Extended Data Table 1 | Effects of box-model elements on the LGM–Holocene MOT difference

Model element	LGM values relative to Holocene	Element specific effect on LGM-Holocene MOT difference
Noble Gases	-1.2‰ (Kr/N_2) -2.5‰ (Xe/Kr) -3.7‰ (Xe/N_2)	-1.8°C -2.2°C -2.1°C
SLC - sum of all effects	-132 m	-0.5°C
SLC - volume	-3.5%	-0.6°C
SLC - salinity	+3.5%	-0.2°C
SLC - SSP	+1.5%	+0.3°C
SSP related to H_2O content of atmosphere	-0.04%	<-0.02°C
SSP in high latitudes	-3% (constant offset)	-0.05°C
Kr and Xe saturation state	+50%	<+0.02°C (Kr/ N_2) +0.3°C (Xe/N_2) +0.4°C (Xe/Kr)
Non-freezing of AABW	-	-0.2°C
AABW volume	+40%	+0.1°C
Total LGM-Holocene MOT change		2.57 +/- 0.24°C
AABW salinity anomaly*	+1 PSS	-0.02°C
Floating ice shelf volume*	+2.6e15 m^3	-0.1°C
Xe solubility function correction*	+2% (constant offset)	+0.04°C (Xe/N_2) +0.07°C (Xe/Kr)

Sea-level change (SLC) effects are most important, but other effects are also listed. SSP, sea surface pressure.
*These elements are not considered in our MOT record (see Methods).