (on behalf of all co-authors)

A further error has been found in one of the Tables of the manuscript, where anomalies were calculated relative to a different baseline than intended. This error does not affect the actual data, which are correctly listed in the same table. It merely provides anomalies relative to the control state, rather than one of the perturbed states.

Below is shown the original Table 2 and the proposed revised version, in which the last two columns are corrected:

Original:

Scenario	Ventilation parameter changed	Reduction (%)	B-Atm	pCO <sub>2</sub>	D(B-Atm)	D(pCO <sub>2</sub> )
PI (ctrl)	none	0	1428	276.5857	-67	6
PI	S.O. wind	20	1495	270.2083	0	0
		40	1548	264.4817	53	-6
		60	1577	260.3277	83	-10
		80	1588	259.9954	93	-10
PI	S.O gas exchange	20	1472.1	275.7578	-23	6
		40	1523.3	274.6609	29	4
		60	1585.5	272.8658	91	3
		80	1662.4	269.6315	168	-1
PI	vertical diffusivity	20	1480.3	273.7565	-14	4
		40	1523.6	271.5337	29	1
		60	1564.6	269.6152	70	-1
		80	1597.5	268.211	103	-2

Revised:

Scenario	Ventilation parameter changed	Reduction (%)	B-Atm	pCO <sub>2</sub>	D(B-Atm)	D(pCO <sub>2</sub> )
PI (ctrl)	none	0	1428	276.5857	0	0
PI	S.O. wind	20	1495	270.2083	67	-6
		40	1548	264.4817	120	-12
		60	1577	260.3277	150	-16
		80	1588	259.9954	160	-17
PI	S.O gas exchange	20	1472.1	275.7578	44	-1
		40	1523.3	274.6609	96	-2
		60	1585.5	272.8658	158	-4
		80	1662.4	269.6315	235	-7
PI	vertical diffusivity	20	1480.3	273.7565	53	-3
		40	1523.6	271.5337	96	-5
		60	1564.6	269.6152	137	-7
		80	1597.5	268.211	170	-8

My apologies for this further late-stage correction, but it would be ideal if this could be adjusted to avoid confusion for the reader.

Luke Skinner (on behalf of all co-authors)