

Parameter	Meaning	Unit	HILDA	Bern2D	Princeton
$H_{\text{mix}}$	Depth of mixed ocean surface layer	m	75	50	50.9
$A_{\text{O}}$	Ocean surface area	$\text{m}^2$	$3.62 \times 10^{14}$	$3.5375 \times 10^{14}$	$3.55 \times 10^{14}$
$k_{\text{g}}$	Gas exchange coefficient	$\text{yr}^{-1} A_{\text{O}}^{-1}$	1/9.06	1/7.46	1/7.66
$T^*$	Global average ocean surface temperature	$^{\circ}\text{C}$	18.17	18.30	17.70
All models					
$a_{\text{O}}$	Ocean fraction of Earth surface	–			0.71
$\varepsilon$	Atmospheric mass of C per mixing ratio	$\text{Gt C ppm}^{-1}$			2.123
$\rho$	Density of ocean water*	$\text{kg m}^{-3}$		1028 (1026.5)	
$c_p$	Specific heat capacity of water	$\text{J kg}^{-1} \text{K}^{-1}$			4000
$c_{\text{S}}$	Mixed-layer heat capacity	$\text{J K}^{-1}$		$c_p \rho H_{\text{mix}} A_{\text{O}}$	
$M_{\mu\text{mol}}$	Mass of DIC per micromole	$\text{gC } \mu\text{mol}^{-1}$		$12.0107 \times 10^{-6}$	
$\text{RF}_{2\times}$	RF per doubling of atm. $\text{CO}_2$	$\text{W m}^{-2}$			3.708
$\Delta T_{2\times}$	Equilibrium climate sensitivity for $\text{CO}_2$ doubling	$^{\circ}\text{C}$			free