

Model	Version	Resolution	Ocean setup	Aerosol emission	Aerosol mode/size bin	Mixing state	Size distribution	Evolve	Cloud drop activation	References
CanESM	2010	2.8×2.8 , 35 levels	Coupled	Emission-driven	S, N, BC, dust, SS, OC	Internal	Log-normal	N/A	N/A	Arora et al. (2011)
GISS-E2R	E2-R	2×2.5 , 40 levels	Coupled	concentration-driven	S (1), N (1), OC (1), BC (1), SS (2), dust (4)	Internal & external	Log-normal	N/A	Empirically	Schmidt et al. (2014)
HadGEM2	6.6.3	1.875×1.25 , 38 levels	Coupled	Emission-driven	S (3), BC, OC, BB (3), SS (2), dust (6)	External	Log-normal	Physically	Empirically	Collins et al. (2011)
HadGEM3	GA 4.0	1.875×1.25 , 85 levels	Coupled	concentration-driven	S (3), BC, OC, BB (3), SS (2), dust (6)	External	Log-normal	N/A	Empirically	Bellouin et al. (2011); Walters et al. (2014)
MIROC-SPRINTARS	5.9.0	T85 (approx. 1.4×1.4), 40 levels	Coupled	Emission-driven	S (1), BC (1), OC (1), dust (6), SS (4)	Internal & external	Log-normal	N/A	Empirically	Takemura et al. (2005, 2009); Watanabe et al. (2010)
CESM-CAM4	1.0.3	2.5×1.9 , 26 levels	Slab	concentration-driven	S, SS (4), dust (4), BC (2), POM (2), SOA	External	Log-normal	N/A	N/A	Neale et al. (2010); Gent et al. (2011)
CESM-CAM5	1.1.2	2.5×1.9 , 30 levels	Coupled	Emission-driven	S, POM, SOA, SS, BC, dust (3)	Internal	Log-normal	Physically	Physically	Hurrell et al. (2013); Kay et al. (2015); Otto-Bliesner et al. (2016)
NorESM	1-M	2.5×1.9 , 26 levels	Coupled	concentration-driven	S, OM, BC, SS, dust; 13 modes, 33 size bins	Internal & external	Log-normal	Physically	Physically	Bentsen et al. (2013); Iversen et al. (2013); Kirkevåg et al. (2013)
IPSL-CM5A	CMIP5	3.75×1.875 , 39 levels	Coupled	concentration-driven	S, BC, OC, dust, SS	External	Log-normal	N/A	Empirically	Dufresne et al. (2013)