Parameter	Description	Default	Min	Max	Units
micro_mg_accre_enhan_fact	Accretion enhancing factor	1	0.1	10	_
micro_mg_autocon_fact	Autoconversion factor	0.01	5e-3	0.2	-
$micro\_mg\_autocon\_lwp\_exp*$	KK2000 LWP exponent	2.47	1.8	3.6	-
$micro\_mg\_autocon\_nd\_exp*$	KK2000 autoconversion factor	-1.1	-2.5	0	-
$micro\_mg\_berg\_eff\_factor$	Bergeron efficiency factor	1	0.1	1	-
$micro\_mg\_dcs$	Autoconversion size	5e-4	5e-5	1e-3	$\mathbf{m}$
	threshold ice-snow				
micro_mg_effi_factor	Scale effective radius for optics calculation	1	0.1	2	-
micro_mg_homog_size	Homogeneous freezing ice particle size	2.5e-5	1e-05	2e-4	m
micro_mg_iaccr_factor	Scaling ice/snow accretion	1	0.2	1	-
micro_mg_max_nicons	Max ice number concentration	1e8	1e5	1e10	$\#/\mathrm{kg}$
micro_mg_vtrmi_factor	Ice fall speed scaling	1	0.2	5	m/s
seasalt_emis_scale	Seasalt emission scaling factor	1	0.5	2.5	- '
microp_aero_npccn_scale	Scale activated liquid number	1	0.33	3	-
microp_aero_wsub_min	Min subgrid velocity for	0.2	0	0.5	m/s
	liquid activation				
microp_aero_wsubi_min	Min subgrid velocity for	1e-3	0	0.2	m/s
	ice activation				
microp_aero_wsub_scale	Subgrid velocity for liquid	1	0.1	5	-
	activation scaling				
microp_aero_wsubi_scale	Subgrid velocity for ice	1	0.1	5	-
	activation scaling				
$dust\_emis\_fact$	Dust emissions scaling factor	0.7	0.1	1.2	-
$sol\_facti\_cloud\_borne$	In-cloud scavenging of	1	0.5	1	-
	cloud-borne modal aerosols				

Table 1: A description of the parameters perturbed, with their ranges.

<sup>\*</sup>These parameters have had their ranges extended from the original CAM6 PPE