MOM-SIS / ACCESS-OM2 namelist comparisons

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Latest version is here: https://github.com/aekiss/namelist-check

Tables auto-generated by nmltab (https://github.com/aekiss/nmltab). Missing variables are shown as blank. Variables are weblinks to source code searches. Greyed variables are ignored (greying only works in groups with use_this_module shown, so typically doesn't work for tables of differences).

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1 MOM namelist 'input.nml'

TODO: set ncar_boundary_scaling_read = .true. after first run at high resolution

- 1deg_jra55v13_ryf9091_spinup_A-input.nml is Andy's 1deg namelist from 2017-11-06: /g/data3/hh5/tmp/cosima/access-om2/1deg_jra55v13_ryf9091_spinup_A/output039/ocean/input.nml
- GFDL_ESM2M_input-cut.nml is GFDL_ESM2M_input.nml from Steve's email 2017-10-18 with irrelevant atmos/ESM namelist groups cut out.
- MOM_SIS_TOPAZ_input.nml is from MOM_SIS_TOPAZ/INPUT/ in /g/data/ua8/mom/test_data/MOM_SIS_TOPAZ.input.tar.gz, dated 2009-12-16 10:44
- fabio_momsis1_input.nml is from Fabio's email 2017-09-20, derived from Paul's 1/4 degree (I think)
- paul_momsis025_input.nml is from Paul's email 2017-09-20
- fanghua_momsis01v5KDS75_WOA13_input.nml is /g/data3/hh5/tmp/cosima/mom01v5/KDS75_WOA13/output000/input.nml
- russ-accessom-mom4p1-input.nml is an old MOM4p1 ACCESS-OM input from years ago (Russ' email 2017-10-17)
- hogg_accessom2_1deg_jra55_ryf_input.nml is /short/v45/amh157/access-om2/control/1deg_jra55_ryf/ocean/input.nml
- kiss_accessom2_025deg_jra55_ryf_input.m.nml is /short/v45/aek156/access-om2/control/025deg_jra55_ryf/ocean/input.nml
- hogg_accessom2_01deg_jra55_ryf_input.nml is /short/v45/amh157/access-om2/control/01deg_jra55_ryf/ocean/input.nml
- kiss_accessom2_025deg_jra55_ryf_logfile.000000.out is the MOM output file /short/v45/aek156/access-om2/control/025deg_jra55_ryf/archive/output144/ocean/logfile.000000.out, modified by deleting lines not starting with whitespace (regex replace ^[^\s]+.*\$ with nothing), replacing salt_flxmh_flux with salt_flx mh_flux, removing ascii gremlins from end of FIELDS_IN and FIELDS_OUT lines, and deleting the copy of input.nml from the start (to work around bug in nmltab.py). So this shows the values specified in input.nml, plus default values for those not specified in input.nml. However there are some namelist groups it doesn't include, e.g. generic_tracer, monin_obukhov_nml, ocean_albedo_nml, ocean_bihcst_friction_nml, ocean_nphysics_util_nml, ocean_nphysicsa_nml, ocean_nphysicsa_nml, ocean_nphysicsb_nml, ocean_shortwave_csiro_nml, ocean_xlandinsert_nml, ocean_xlandmix_nml, xgrid_nml [and ocean_vert_kpp_nml, was replaced by ocean_vert_kpp_mom4p1_nml in MOM5, and bg_diff_lat_dependence_nml, ocean_polar_filter and ocean_vert_kpp_iow which are not in the MOM5 code at all]; there may be more.

Other useful info:

• Griffies et al. (2015) p973

1.1 All variables in GFDL & ACCESS configs (differences highlighted)

Group	Variable	original/ GFDL ESM2M input- cut.nml	original/ MOM_SIS TOPAZ input.nml	original/ russ- accessom- mom4p1- input.nml	original/ hogg_acces- som2 1deg jra55_ryf input.nml	new/ control/ 1deg jra55_ryf/ ocean/ input.nml	original/ kiss_acces- som2 025deg jra55_ryf log-	new/ control/ 025deg jra55_ryf/ ocean/ input.nml	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new/ control/ 01deg jra55_ryf/ ocean/ input.nml
&auscom_ice_nml	aice_cutoff			0.15	0.15	0.15	file.000000.o ı 0.15	0.15	0.15	0.15
Cudscom_rec_rime	chk_fields_period			0.13	0.13	0.13	1	0.13	0.13	0.13
chk	_fields_start_time						0			
	chk_i2o_fields			False	False	False	False	False	False	False
	chk_o2i_fields do_ice_once			False False	False False	False False	False False	False False	False False	False False
	dt_cpl			3600	3600	3600	1800	1800	150	600
	fixmeltt			False	False	False	False	False	False	False
	frazil_factor			1.0	1.0	1.0	1.0	1.0	1.0	1.0
	iceform_adj_salt icemlt_factor			False 1.0	False 1.0	False 1.0	False 1.0	False 1.0	False 1.0	False 1.0
	ige			1.0	1.0	1.0	345	1.0	1.0	1.0
	igs						328			
	ire1						324			
	ire2						331			
	irs1						314			
	irs2 jge						325 198			
	jgs						189			
	jre1						196			
	jre2						180			
	jrs1						169			
	jrs2 kmxice			5	5	5	169	5	5	5
	ksmax)	3)	5 5)	3)
	limit_srfstress						False			
	mstress						2.0			
	pop_icediag			True	True	True	True	True	True	True
re	dsea_gulfbay_sfix				True	True	False			
	sfix_hours sign_stflx			1.0	1.0	1.0	12 1.0	1.0	1.0	1.0
	tlthk0			1.0	1.0	1.0	10.0	1.0	1.0	1.0
	tmelt			-0.216	-0.216	-0.216	-0.216	-0.216	-0.216	-0.216
	use_ioaice			True	True	True	True	True	True	True
&bg_diff_lat_depende bg_diff_eq				1×10^{-6}	1×10^{-6}					
0	lat_low_bgdiff	0		20.0	20.0					
&coupler_nml	atmos_npes atmos_nthreads	0 4	0							
	calendar	'NOLEAP'	'NOLEAP'							
	check_stocks	0	0							
	concurrent	True	False							
	current_date	1, 1, 1, 0, 0, 0	1, 1, 1, 0, 0, 0							
	days do_atmos	0 True	2 False							
	do_flux	True	raisc							
	do_ice	True	True							
	do_land	True	False							
	do_ocean	True	True							
	dt_atmos dt_cpld	1800 7200	7200 7200							
	months	12	0							
	ocean_npes	96	0							
	use_lag_fluxes	True	True							
&data_override_nml debug_data_override							False			
9 diag integral and	grid_center_bug	7a!	7al;				False			
&diag_integral_nml	file_name	'diag integral.out'	'diag integral.out'							
	output_interval	1.0	1.0							
	time_units	'days'	'days'							
&diag_manager_nml append_pelist_name							False			
	conserve_water						True			
	ug_diag_manager					True	True	True		True
	do_diag_field_log sue_oor_warnings	Falce	False	False	False	True	False True	True	False	True
IS	max_axes	False 200	100	raise	raise	nue	60	nue	300	iiue
ma	ax_field_attributes	200	100				2		300	

Group (continued)	Variable	original/ GFDL ESM2M input- cut.nml	original/ MOM_SIS TOPAZ input.nml	original/ russ- accessom- mom4p1- input.nml	original/ hogg_acces- som2 1deg jra55_ryf input.nml	new/ control/ 1deg jra55_ryf/ ocean/ input.nml	original/ kiss_acces- som2 025deg jra55_ryf log- file.000000.ou	new/ control/ 025deg jra55_ryf/ ocean/ input.nml	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new/ control/ 01deg jra55_ryf/ ocean/ input.nml
	max_file_attributes						2			
	max_files	50	400				31		1000	
	max_input_fields max_num_axis_sets	800 200	699 100				300 25		700 40	
	max_out_per_in_field	200	100				150		40	
	max_output_fields	1300	699				300		700	
mix_sna	apshot_average_fields	False	False				False			
	oor_warnings_fatal						False True			
regi	prepend_date on_out_use_alt_value						True			
, eg.	use_cmor						False			
	write_bytes_in_file						False			
&flux_exchange_n		False	False							
d	divert_stocks_report o_area_weighted_flux	True False	True False							
u	nblocks	4	raise							
&fms_io_nml	checksum_required						True		False	
	debug_mask_list						False			
	dr_set_size		'cinala'	'einala'	'cinala'	'cinala'	10	?mla!?	2mm.da2	'mala?'
	fileset_write fms_netcdf_override		'single'	'single'	'single'	'single'	'single' True	'multi'	'multi'	'multi'
	fms_netcdf_restart						True			
	format						'netcdf'			
	iospec_ieee32						'-N', 'ieee_32'			
	max_files_r	300	200				40		700	
	max_files_w print_chksum	300	200				40 False		700	
	read_all_pe						True			
	read_data_bug						False			
show_open_r	namelist_file_warning						False			
	threading_read	'multi'	'multi'	'multi'	'multi'	'multi'	'multi'	'multi'	'multi'	'multi'
	threading_write time_stamp_restart		'single'	'single'	'single'	'single'	'single' True	'multi'	'multi'	'multi'
&fms_nml	clock_flags						'NONE'			
G	clock_grain domains_stack_size	'COMPONENT' 5000000	'LOOP' 8000000	'L00P'	'LOOP'	'COMPONENT' 115200	'LOOP'	'COMPONENT' 115200	'LOOP' 115200	'COMPONENT' 115200
	iospec_ieee32	300000	0000000			113200	'-N', 'ieee_32'	113200	113200	113200
	print_memory_usage						False		False	
	read_all_pe		_				True			
	stack_size warning_level	0	0				0 'warning'			
&generic_tracer_ni		False	False				'warning'		False	
&generic_tracer_m	do_generic_topaz	True	True						False	
	do_generic_tracer	True	True						False	
&get_cal_time_nm allow_calendar_co							True			
&horiz_interp_nml							False			
&ice_albedo_nml	t_range	10.0	10.0							
&ice_model_nml	add_diurnal_sw alb_ice	False 0.65	True 0.615							
	alb_sno	0.85	0.825							
	channel_viscosity	500 000.0	025							
	cm2_bugs	False	False							
	do_icebergs	True	False							
	h_lo_lim heat_rough_ice	1×10^{-10}	1×10^{-10} 0.0005							
	ice_bulk_salin	0.005	0.0005							
	io_layout	1, 2								
	layout	15, 2								
	nsteps_adv	1	1							
	nsteps_dyn num_part	72 6	108 6							
	spec_ice	False	False							
	t_range_melt	1.0	10.0							
	wd_turn	0.0	0.0							
&icebergs_nml bergy_bit_erosion_	fraction		0.0							
	debug		False							
ma	ke_calving_reproduce	True	-							
	parallel_reprod really_debug		True False							
	sicn_shift		0.1							
	Jidii_Jiiilt		0.1							

Group (continued)	Variable	original/ GFDL ESM2M input- cut.nml	original/ MOM_SIS TOPAZ input.nml	original/ russ- accessom- mom4p1- input.nml	original/ hogg_acces- som2 1deg jra55_ryf input.nml	new/ control/ 1deg jra55_ryf/ ocean/ input.nml	original/ kiss_acces- som2 025deg jra55_ryf log- file.000000.oi	new/ control/ 025deg jra55_ryf/ ocean/ input.nml	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new/ control/ 01deg jra55_ryf/ ocean/ input.nml
	speed_limit	0.5					1110.000000.01			
	.average_weight	False	0							
	traj_sample_hrs perator_splitting	0	0 True							
	use_roundoff_fix	True	iiuc							
	verbose	True	False							
&mom_oasis3_interface	verbose_hrs _nml fields_in	120	2400	' A '	' A'	'u_flux',	2. A2	' 	'u_flux',	'u_flux',
Willow 2021	LIMIC HEUSEM			'u_flux', 'v_flux', 'lprec', 'fprec', 'salt_flx', 'mh_flux', 'sw_flux',	'u_flux', 'v_flux', 'lprec', 'fprec', 'salt_flx', 'mh_flux', 'sw_flux',	'v_flux', 'lprec', 'fprec', 'salt_flx', 'mh_flux', 'sw_flux',	'u_flux', 'v_flux', 'lprec', 'fprec', 'salt_flx', 'mh_flux', 'sw_flux',	'u_flux', 'v_flux', 'lprec', 'fprec', 'salt_flx', 'mh_flux', 'sw_flux',	'v_flux', 'lprec', 'fprec', 'salt_flx', 'mh_flux', 'sw_flux',	'v_flux', 'lprec', 'fprec', 'salt_flx', 'mh_flux', 'sw_flux',
				'q_flux',	'q_flux',	'q_flux',	'q_flux', '* fl'	'q_flux',	'q_flux',	'q_flux',
				't_flux', 'lw_flux',	't_flux', 'lw_flux',	't_flux', 'lw_flux',	't_flux', 'lw_flux',	't_flux', 'lw_flux',	't_flux', 'lw_flux',	't_flux', 'lw_flux',
				'runof', 'p',	'runof', 'p',	'runof', 'p',	'runof', 'p',	'runof', 'p',	'runof', 'p',	'runof', 'p',
				'aice',	'aice',	'aice',	'aice',	'aice',	'aice',	'aice',
				'wfimelt', 'wfiform'	'wfimelt', 'wfiform'	'wfimelt', 'wfiform'	'wfimelt', 'wfiform'	'wfimelt', 'wfiform'	'wfimelt', 'wfiform'	'wfimelt', 'wfiform'
	fields_out			't_surf',	't_surf',	't_surf',	't_surf',	't_surf',	't_surf',	't_surf',
				's_surf',	's_surf',	's_surf',	's_surf',	's_surf',	's_surf',	's_surf',
				'u_surf',	'u_surf',	'u_surf',	'u_surf',	'u_surf',	'u_surf',	'u_surf',
				'v_surf', 'dssldx',	'v_surf', 'dssldx',	'v_surf', 'dssldx',	'v_surf', 'dssldx',	'v_surf', 'dssldx',	'v_surf', 'dssldx',	'v_surf', 'dssldx',
				'dssldy',	'dssldy',	'dssldy',	'dssldy',	'dssldy',	'dssldy',	'dssldy',
				'frazil'	'frazil'	'frazil'	'frazil'	'frazil'	'frazil'	'frazil'
	num_fields_in			15	15	15	15	15	15	15
send afte	num_fields_out er_ocean_update			7 True	7 True	7 True	7 True	7 True	7 True	7 True
	e_ocean_update			False	False	False	False	False	False	False
&monin_obukhov_nml	neutral		True			True		True	True	True
	rich_crit	10.0								
	stable_option zeta_trans	2 0.5								
&mpp_io_nml	deflate_level	0.5				5	-1	5	5	5
	field_on_root_pe						True			
he	eader_buffer_val io_clocks_on						16384 False			
	shuffle					1	0	1	1	1
&ocean_adv_vel_diag_n	ml diag_step	1200	12	120	4320	4320	4320	4320	576	576
	large_cfl_value	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
	max_cfl_value verbose_cfl	100.0 False	100.0 False	100.0 False	100.0 True	100.0 True	100.0 True	100.0 True	100.0 True	100.0 True
&ocean_advection_veloc	city_nml ocity	Tube	ruse	ruse	iiuc	inde	False	nuc	nuc	iruc
	oug_this_module oflow_nboundary						False False			
	vection_velocity	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.2	0.5
	ection_transport				-1-		False			
	vection_velocity						False			
&ocean_albedo_nml ocean_albedo_option		5	2			2		2	2	2
&ocean_barotropic_nml	alphat						0.948			
·	barotropic_halo				10	10	10	10	10	10
	tropic_leap_frog		False	False						
	tropic_pred_corr time_stepping_a	True	True	True	True	True	True	True	True	True
barotropic_t	time_stepping_b	False			False	False	False	False	False	False
barotropic_time_ste			True	True						
barotropic_time_ste	epping_mom4p1 oug_this_module	False	False False	False False	False	False	False	False	False	False
deb	diag_step	1200	12	120	4320	4320	4320	4320	576	576
do_bit	wise_exact_sum	True					False			
	eta_max eta_offset	8.0	8.0	8.0	8.0	8.0	1×10^{-12}	8.0	8.0	8.0
Trac.	_crit_cell_height geoid_forcing	0.2	0.2	0.2	0.2	0.2	0.2 False	0.2	0.2	0.2
	ideal_initial_eta						False			
	l_eta_amplitude						5.0			
	itial_eta_xwidth						100 000.0			
ideal_in	itial_eta_ywidth						100 000.0			

Group (continued)	Variable	original/ GFDL ESM2M input- cut.nml	original/ MOM_SIS TOPAZ input.nml	original/ russ- accessom- mom4p1- input.nml	original/ hogg_acces- som2 1deg jra55_ryf input.nml	new/ control/ 1deg jra55_ryf/ ocean/ input.nml	original/ kiss_acces- som2 025deg jra55_ryf log- file.000000.oi	new/ control/ 025deg jra55_ryf/ ocean/ input.nml	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new/ control/ 01deg jra55_ryf/ ocean/ input.nml
initsum_with_b							False			
initsum_with_b	pbot_offset						True 1×10^{-12}			
pred_	corr_gamma	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
smooth_anompb_bt							False			
smooth_anompb_							False			
<mark>smooth_eta_diag</mark> smooth_eta_dia		True	True	True	True	True	False True	True	True	True
smooth_eta_t		True	True	True	False	False	False	False	False	False
smooth_eta_t_bt					. 4.50		False	· disc	, alse	1 4130
smooth_eta_t_							False			
smooth_eta		False	False	False	True	True	True	True	True	True
smooth_pbot_t smooth_pbot_t_biharn		True	True	True	False	False	False False	False	False	False
smooth_pbot	,	False	False	False	True	True	True	True	True	True
tid	al_forcing_8						False			
	orcing_ideal						False			
	_forcing_m2 runcate_eta	False	False	False	False	False	False False	False	False	False
	udrho_bih	rdise	rdise	raise	raise	rdise	False	rdlSE	raise	rdise
udrho_bih	_vel_micom						0.01			
	drho_bt_bih						False			
u	drho_bt_lap						False			
udrho lan	udrho_lap _vel_micom						False 0.05			
use_legacy_baro					False	False	False	False	False	False
	_micom_bih	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
	m_bih_diag						0.1			
	_micom_lap	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
	om_lap_diag verbose_init	1.0	1.0	0.2	0.2	0.2	0.2 True	0.2	0.5	0.2
	se_truncate	True	True	True	True	True	True	True	True	True
wri	te_a_restart						True			
zero	_coriolis_bt						False			
	zero_eta_ic zero_eta_t						False False			
zero_e	ta_tendency						False			
201020	zero_eta_u						False			
	_forcing_bt						False			
zero_nonlinea		F-1	F-I	F-I		F-I	False	F-1	F-I	Falsa
· · · · · · · · · · · · · · · · · · ·	ro_tendency omf_implicit	False	False	False		False True	False True	False True	False True	False True
Quedit_Duc_iiiit	bmf_max					iiuc	1.0	iiue	iiue	iiuc
	cdbot	0.002	0.002	0.001	0.001	0.001	0.001	0.001	0.001	0.001
cd	bot_gamma						40.0			
	cdbot_hh cdbot_hi					0.007	1100.0 0.007	0.007	0.007	0.007
cdhot	law_of_wall			False	False	0.007	False	0.007	0.007	0.007
	cdbot_lo			. 4.50	. 4.50		0.001			
cdbot_rough	ness_length					False	False	False	False	False
cdbot_roug	nness_uamp cdbot_uu					True	True	True	True	True
	cdbot_wave						1.0 False			
	geothermal						0.001			
debug_:	:his_module						False			
law_of_wall_ro						2.25	0.01		0.0=	
use_geother	uresidual	0.05 True	0.05 True	False	False	0.05 False	0.05 False	0.05 False	0.05 False	0.05 False
	uvmag_max	iiuc	iluc	ו מנטכ	ו מנטכ	ו מנטכ	10.0	ו מנטכ	ו מנטכ	ו מנטכ
&ocean_bbc_ofam_nml read				False	False		False			
	idual2_max			1.0	1.0	,	0.05			
&ocean_bih_friction_nml b	ıh_friction	'general'	'general'	'general'	'general'	'general'	'general'	'general'	'general'	'general'
	his_module						False			
&ocean_bih_tracer_nml	te_a_restart abih						True 0.0			
	rz_s_diffuse						True			
ho	rz_z_diffuse						False			
	ısivity_mask						False		_	
tracer	mix_micom :his_module	False	False	False	False	False	True False	False	True False	False
LICO S										

Group (continued)	Variable	original/ GFDL ESM2M input- cut.nml	original/ MOM_SIS TOPAZ input.nml	original/ russ- accessom- mom4p1- input.nml	original/ hogg_acces- som2 1deg jra55_ryf input.nml	new/ control/ 1deg jra55_ryf/ ocean/ input.nml	original/ kiss_acces- som2 025deg jra55_ryf log- file.000000.ot	new/ control/ 025deg jra55_ryf/ ocean/ input.nml	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new/ control/ 01deg jra55_ryf/ ocean/ input.nml
&ocean_bihcst_friction_n	ml	False	False	False	False	False		False	False	False
&ocean_bihgen_friction_r bottom_5point	nml	True	True	True	True	True	False	False	False	False
debu	ig_this_module						False			
	eq_lat_micom	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	l_micom_aniso	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
· · · · · · · · · · · · · · · · · · ·	.vel_micom_iso quatorial_zonal	False	False	False	False	False	False	False	False	False
	orial_zonal_lat		. 4.50				0.0	. 4.50	. 4.50	
	k_smag_aniso	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	k_smag_iso	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
	undary_scaling	True	True	True	True	True	True	True	True	True
	ry_scaling_read	2	2	2	2	False	True	False	True	False
	_rescale_power ncar_vconst_4	2×10^{-8}	2×10^{-8}	2×10^{-8}	2×10^{-8}	2×10^{-8}	2×10^{-8}	2×10^{-8}	2×10^{-8}	2×10^{-8}
	ncar_vconst_5	2 × 10	2 × 10	2 × 10	5	2 × 10	5	5	5	2 × 10
	neptune						False	,	,	
neptu	une_depth_min						100.0			
nept	une_length_eq						4200.0			
	ne_length_pole						17 000.0			
	eptune_scaling						1.0			
	eptune_smooth e_smooth_num						True 1			
	_aiso_bih_back						False			
	q_friction_max						1.0			
	friction_scaling						1.0			
side_drag_frictio							10.0			
	e_drag_friction	_		_	_	_	False	_	_	
	se_this_module	True 0.0	True 0.0	True 0.0	True 0.0	True	True	True	True 0.0	True
	l_micom_aniso micom_bottom	0.01	0.0	0.01	0.01	0.0 0.01	0.0 0.0	0.0 0.0	0.0	0.0 0.0
	vel_micom_iso	0.01	0.01	0.01	0.04	0.01	0.0	0.0	0.0	0.0
	visc_crit_scale	0.25	0.25	0.25	0.25	0.25	1.0	1.0	1.0	1.0
	diverge_scaling						0.0			
&ocean_blob_nml bitwise							False			
	ob_small_mass						1000.0			
	ig_this_module vise_exact_sum						False False			
	prop_thickness						0.7			
mux_	really_debug						False			
&ocean_convect_nml				False	False		True		True	
convect_full_scalar										
conv	rect_full_vector			True	True		False		False	
	convect_ncon						False			
IIS	ncon se_this_module	False	False	False	False	False	7 False	False	False	False
&ocean_coriolis_nml	acor	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	ıg_this_module						False			
	se_this_module	True	True	True	True	True	True	True	True	True
	pha_linear_eos						0.255			
	eta_linear_eos						0.0			
	q_smooth_vert ig_this_module						True False			
	y_equal_potrho						False			
	vise_exact_sum						False			
drho	dz_diag_stable						True			
	eos_linear	False			False	False	False	False	False	False
	eos_preteos10	True			True	True	True	True	True	True
	eos_teos10 epsln_drhodz						False $1 imes 10^{-10}$			
encl	ln_drhodz_diaq						1×10^{-10} 1×10^{-10}			
	otrho_compute						False			
	_lrpotrho_max						10.0			
	o_lrpotrho_min						1.0			
	layer_nk	80	80	80	80	80	80	80	80	80
magali	linear_eos		False	False			Ealaa			
	domain_restart density_omega						False False			
	density_onlega density_potrho						True			
	neutralrho_max	1030.0	1030.0	1030.0	1030.0	1030.0	1038.0	1030.0	1038.0	1030.0
r	neutralrho_min	1020.0	1020.0	1020.0	1020.0	1020.0	1028.0	1020.0	1028.0	1020.0

Group (continued)	Variable	original/ GFDL ESM2M input- cut.nml	original/ MOM_SIS TOPAZ input.nml	original/ russ- accessom- mom4p1- input.nml	original/ hogg_acces- som2 1deg jra55_ryf input.nml	new/ control/ 1deg jra55_ryf/ ocean/ input.nml	original/ kiss_acces- som2 025deg jra55_ryf log- file.000000.oi	new/ control/ 025deg jra55_ryf/ ocean/ input.nml	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new/ control/ 01deg jra55_ryf/ ocean/ input.nml
nı	ım_121_passes						1			
	p_test potrho_max	1038.0	1038.0	1038.0	1038.0	1038.0	1000.0 1038.0	1038.0	1038.0	1038.0
	potrho_min	1038.0	1038.0	1038.0	1038.0	1038.0	1028.0	1038.0	1028.0	1038.0
	potrho_press						2000.0			
	press_standard						0.0			
	rho0_density s_test						False 20.0			
	smax_diaq						-1.0			
	min_in_column						False			
smooth_strat	ification_factor						False			
	sn_test t_test						35.0 20.0			
	teos10_eos			False			20.0			
	theta_max						30.0			
	theta_min						-2.0			
undate dia	tn_test gnostic_factors						20.0 False			
	write_a_restart						True			
&ocean_domains_nml	halo						1			
	max_tracers			20	10	5	5	5	5	5
	x_cyclic_offset						0			
0 1:0	y_cyclic_offset						0			
	output_interval se_this_module	False	False				False			
&ocean_form_drag_nml a		Talse	Talse				600.0			
Goccan Lonning and G	cprime_aiki			0.6	0.6		0.3			
	g_this_module						False			
form_drag_aiki_							3			
	i_bottom_layer iiki_gradh_max						False 0.05			
	i_gradh_power						1.0			
	ki_scale_by_gm						False			
form_drag_aiki_							False			
	_gbatch_alpha						300 000 000.0 False			
	patch_alpha_f2 patch_f2overn2						False			
form_draq_qba							False			
	tch_f2overno2						False			
	rag_gbatch_no						0.005			
form_drag_gbat	atch_surf_layer						False False			
	urf_blayer_min						3			
	n_squared_min						1×10^{-10}			
	ım_121_passes						1			
	form_drag_aiki						False			
	m_drag_gbatch se_this_module	False	False	False	False	False	False False	False	False	False
	orm_drag_max	rauc	1 0130	Talsc	rabc	Talsc	1.0	raisc	raisc	raise
	verbose_init						True			
	orm_drag_max						1.0			
&ocean_frazil_nml air_s		False	False			False	True False	False	False	False
uebu	g_this_module frazil_factor	raise	raise			raise	1.0	raise	raise	raist
frazil_0	only_in_surface	True	True	False		False	False	False	False	False
	temp_accurate		False	True						
	emp_preteos10	_	_		_	True	True	True	True	True
	g_temp_simple g_temp_teos10	True	True	False	True	False	False False	False	False	False
	se_this_module	True	True	True	True	True	True	True	True	True
&ocean_grids_nml debu		True	True	True	True	False	False	False	False	False
do_bitv	ise_exact_sum	True					False			
rea	id_rho0_profile	False	False	False	False		False			
	verbose_init write_grid						True False			
&ocean_increment_eta_n				0	0		1 4136			
days_to_increment	-			V			_			
frac	tion_increment			1.0	1.0		1.0			
	s_to_increment		F .	3600	1800	F 1	0	F .		
	e_this_module	False	False	False	False	False	False	False	False	False

Group (continued)	Variable	original/ GFDL ESM2M input- cut.nml	original/ MOM_SIS TOPAZ input.nml	original/ russ- accessom- mom4p1- input.nml	original/ hogg_acces- som2 1deg jra55_ryf input.nml	new/ control/ 1deg jra55_ryf/ ocean/ input.nml	original/ kiss_acces- som2 025deg jra55_ryf log- file.000000.oi	new/ control/ 025deg jra55_ryf/ ocean/ input.nml	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new/ control/ 01deg jra55_ryf/ ocean/ input.nml
	raction_increment secs_to_increment			1.0 3600	1.0 1800		1.0			
	use_this_module	False	False	False	False	False	False	False	False	False
&ocean_increment_ve	locity_nml			0	0		1			
days_to_increment				4.0	4.0		4.0			
	raction_increment secs_to_increment			1.0 3600	1.0 1800		1.0			
1	use_this_module	False	False	False	False	False	False	False	False	False
&ocean_lap_friction_n		Tube	Tutse	raise	ruse	Tuisc	False	Tuisc	ruise	raisc
debug_this_module										
la	p_friction_scheme	'general'	'general'	'general'	'general'	'general'	'general'	'general'	'general'	'general'
0 1 4	write_a_restart						True			
&ocean_lap_tracer_nn	nl alap horz_s_diffuse						0.0 True			
	horz_z_diffuse						False			
rea	d_diffusivity_mask						False			
	tracer_mix_micom						False			
	use_this_module	False	False	False	False	False	False	False	False	False
	vel_micom						0.0			
	verbose_init						True			
&ocean_lapcst_friction	n_nml	False	False	False	False	False		False	False	False
<pre>use_this_module &ocean_lapgen_frictio async_domain_update</pre>	n_nml						False			
usync_domain_update	blocksize						10			
	bottom_5point	True	True	True	True	True	False			
	debug_ncar_a						False			
	debug_ncar_b						False			
	ebug_this_module						False			
	divergence_damp						False			
divergence.	_damp_vel_micom						0.0			
90	eq_lat_micom_vel_micom_aniso						0.0			
	eq_vel_micom_iso						0.0			
	uatorial_no_smag						False			
_	equatorial_zonal						False			
eq	uatorial_zonal_lat						0.0			
	k_smag_aniso	0.0	0.0	0.0	0.0	0.0	0.0		2.0	
	k_smag_iso	0.0	0.0	0.0	0.0	0.0	2.0		2.0	
	sotropic_at_depth opic_at_depth_visc						False 10 000.0			
	ar_isotropic_depth						4000.0			
	tropic_off_equator						False			
	ar_only_equatorial			True	True		False			
	neptune						False			
	eptune_depth_min						100.0			
	eptune_length_eq						1200.0			
nep	neptune_smooth						3000.0 True			
nent	neptune_smooth une_smooth_num						1			
	restrict_polar_visc	True	True	True	True	True	False			
	rict_polar_visc_lat	60.0	60.0	60.0	60.0	60.0	60.0			
restric	t_polar_visc_ratio	0.35	0.35	0.35	0.35	0.35	0.35			
	$drag_friction_max$						1.0			
	ig_friction_scaling						1.0			
	ction_uvmag_max						10.0			
use_	side_drag_friction use_this_module	True	True	True	True	True	False False	False	False	False
	vconst_1	nue	iiue	8 000 000.0	8 000 000.0	iiue	10 000 000.0	rdlSE	rdise	rdise
	vconst_2			0.0	0.0		0.0			
	vconst_3			0.8	0.8		0.16			
	vconst_4			5×10^{-9}	5×10^{-9}		2×10^{-8}			
	vconst_5			3	3		3			
	vconst_6			300 000 000.0	300 000 000.0		10 000 000.0			
	vconst_7			100.0	100.0		100.0			
	vconst_8 vel_micom_aniso						45.0 0.0			
	vel_micom_iso	0.1	0.1	0.1	0.1	0.1	0.0			
visc	_vel_scale_length	0.1	0.1	0.1	0.1	0.1	150 000.0			
7130	viscosity_ncar	False	False	False	True	False	False			
	scosity_ncar_2000			False	False		True			
vi	scosity_ncar_2007			True	True		False			

Viscosity, scale by, rossby True True True True True False Viscosity, scale by, rossby power 4.0 4.0 4.0 4.0 4.0 4.0 2.0 4.0 2.0 4.0 4.0 2.0 4.0 2.0 4.0 4.0 4.0 2.0 4.0 4.0 4.0 2.0 4.0 4.0 4.0 2.0 4.0 4.0 4.0 2.0 4.0 4.0 4.0 2.0 4.0 4.0 4.0 2.0 4.0 4.0 4.0 2.0 4.0 4.0 4.0 2.0 4.0 4.0 4.0 2.0 4.0 4.0 4.0 2.0 4.0 4.0 4.0 4.0 2.0 4.0 4.0 4.0 2.0 4.0 4.0 4.0 4.0 2.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4	jra55_ryf input.nml	01deg jra55_ryf/ ocean/ input.nml
&ocean_mixdownslope.nml debug this module False False False False False False mixdownslope.mask gfdl True True False False False Palse mixdownslope.mask gfdl True True False False False False mixdownslope.mask gfdl True True False False False False mixdownslope.mask gfdl True True False False False False mixdownslope.weight_far True False		
True	False	
mixdownslope_mask_affdt True False False False False False mixdownslope_mask 4 4 4 4 4 1 mixdownslope_width read_mixdownslope_width True True False False mixdownslope_width True	rutsc	
mixdownslope mask_ofdl True True False False False False mixdownslope_weight_far 4 4 4 4 4 1 mixdownslope_weight_far 1 1 1 1 read_mixdownslope_width True True False False False mixdownslope_width True True True True True False False use_this_module True True True True True False Fa		
mixdownslope_npts 4		
Mixdownslope_width Fead_mixdownslope_mask		
read_mixdownslope_mask use this_module True		
use_this_moduleTrue		
Barotropic_split 80 80 80 80 80 80 80 8	False	False
False	1	1
debug dt_oceanFalse 7200False 7200False 7200False 3600False 3600False 3600False 3600False 3600False 3600False 3600False 3600False 	80	80 True
Description	False	False
False	150	150
1,4 1,2 1,4		
layout 12,8 6,4 12,10 16,15 16,15 48,40 48,40 mask table reinitialize thickness surface_height_split 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	10, 15	10, 15
reinitialize_thickness surface_height_split 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	80,75	80,75
surface_height_split 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
time_tendency 'twolevel' 'twoleve	1	1
use_blobs use_velocity_override vertical_coordinate 'zstar' 'z	'twolevel'	1 'twolevel'
vertical_coordinate 'zstar' '	tiloteret	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
&ocean_momentum_source_nml False debug_this_module False rayleigh_damp_exp_from_bottom False False rayleigh_damp_exp_scale 100.0 rayleigh_damp_exp_time 864 000.0 use_rayleigh_damp_table True True True True True True		
debug_this_module rayleigh_damp_exp_from_bottom False False False rayleigh_damp_exp_scale 100.0 rayleigh_damp_exp_time 864 000.0 use_rayleigh_damp_table True True True True True True True True True	'zstar'	'zstar'
rayleigh_damp_exp_from_bottom False False rayleigh_damp_exp_scale 100.0 rayleigh_damp_exp_time 864 000.0 use_rayleigh_damp_table True True True True		
rayleigh_damp_exp_time 864 000.0 use_rayleigh_damp_table True True True True True True	False	False
use_rayleigh_damp_table True True True True True True		
	True	True
<mark>use_this_module</mark> False False True True True True True True	True	True
verbose_init True		
&ocean_nphysics_new_nml False drhodz_smooth_horz		
drhodz_smooth_vert False		
smax 0.01		
use_this_module False		
vel_micom_smooth 0.2 &ocean_nphysics_nml debug_this False False False False False False	False	False
module	1 0130	1 0130
use_nphysicsa False False False False False False	False	False
use_nphysicsb False True False False False False False False	False	False
<pre>use_nphysicsc True False True True False False use_this_module True True True True False False</pre>	False False	False False
write_a_restart True	1 4150	· utsc
&ocean_nphysics_util_new_nml 1		
num_121_passes &ocean_nphysics_util_nml agm 800.0 800.0 600.0 600.0 600.0 100.0	100.0	100.0
agm_closure True True True True True True True T	True	True
<mark>agm_closure_baroclinic</mark> True True True True True True True	True	True
agm_closure_buoy_freq	0.004	0.004
<pre>agm_closure_eady_ave_mixed True True True True agm_closure_eady_cap True True True True True</pre>		
agm_closure_eady_smooth_horz True True True True True True		
agm_closure_eady_smooth_vert True True True True True		
agm_closure_eden_gamma 0.0 0.0 0.0 0.0 agm_closure_eden_greatbatch False False False		
agm_closure_grid_scaling True True True True True		
agm_closure_length 50 000.0 50 000.0 50 000.0 50 000.0 50 000.0 50 000.0	50 000.0	50 000.0
agm_closure_length_bczone False False False False False False False False False	False	False
agm_closure_length_fixed False False False False agm_closure_length_rossby False False False False	False False	False False
agm_closure_lower_depth 2000.0 2000.0 2000.0 2000.0 2000.0 2000.0	2000.0	2000.0
agm_closure_max 800.0 800.0 600.0 600.0 600.0 600.0	600.0	600.0
agm_closure_min 100.0 100.0 50.0 50.0 50.0 100.0 agm_closure_scaling 0.07 0.07 0.07 0.07 0.07 0.07	100.0 0.07	100.0 0.07
agm_closure_upper_depth 100.0 100.0 100.0 100.0 100.0 100.0 100.0	100.0	100.0
agm_damping_time 45.0 45.0 45.0 45.0 45.0		

Group (continued)	Variable	original/ GFDL ESM2M input- cut.nml	original/ MOM_SIS TOPAZ input.nml	original/ russ- accessom- mom4p1- input.nml	original/ hogg_acces- som2 1deg jra55_ryf input.nml	new/ control/ 1deg jra55_ryf/ ocean/ input.nml	original/ kiss_acces- som2 025deg jra55_ryf log- file.000000.o	new/ control/ 025deg jra55_ryf/ ocean/ input.nml	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new/ control/ 01deg jra55_ryf/ ocean/ input.nml
agn	n_smooth_space	False	False	False	False	False				
ag	m_smooth_time	False	False	False	False	False				
	aredi	600.0	600.0	600.0	600.0	600.0		600.0	600.0	600.0
	redi_equal_agm	False	False	False	False	False		False	False	False
	drhodz_mom4p1 dz_smooth_horz	True False	True False	True False	True False	True False		False False	False False	False False
	dz_smooth_vert	False	False	False	False	False		False	False	False
nphysi	cs_util_zero_init	True	True	True	True	True				
ros	ssby_radius_max	100 000.0	100 000.0	100 000.0	100 000.0	100 000.0		100 000.0	100 000.0	100 000.0
ro	ssby_radius_min	15 000.0	15 000.0	15 000.0	15 000.0	15 000.0		15 000.0	15 000.0	15 000.0
	smax	0.005	0.005						0.002	
ter	swidth acer_mix_micom	0.002 False	0.002 False	False	False	False		False	0.002 False	False
uc	vel_micom	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
&ocean_nphysicsa_nml	recomeon	False	False	0.0	0.0	0.0		0.0	0.0	0.0
debug_this_module										
neutral_	linear_gm_taper	True	True							
	ral_physics_limit	True	True							
	_physics_simple	False	False							
	utral_sine_taper nask_neutral_on	True True	True True							
	use_this_module	False	False	False	False	False		False	False	False
&ocean_nphysicsb_nml debug_this_module	ise_tills_illoudte	False	False	i disc	1 disc	i alse		i alse	1 alse	i disc
	nblayer_smooth	True	True							
neutr	ral_physics_limit	True	True							
	_turb_thick_min	50.0	50.0							
	urb_thick_min_k	5	5							
	use_this_module	False	True	False	False	False		False	False	False
&ocean_nphysicsc_nml bv_freq_smooth_vert	bvp_bc_mode	True 2		True 2	True 2	True 2				
	bvp_min_speed	0.1		0.1	0.1	0.1				
	bvp_speed	0.0		0.0	0.0	0.0				
deb	ug_this_module	False		False	False	False				
	do_gm_skewsion	True		True	True	True				
do_n	neutral_diffusion	True		True	True	True				
	epsln_bv_freq	1×10^{-12}		1×10^{-12}	1×10^{-12}	1×10^{-12}				
_	sion_bvproblem skewsion_modes	True False		True False	True False	True False				
	tral_eddy_depth	True		True	True	True				
	ral_physics_limit	True		True	True	True				
	mber_bc_modes	2		2	2	2				
	regularize_psi	False		False	False	False				
	smax_psi	0.01		0.01	0.01	0.01				
•	smooth_psi nask_neutral_on	True		True	True	True				
	turb_blayer_min	True 50.0		True 50.0	True 50.0	True 50.0				
	use_this_module	True	False	True	True	True		False	False	False
&ocean_obc_nml	ctrop_inc						0.0, 0.0, 0.0,			
	ctrop_max						0.0 1.5, 1.5, 1.5,			
	ctrop_min						1.5 0.1, 0.1, 0.1, 0.1			
	ctrop_smooth						0.7, 0.7, 0.7, 0.7			
	direction						None			
	enh_fac_d						1.0, 1.0, 1.0,			
	enh_fac_v enh_pnts						0.9, 0.9, 0.9, 0.9 1, 1, 1, 1			
	fieldname_eta						'eta_t', 'none', 'none', 'none'			
	fieldname_ud						'ud', 'none', 'none', 'none'			
	filename_eta						'obc_eta t.nc', 'none', 'none', 'none'			
	filename_tracer						'INPUT'			

Group (continued)	Variable	original/ GFDL ESM2M input- cut.nml	original/ MOM_SIS TOPAZ input.nml	original/ russ- accessom- mom4p1- input.nml	original/ hogg_acces- som2 1deg jra55_ryf input.nml	new/ control/ 1deg jra55_ryf/ ocean/ input.nml	original/ kiss_acces- som2 025deg jra55_ryf log- file.000000.oi	new/ control/ 025deg jra55_ryf/ ocean/ input.nml	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new/ control/ 01deg jra55_ryf/ ocean/ input.nml
fil	ename_ud						'obc_ud.nc', 'none', 'none', 'none'			
	ie						-999, -999, -999, -999			
	iere						-999, -999, -999, -999			
	iers						-999, -999, -999, -999			
	is						-999, -999, -999, -999			
	itre						-999, -999, -999, -999			
	itrs						-999, -999, -999, -999			
	je						-999, -999, -999, -999			
	jere						-999, -999, -999, -999			
	jers						-999, -999, -999, -999			
	js						-999, -999, -999, -999			
	jtre						-999, -999, -999, -999			
	jtrs						-999, -999, -999, -999			
	name						'test_obc', 'none', 'none',			
	nobc						'none'			
obc_adjust_ 							False, False, False, False			
	der_convu						False, False, False, False			
obc_conside	er_sources						False, False, False, False,			
							False, False, False, False,			
							False, False, False, False,			
							False, False,			
							False, False,			
							False, False, False, False,			
							False, False,			
							False, False, False, False,			
							False, False,			
							False, False,			
							False, False, False, False,			
							False, False,			
							False, False, False, False			
obc_enhance	_diff_back						'NONE',			
							'NONE', 'NONE', 'NONE'			
obc_enhance	_visc_back						'NONE', 'NONE',			
							'NONE', 'NONE'			
	obc_eta						'NOTHIN', 'NOTHIN',			
							'NOTHIN', 'NOTHIN'			

Group (continued)	Variable	original/ GFDL ESM2M input- cut.nml	original/ MOM_SIS TOPAZ input.nml	original/ russ- accessom- mom4p1- input.nml	original/ hogg_acces- som2 1deg jra55_ryf input.nml	new/ control/ 1deg jra55_ryf/ ocean/ input.nml	original/ kiss_acces- som2 025deg jra55_ryf log- file.000000.oı	new/ control/ 025deg jra55_ryf/ ocean/ input.nml	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new/ control/ 01deg jra55_ryf/ ocean/ input.nml
	obc_flow_relax						1, 1, 1, 1, 1, 1, 1, 1, 1, 1,			
	obc_mix						'NOGRAD', 'NOGRAD', 'NOGRAD', 'NOGRAD'			
	obc_nor						'NOGRAD', 'NOGRAD', 'NOGRAD', 'NOGRAD'			
	obc_relax_tracer						False, False, False, False,			
	obc_tan						'NOGRAD', 'NOGRAD', 'NOGRAD', 'NOGRAD'			

Group (continued)	Variable	original/ GFDL ESM2M input- cut.nml	original/ MOM_SIS TOPAZ input.nml	original/ russ- accessom- mom4p1- input.nml	original/ hogg_acces- som2 1deg jra55_ryf input.nml	new/ control/ 1deg jra55_ryf/ ocean/ input.nml	original/ kiss_acces- som2 025deg jra55_ryf log- file 000000 ou	new/ control/ 025deg jra55_ryf/ ocean/ input.nml	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new/ control/ 01deg jra55_ryf/ ocean/ input.nml
	obc.tra						file.00000.ot 'NOGRAD',			
obc <u>.t</u> i	obc_ud						False, False, False, False,			
							'NOGRAD', 'NOGRAD', 'NOGRAD'			
O	bc_vert_advel_t						False, False, False, False			
ot	oc_vert_advel_u						False, False, False, False			

Group (continued)	Variable	original/ GFDL ESM2M input- cut.nml	original/ MOM_SIS TOPAZ input.nml	original/ russ- accessom- mom4p1- input.nml	original/ hogg_acces- som2 1deg jra55_ryf input.nml	new/ control/ 1deg jra55_ryf/ ocean/ input.nml	original/ kiss.acces- som2 025deg jra55_ryf log- file.000000.oi	new/ control/ 025deg jra55_ryf/ ocean/ input.nml	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new/ control/ 01deg jra55_ryf/ ocean/ input.nml
	rel_clin_pnts						1, 1, 1, 1, 1, 1, 1, 1, 1, 1,			
	rel_coef_eta_in						0.0, 0.0, 0.0, 0.0			
	rel_coef_eta_out						0.0, 0.0, 0.0,			
	rel_coef_tracer_in						0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0,			
	el_coef_tracer_out						0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0,			
&ocean_operators_nn	rel_eta_pnts	True				False	1, 1, 1, 1 False	False	False	False
use_legacy_div_ud										
&ocean_overexchanger this_module	e_nml debug	False	False	False	False	False	False	False	False	False
overex	bitwise_exact_sum ch_check_extrema xch_min_thickness	False	False	False	False		False False 4.0			
	overexch_npts overexch_stability	4	4	4	4	4	4 0.25	4	4	4
	erexch_weight_far	False	False	False	False	False	False	False	False	False
	overexch_width						0.7777			
	overflow_delta overflow_mu						0.3333 0.0001			
	overflow_umax	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
&ocean_overflow_nm	use_this_module	False	False	False	False	False	False	False	False	False
debug_this_module		False	False	False	False		False		False	
ao_	bitwise_exact_sum no_return_flow						False False			
	overflow_delta						0.3333			
	overflow_mu						0.0001			
	overflow_umax transport_units						0.01 'Sv'			
	use_this_module	False	False	False	False	False	False	False	False	False
&ocean_overflow_ofp debug_this_module									False	
do ent	diag_step rainment_para_ofp								5760 False	
do_cnt	do_mass_ofp								True	
	frac_exchange_src								1.0	
	max_vol_trans_ofp								10 000 000.0	

Group (continued) Variable	original/ GFDL ESM2M input- cut.nml	original/ MOM_SIS TOPAZ input.nml	original/ russ- accessom- mom4p1- input.nml	original/ hogg_acces- som2 1deg jra55_ryf input.nml	new/ control/ 1deg jra55_ryf/ ocean/ input.nml	original/ kiss_acces- som2 025deg jra55_ryf log- file.000000.o1	new/ control/ 025deg jra55_ryf/ ocean/ input.nml	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new/ control/ 01deg jra55_ryf/ ocean/ input.nml
use_this_module					False		False	False	False
&ocean_parameters_nml						4218.0			
cp_liquid_runoff									
cp_ocean						3992.103 223			
cp_solid_runoff						2106.0			
grav						9.8 7.2921 ×			
omega_earth						10^{-5}			
rho0						1035.0			
tfreeze						273.15			
&ocean_polar_filter_nml	False	False	False	False	False		False	False	False
use_this_module									
&ocean_pressure_nml						False			
debug_this_module zero_correction_term_grad						False			
zero_diagonal_press_grad						False			
zero_eta_over_h_zstar_pressure						False			
zero_pressure_force					False	False	False	False	False
&ocean_rivermix_nml	40.0	40.0				0.0			
calving_insertion_thickness									
debug_all_in_top_cell						False	_		
debug_this_module	False	False	False	False	False	False	False	False	False
debug_this_module_heat discharge_combine_runoff_calve	False	True				False True			
do_bitwise_exact_sum	True	iiue				False			
river_diffuse_salt	False	False	False	False	True	False	True	True	True
river_diffuse_temp	False	False	False	False	True	False	True	True	True
river_diffusion_thickness	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
river_diffusivity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
river_insertion_thickness	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
runoff_insertion_thickness use_this_module	40.0 True	40.0 True	True	True	True	0.0 True	True	True	True
&ocean_riverspread_nml	iiue	iiue	ilue	iiue	ilue	False	iiue	False	irue
debug_this_module						rutsc		ruisc	
riverspread_diffusion						False			
riverspread_diffusion_passes						0			
use_this_module	False	False	True	True	False	False	False	True	False
vel_micom_smooth	'haliaara'	'haliaava'			'haliaara'	0.2	'haliaaus'	'haliaass'	'haliaara'
&ocean_rough_nml rough_scheme &ocean_sbc_nml avg_sfc_temp_salt_eta	'beljaars' True	'beljaars' True	True	True	'beljaars' True	True	'beljaars' True	'beljaars' True	'beljaars' True
avg_sfc_velocity	True	True	True	True	True	True	True	True	True
calvingspread	False	False	iiuc	iide	False	False	False	False	False
constant_hlf						True			
constant_hlv						True			
constant_sss_for_restore						35.0			
constant_sst_for_restore						12.0			
convert_river_to_pme debug_water_fluxes						False False			
do_bitwise_exact_sum					False	False	False	False	False
do_flux_correction	True				False	False	False	False	False
do_langmuir						False			
eta_restore_tscale	-10.0					-30.0			
ice_salt_concentration			0.005			0.005			
land_model_heat_fluxes	True	False	0.5	0.5	False	False	False	False	False
max_delta_salinity_restore max_ice_thickness	8.0	8.0	0.5 8.0	0.5 8.0	0.5 0.0	0.5 0.0	0.5 0.0	0.5 0.0	0.5 0.0
read_restore_mask	0.0	0.0	False	False	False	False	False	False	False
read_stokes_drift			Talsc	Tabe	Talsc	False	raisc	raisc	i disc
restore_mask_gfdl			False	False	False	False	False	False	False
rotate_winds						False			
runoff_salinity			0.0	0.0	0.0	0.0	0.0	0.0	0.0
runoff_temp_min	F. 1	F. 1				0.0 False			
runoffspread salinity_ref	False	False				False 35.0			
salt_correction_scale	0.0				0.0	0.0	0.0	0.0	0.0
salt_restore_as_salt_flux	0.0		True	True	True	True	True	True	True
salt_restore_tscale	-10.0	-10.0	15.0	15.0	60.0	60.0	60.0	60.0	60.0
salt_restore_under_ice			True	True	True	True	True	True	True
sbc_heat_fluxes_const						False			
sbc_heat_fluxes_const_seasonal						False			
sbc_heat_fluxes_const_value tau_x_correction_scale	0.0					0.0 0.0			
Lau_x_correction_scale	0.0					0.0			

Group (continued)	Variable	original/ GFDL ESM2M input- cut.nml	original/ MOM_SIS TOPAZ input.nml	original/ russ- accessom- mom4p1- input.nml	original/ hogg_acces- som2 1deg jra55_ryf input.nml	new/ control/ 1deg jra55_ryf/ ocean/ input.nml	original/ kiss_acces- som2 025deg jra55_ryf log- file.000000.oi	new/ control/ 025deg jra55_ryf/ ocean/ input.nml	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new/ control/ 01deg jra55_ryf/ ocean/ input.nml
tau_y_c	correction_scale	0.0					0.0			
	taux_sinx						False			
	tauy_siny	4.0					False			
	correction_scale o_restore_tscale	1.0 —10.0	-10.0	-1.0	-1.0	-10.0	0.0 —10.0	-10.0	-10.0	-10.0
	_sss_for_restore	-10.0	-10.0	-1.0	-1.0	-10.0	— 10.0 False	-10.0	-10.0	-10.0
	_sst_for_restore						False			
use_full_patr	m_for_sea_level	True	True			False	False	False	False	False
	e_ideal_calving						False			
U	ise_ideal_runoff	Tour	T	Т	T	Т	False	Т	T	Т
use_waterflux_o	use_waterflux	True False	True	True	True	True	True False	True	True	True
	<pre>catving </pre>	False					False			
	c_override_fprec	False					False			
	waterflux_tavg	False	False	False	False		False			
	_calving_fluxes						False			
	ero_heat_fluxes	False		False	False	False	False	False	False	False
	me_eta_restore _salt_correction	False				False	False False	Ealco	Ealco	False
	net_salt_restore			True	True	True	True	False True	False True	True
	vater_correction			Huc	nuc	False	False	False	False	False
zero_net_water				True	True	True	True	True	True	True
	t_water_coupler			True	True	True	True	True	True	True
zero_ne	t_water_restore			True	True	True	True	True	True	True
	ero_pme_fluxes						False			
	ero_river_fluxes						False			
	ro_runoff_fluxes			Falsa	False	False	False	F-1	Falsa	Falsa
	o_surface_stress ro_water_fluxes			False False	False	False	False False	False False	False False	False False
&ocean_sbc_ofam_nml	IO_Water_Ituxes			False	False	1 alse	False	1 0130	1 atse	1 alse
restore_mask_ofam				ruisc	ruse		ruisc			
ri	ver_temp_ofam			False	False		False			
&ocean_shortwave_csiro	_nml			True	True					
read_depth										
u	se_this_module	False	False	True	True	False		False	False	False
&ocean_shortwave_gfdl.	zmax_pen			7000	7000		0.08			
chl_default	Jiiiit.						0.00			
	ug_this_module	False	False	False	False	False	False	False	False	False
	enforce_sw_frac	True	True	True	True	True	True	True	True	True
	for_uniform_chl						False			
	optics_manizza	True	True	True	True	True	True	True	True	True
optics optics optics	_morel_antoine	False	False			False	False	False	False	False
	override_f_vis read_chl	False False	False False	False	False	True	True True	True	True	True
	sw_frac_top	raise	raise	rdist	rdise	iiue	0.0	iiue	iiue	iiue
sw mor	el_fixed_depths						False			
	en_fixed_depths			False	False		. 4.50			
u	se_this_module	True	True	False	False	True	True	True	True	True
	zmax_pen	200.0	200.0	200.0	200.0	300.0	300.0	300.0	300.0	300.0
&ocean_shortwave_jerlo	v_nml	False	False	False	False	False		False	False	False
<pre>use_this_module &ocean_shortwave_nml</pre>		False	False	True	True	False	False	False	False	False
use_shortwave_csiro		i alse	Talse	iiue	iiue	raise	i atse	1 0130	i atse	1 0130
	_shortwave_ext						False			
	.shortwave_gfdl	True	True	False	False	True	True	True	True	True
use_sh	nortwave_jerlov	False	False	False	False	False	False	False	False	False
	se_this_module	True	True	True	True	True	True	True	True	True
&ocean_sigma_transport	t_nml						0.3333			
campingoose_delta	ampingooso mu						0.0001			
	mpingoose_mu ug_this_module						False			
	dvection_check						True			
	a_advection_on	False	False	False	False		False		False	
	ection_sgs_only	False	False	False	False		False		False	
	na_diffusion_on	True	True	True	True		True		True	
	igma_diffusivity						1000.0			
	diffusivity_ratio	1×10^{-6}	1×10^{-6}	1×10^{-6}	1×10^{-6}		1×10^{-6}		1×10^{-6}	
sigma_just.	_in_bottom_cell	True	True	True	True		True		True	
cmoath c	sigma_umax sigma_thickness	0.01 True	0.01 True	0.01 True	0.01 True		0.01 True		0.01 True	
	_sigma_velocity	True	True	True	True		True		True	
SITIUUUII	_Jigma_velocity	iiue	nue	iiue	nue		ilue		ilue	

Group (continued)	Variable	original/ GFDL ESM2M input- cut.nml	original/ MOM_SIS TOPAZ input.nml	original/ russ- accessom- mom4p1- input.nml	original/ hogg_acces- som2 1deg jra55_ryf input.nml	new/ control/ 1deg jra55_ryf/ ocean/ input.nml	original/ kiss_acces- som2 025deg jra55_ryf log- file.000000.oı	new/ control/ 025deg jra55_ryf/ ocean/ input.nml	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new/ control/ 01deg jra55_ryf/ ocean/ input.nml
	smooth_velmicom	0.2	0.2	0.2	0.2		0.2		0.2	_
thi	ckness_sigma_layer	100.0	100.0	100.0	100.0		100.0		100.0	
th	ickness_sigma_max	100.0	100.0	100.0	100.0		100.0		100.0	
th	ickness_sigma_min	100.0	100.0	100.0	100.0		100.0		100.0	
	tmask_sigma_on	False	False	False	False		False		False	
	tracer_mix_micom	True	True	True	True		True		True	
	use_this_module	True	True	True	True	False	False	False	False	False
	vel_micom	0.05	0.05	0.05	0.05		0.05		0.05	
	verbose_init						True			
	write_a_restart						True			
&ocean_solo_nml	calendar			'NOLEAP'	'NOLEAP'	'NOLEAP'	'NOLEAP'	'NOLEAP'	'NOLEAP'	'NOLEAP'
	date_init			1, 1, 1, 0, 0, 0	1, 1, 1, 0, 0, 0	1, 1, 1, 0, 0, 0	1, 1, 1, 0, 0, 0	1, 1, 1, 0, 0, 0	1, 1, 1, 0, 0, 0	1, 1, 1, 0, 0, 0
	days			0	1460	0	0	31	30	30
	debug_this_module				False		False			
	dt_cpld			3600	3600	3600	1800	1200	150	600
	hours			0	0	0	0	0	0	0
	layout_mask						0,0			

Group (continued)	Variable	original/ GFDL ESM2M input- cut.nml	original/ MOM_SIS TOPAZ input.nml	original/ russ- accessom- mom4p1- input.nml	original/ hogg_acces- som2 1deg jra55_ryf input.nml	new/ control/ 1deg jra55_ryf/ ocean/ input.nml	original/ kiss_acces- som2 025deg jra55_ryf log-	new/ control/ 025deg jra55_ryf/ ocean/ input.nml	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new/ control/ 01deg jra55_ryf/ ocean/ input.nml
	mask_list						file.000000.o ı			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
					19		0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0			

Group (continued)	Variable	original/ GFDL ESM2M input- cut.nml	original/ MOM_SIS TOPAZ input.nml	original/ russ- accessom- mom4p1- input.nml	original/ hogg_acces- som2 1deg jra55_ryf input.nml	new/ control/ 1deg jra55_ryf/ ocean/ input.nml	original/ kiss_acces- som2 025deg jra55_ryf log- file.000000.oi	new/ control/ 025deg jra55_ryf/ ocean/ input.nml	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new/ control/ 01deg jra55_ryf/ ocean/ input.nml
	minutes			0	0	0	0	0	0	0
	months			12	0	0	0	0	0	0
	n_mask						0			
restari	t_interval						0, 0, 0, 0, 0, 0			
	seconds			0	0	0	0	0	0	0
0	years				0	2	1	0	0	0
&ocean_sponges_eta_nml umodule	use_this	False	False	False	False	False	False	False	False	False
&ocean_sponges_eta_ofam_nm	al athroch						0.5			
	o_restore						1			
	lambda						0.0083			
	npower						1.0			
secs_t	o_restore						0			
	taumin						720.0			
use_adaptiv							False			
	rd_thump						False			
use_no _use_sponge_	rmalising after init						False False			
&ocean_sponges_tracer_nml	arter_IIIIt	False	False	False	False		False		False	
damp_coeff_3d		1 4125	1 dise	I dist	i dise		i dise		i dise	
	s_module	False	False	False	False	False	False	False	False	False
&ocean_sponges_tracer_ofam_							0.5			
athresh										
days_t	o_restore						1			
	deflate						False			
deflate	-fraction						0.6			
	lambda						0.0083			
	limit_salt _salt_min						False 0.01			
	t_restore						3600.0			
	mit_temp						False			
	emp_min						-1.8			
limit_tem	p_restore						10 800.0			
	npower						1.0			
secs_t	o_restore						0			
	taumin						720.0			
use_adaptiv							False			
	rd_thump						False False			
use_sponge_	rmalising after init						False			
&ocean_sponges_velocity_nml damp_coeff_3d							False			
	s_module	False	False	False	False	False	False	False	False	False
&ocean_sponges_velocity_ofan	n_nml						0.5			
athresh										
days_t	o_restore						0.0083			
	lambda						1.0			
sers to	npower o_restore						0			
3003_0	taumin						720.0			
use_adaptiv							False			
	d_thump						False			
use_no	rmalising						False			
use_sponge_	after_init						False			
&ocean_submesoscale_nml coefficient_ce						0.05	0.05	0.05	0.05	0.05
	tant_hblt	Ealaa	Ealas	Ealas	Ealaa	Ealas	100.0 False	Ealaa	Ealaa	False
debug_this	diag_step	False	False	False	False	False	1200	False	False	False
front_leng		5000.0	5000.0	5000.0	5000.0	5000.0	5000.0	5000.0	5000.0	5000.0
front_length_defor		True	True	True	True	True	True	True	True	True
	limit_psi	True	True	True	True	True	True	True	True	True
limit_psi_velo		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	min_kblt	4	4	4	4	4	4	4	4	4
	num_hblt					_	0.0	-	_	_
smooth_advect_transf						True	True	True	True	True
smooth_advect_transp	oort_num ooth_hblt	False	False	False	False	4 False	4 False	4 Falso	4 Falso	4 Falso
smooth_ 		raise	ralse	raise	raise	raise	False 2	False	False	False
	nooth_psi					True	True	True	True	True
	_psi_num					3	3	3	3	3
submeso_ad						False	False	False	False	False

Group (continued)	Variable	original/ GFDL ESM2M input- cut.nml	original/ MOM_SIS TOPAZ input.nml	original/ russ- accessom- mom4p1- input.nml	original/ hogg_acces- som2 1deg jra55_ryf input.nml	new/ control/ 1deg jra55_ryf/ ocean/ input.nml	original/ kiss_acces- som2 025deg jra55_ryf log-	new/ control/ 025deg jra55_ryf/ ocean/ input.nml	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new/ control/ 01deg jra55_ryf/ ocean/ input.nml
suhme	eso_advect_limit					True	file.00000.ou	True	True	True
	o_advect_sweby					iiuc	False	iiuc	iiuc	iiuc
	_advect_upwind					True	True	True	True	True
	advect_zero_bdy					True	True	True	True	True
	omeso_diffusion					False	False	False	False	False
	sion_biharmonic _diffusion_scale					True	True	True	True	True
	meso limit flux	True	True	True	True	10.0	10.0 True	10.0	10.0	10.0
	meso_skew_flux	ilue	iiuc	iiue	iiue	True	True	True	True	True
	time_constant						86 400.0			
us	e_hblt_constant						False			
use.	_hblt_equal_mld	True	True	True	True	True	True	True	True	True
	use_psi_legacy	True	True	Truce	Tuus	False	False	False	False	False
&ocean_tempsalt_nml	ise_this_module	True False	True False	True	True False	True False	True False	True False	True True	True False
debug_this_module		raise	False		raise	raise	raise	False	irue	False
	p_2nd_iteration	True	True	True	True	True	True	True	True	True
	_equal_contemp					True	True	True	True	True
	it_ts_with_ideal						False			
	with_ideal_efold						1000.0			
	ith_ideal_svalue						30.0			
reinit_ts_w	ith_ideal_tvalue s_max	55.0	55.0	55.0	55.0	70.0	10.0 70.0	70.0	70.0	70.0
	s_max_limit	42.0	42.0	42.0	42.0	70.0 42.0	42.0	42.0	42.0	42.0
	s_min	-1.0	-1.0	-1.0	-1.0	0.0	0.0	0.0	0.0	0.0
	s_min_limit	5.0	5.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0
	t_max	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0
	t_max_limit	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0
	t_min	-5.0	-5.0	-5.0	-5.0	-20.0	-20.0	-20.0	-20.0	-20.0
tomp	t_min_limit	—1.9 'potential	-1.9 'potential	- 2.0 conservative	-2.0	-5.0	— 5.0 'potential	-5.0	— 5.0 'potential	-5.0 potential
цетр	erature_variable	temp'	temp'	temp'	'conservative temp'	'potential temp'	temp'	'potential temp'	temp'	temp'
	teos10	temp	temp	False	temp	temp	False	temp	temp	temp
&ocean_thickness_nml	debug_this	False	False	False	False	False	False	False	False	False
module	-									
•	s_module_detail	False	False	False	False	False	False	False	False	False
	ı_min_for_sigma						0.01			
	rce_positive_dzt n_init_thickness						False $1 imes 10^{-5}$			
	step_topography						False			
	itialize_zero_eta	False	False	False	False		False			
line	ear_free_surface						False			
max	_num_bad_print						25			
	pbot0_simple		_				False			
	cale_rho0_mask	True	True	False	False		False			
	ead_rhoO_profile _to_get_ht_mod					False	False False	False	False	False
	hoO_basin_label	7.0	7.0	7.0	7.0	Talsc	-1.0	raisc	raisc	raisc
	rho0_mask_qfdl	True	True	False	False		False			
resi	cale_rho0_value	0.75	0.75	0.75	0.75		1.0			
	ickness_dzt_min	2.0	2.0	1.0	1.0		2.0		2.0	
	ess_dzt_min_init	2.0	2.0	2.0	2.0	, , ,	10.0	, , , ,	10.0	, , ,
	ickness_method ipdate_dzwu_k0	'energetic'	'energetic'	'energetic'	'energetic'	'energetic'	'energetic' True	'energetic'	'energetic'	'energetic'
L.	write_a_restart						True			
&ocean_time_filter_nml		False	False							
use_this_module										
&ocean_topog_nml deb	ug_this_module						True			
	flat_bottom						False			
2	flat_bottom_ht						5500.0 50			
	lat_bottom_kmt kmt_recompute						False			
	ecompute_offset						0			
	min_thickness	5.0	5.0	25.0	25.0		1.0			
	write_topog						False			
&ocean_tracer_advect_n	ıml	False	False	True	True		False			
advect_sweby_all					_					
	_domain_update			-	True		False			
compute_gyre_ove	erturn_diagnose ug_this_module	False	False	True False	False	False	False	False	False	False
	lo_fast_compute	raise	raise	True	raise	FdlSE	rdise	Lqf2G	Lqt2G	FdlSE
	nit_with_upwind	False	False	iiuc			False			

Group (continued) Variable	original/ GFDL ESM2M input- cut.nml	original/ MOM_SIS TOPAZ input.nml	original/ russ- accessom- mom4p1- input.nml	original/ hogg_acces- som2 1deg jra55_ryf input.nml	new/ control/ 1deg jra55_ryf/ ocean/ input.nml	original/ kiss_acces- som2 025deg jra55_ryf log-	new/ control/ 025deg jra55_ryf/ ocean/ input.nml	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new/ control/ 01deg jra55_ryf/ ocean/ input.nml
ncom limit prother						file.000000.oı False			
psom_limit_prather read_basin_mask			True		False	False	False	False	False
write_a_restart					. 4.50	True	. 4.50		. 4.50
zero_tracer_advect_horz						False			
zero_tracer_advect_vert						False			
&ocean_tracer_diag_nml buoyancy_crit						0.0003			
debug_diagnose_mixinga debug_diagnose_mixingb						False False			
debug_diagnose_mixingc						False			
debug_diagnose_mixingd						False			
diag_step	1200	12	120	4320	4320	4320	4320	576	576
do_bitwise_exact_sum	False	False	False	False	False	False	False	False	False
dtheta_crit frazil_factor						2.0 1.0			
psu2ppt						1.004 867			
rho_grad_max						$1 \times 10^{+28}$			
rho_grad_min						1×10^{-5}			
smooth_kappa_sort						0			
smooth_mld	True	True				False			
smooth_mld_for_subduction	1000	4000	4.0	4.0	700	True	700	700	-0.0
tracer_conserve_days	$\frac{100.0}{1 \times 10^{+40}}$	100.0	1.0	1.0	30.0	30.0	30.0	30.0	30.0
&ocean_tracer_nml age_tracer_max_init compute_tmask_limit_on	$1 \times 10^{+40}$	0.0	0.0	0.0	0.0	0.0 True	0.0	0.0	0.0
debug_this_module	False	False	False	False	False	False	False	False	False
frazil_heating_after_vphysics	True	True	True	True	True	True	True	True	True
frazil_heating_before_vphysics	False	False	False	False	False	False	False	False	False
inflow_nboundary						False			
interpolate_tdiag_to_pbott	False					False			
interpolate_tprog_to_pbott	False	_	_	_	_	True	_	_	_
limit_age_tracer	True	True	True	True	True	True	True	True	True
ocean_tpm_debug remap_depth_to_s_init	False	False	False	False	False	False False	False	False	False
tmask_limit_ts_same	True	True	raisc	Tabe	raisc	True	i disc	raisc	raisc
use_tempsalt_check_range				True	True	True	True	True	True
write_a_restart						True			
zero_tendency	False	False	False	False	False	False	False	False	False
zero_tracer_source	False	False	False	False	False	False	False	False	False
&ocean_tracer_util_nml debug_diagnose_mass_of_layer						False			
epsln_diagnose_mass_of_layer						1×10^{-5}			
rebin_onto_rho_all_values						True			
&ocean_velocity_advect_nml						False			
debug_this_module									
velocity_advect_centered						True			
velocity_advect_upwind						False			
zero_velocity_advect_horz zero_velocity_advect_vert						False False			
&ocean_velocity_diag_nml debug_this	False	False	False	False	False	False	False	False	False
module	· ucc	iauc	i disc	, alsc	iuoc	, alsc	iauc	, uisc	i uisc
diag_step	1200	12	120	4320	4320	4320	4320	576	576
do_bitwise_exact_sum						False			
energy_diag_step	1200	12	120	4320	4320	4320	4320	5760	5760
land_cell_num_max	10.0	100	10.0	10.0	100	100	100	10.0	100
large_cfl_value max_cfl_value	10.0	10.0 100.0	10.0	10.0 100.0	10.0 100.0	10.0 100.0	10.0 100.0	10.0	10.0 100.0
verbose_cfl	100.0	100.0	100.0	100.0	100.0	False	100.0	100.0	100.0
&ocean_velocity_nml						0.6			
adams_bashforth_epsilon									
adams_bashforth_third	True	True	True	True	True	True	True	True	True
constant_u						0.0			
constant_v debug_this_module						0.0 False			
max_cgint			1.0	1.0	1.0	1.5	1.0	1.0	1.0
truncate_velocity	False	False	False	True	False	False	False	False	False
truncate_velocity_lat	. 4.50	. 4150	. 4150	nuc	. utoc	0.0	. 4150	. disc	. 4130
truncate_velocity_value	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
truncate_verbose	True	True	True	True	True	True	True	True	True
update_velocity_via_uprime						True			
use_constant_velocity						False			
write_a_restart zero_tendency	False	False	False	False	False	True False	False	False	False
zero_tendency_explicit_a	raise	raise	Lql26	raise	False	False	False False	False	False
zero_tendency_expticit_a					ו מנטכ	1 4126	ו מנטב	ו מנאכ	ו מנאכ

Group (continued) Variable	original/ GFDL ESM2M input- cut.nml	original/ MOM_SIS TOPAZ input.nml	original/ russ- accessom- mom4p1- input.nml	original/ hogg_acces- som2 1deg jra55_ryf input.nml	new/ control/ 1deg jra55_ryf/ ocean/ input.nml	original/ kiss_acces- som2 025deg jra55_ryf log- file.000000.ot	new/ control/ 025deg jra55_ryf/ ocean/ input.nml	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new/ control/ 01deg jra55_ryf/ ocean/ input.nml
zero_tendency_explicit_b					False	False	False	False	False
zero_tendency_implicit					False	False	False	False	False
&ocean_vert_kpp_iow_nml use_this_module	False	False		False	False		False	False	False
&ocean_vert_kpp_mom4p0_nml use_this_module	False	False		False					
&ocean_vert_kpp_mom4p1_nml bvf_from_below						False			
calc_visc_on_cgrid						False			
concv						1.8			
cw_0						0.15			
debug_this_module diff_cbt_iw	0.0			0.0	0.0	False 0.0	0.0	0.0	0.0
diff_cbt_limit	0.0			0.0	0.0	0.005	0.0	0.0	0.0
diff_con_limit				0.1		0.1			
do_langmuir						False			
double_diffusion hbl_with_rit	True			True	True	True	True	True	True
kbl standard method				False	False	False False	False	False	False
kot_standard_method kl_min				raisc	raisc	2	raisc	raisc	raisc
l_smyth						2.0			
lgam						1.04			
limit_ghats						False True			
limit_with_hekman linear_hbl						True			
ltmax						5.0			
non_local_kpp						True			
radiation_iow						False			
radiation_large						False			
radiation_zero ricr	0.3			0.3	0.3	False 0.3	0.3	0.3	0.3
shear_instability	0.5			0.5	0.5	True	0.5	0.5	0.5
smooth_blmc	True			False	False	False	False	False	False
smooth_ri_kmax_eq_kmu				True	True	True	True	True	True
use_max_shear						False			
use_sbl_bottom_flux use_this_module	True			True	True	False True	True	True	True
variable_vtc	nuc			nuc	iiuc	False	iiuc	iiuc	iiuc
visc_cbu_iw	0.0			0.0	0.0	0.0	0.0	0.0	0.0
visc_cbu_limit						0.005			
visc_con_limit wsfc_combine_runoff_calve	False			0.1		0.1			
wsic_combine_runon_caive wstfac	raise					True 0.6			
&ocean_vert_kpp_nml diff_cbt_iw		0.0	0.0			0.0			
diff_con_limit			0.1						
double_diffusion		True	True						
kbl_standard_method		0.7	True						
ricr smooth_blmc		0.3 True	0.3 True						
use_this_module		True	True						
visc_cbu_iw		0.0	0.0						
visc_con_limit	0.475	2.77	0.1	0.45					
&ocean_vert_mix_nml afkph_00	0.675	0.675	0.65	0.65		0.55			
<mark>afkph_90</mark> aidif	0.725 1.0	0.725 1.0	0.75 1.0	0.75 1.0	1.0	0.55 1.0	1.0	1.0	1.0
bryan_lewis_diffusivity	True	True	False	False	False	False	False	False	False
bryan_lewis_lat_depend	True	True	True	True	False	False	False	False	False
bryan_lewis_lat_transition	35.0	35.0	35.0	35.0		35.0			
debug_this_module dfkph_00	1.15	1.15	1.15	1.15		False 1.05			
dfkph_90	1.15	1.15	0.95	0.95		1.05			
diff_cbt_tanh	1.1.7	1,1,7	0.73	0.73		False			
diff_cbt_tanh_max						0.001			
diff_cbt_tanh_min						2×10^{-5}			
diff_cbt_tanh_zmid						150.0			
diff_cbt_tanh_zwid hwf_30_diffusivity						30.0 2×10^{-5}			
hwf_depth_transition						25 000 000.0			
hwf_diffusivity					False	False	False	False	False
hwf_diffusivity_3d						False			
hwf_min_diffusivity					2×10^{-6}	2×10^{-6}	2×10^{-6}	2×10^{-6}	2×10^{-6}
hwf_n0_2omega					20.0	20.0	20.0	20.0	20.0

Group (continued)	Variable	original/ GFDL ESM2M input- cut.nml	original/ MOM_SIS TOPAZ input.nml	original/ russ- accessom- mom4p1- input.nml	original/ hogg_acces- som2 1deg jra55_ryf input.nml	new/ control/ 1deg jra55_ryf/ ocean/ input.nml	original/ kiss_acces- som2 025deg jra55_ryf log- file.000000.o	new/ control/ 025deg jra55_ryf/ ocean/ input.nml	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new/ control/ 01deg jra55_ryf/ ocean/ input.nml
linear_taper_diff_	_cbt_table	False	False	False	False		False			
	21_passes						1			
quebec_200		False	4.5×10^{-5}	4.5×10^{-5}	4.5×10^{-5}		False $4.5 imes 10^{-5}$			
	sfkph_00 sfkph_90	4.5×10^{-5} 4.5×10^{-5}	4.5×10^{-5} 4.5×10^{-5}	4.5×10^{-5} 4.5×10^{-5}	4.5×10^{-5} 4.5×10^{-5}		4.5×10^{-5} 4.5×10^{-5}			
smoot	th_rho_n2	4.5 ∧ 10	4.J × 10	T.J × 10	4.5 ∧ 10		True			
use_diff_	_cbt_table	False	False	False	False	False	False	False	False	False
use_explicit_ve							True			
vert_diff_back	rbose_init	True	True	True	True	True	True True	True	True	True
	x_scheme	'kpp	'kpp'	'kpp'	'kpp	'kpp	'kpp	'kpp	'kpp	'kpp
		mom4p1'			mom4p1'	mom4p1'	mom4p1'	mom4p1'	mom4p1'	mom4p1'
	_visc_back						False 0.01			
visc_cbu_ visc_chu	back_min						0.01			
visc_cbu_t							50.0			
visc_cbu_t							30.0			
vmix_min_diss_bvf							0.0006			
vmix_min_c vmix_min_diss_flu							1×10^{-7} 0.2			
vmix_rescale_							False			
vmix_set_min_d							False			
	zfkph_00	250 000 000.0	250 000 000.0	250 000.0	250 000.0		250 000.0			
	zfkph_90	250 000 000.0	250 000 000.0	$\frac{250000.0}{5\times10^{-6}}$	$\frac{250000.0}{5\times10^{-6}}$	0.0	250 000.0	0.0	0.0	0.0
&ocean_vert_tidal_nml background_diffusivity		0.0	0.0	2 × 10 °	5 × 10 °	0.0	0.0	0.0	0.0	0.0
background	_viscosity	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
	n_drag_cd						0.0024			
debug_thi		7000	700.0	7000	7000	5000	False	F00.0	500.0	F00.0
default_roughne	ecay_scale	300.0	300.0	300.0	300.0	500.0	500.0 25.0	500.0	500.0	500.0
default_ti							0.01			
drag_dissipat	tion_efold						True			
drag_dissipation_ti						-	43 200.0	_	-	_
drag_dissipation_u	use_cabot nask_deep					True	True True	True	True	True
drag_mask_d							0.1			
dr	hodz_min	$1 imes 10^{-12}$	$1 imes 10^{-12}$	$1 imes 10^{-12}$	$1 imes 10^{-12}$	$1 imes 10^{-10}$	$1 imes 10^{-10}$	$1 imes 10^{-10}$	$1 imes 10^{-10}$	1×10^{-10}
fixed_wave_d		False	False	False	False	False	False	False	False	False
<mark>max_drag_</mark> max_wave_		0.01	0.01	0.01 0.01	0.01 0.01	0.01	0.005 0.01	0.01	0.01	0.01
	efficiency	0.01	0.01	0.01	0.01	0.01	0.2	0.01	0.01	0.01
mixing_efficiency_i		True	True	True	True	True	True	True	True	True
	nderson_p						0.25			
munk_anders	21_passes						3.0 1			
read_leewave_d							False			
read_r	oughness	True	True	True	True	True	True	True	True	True
	ide_speed	True	True	True	True	True	True	True	True	True
read_wave_d reading_rough		False True	False True	False True	False True	False True	False True	False True	False True	False True
reading_roughne		False	False	False	False	False	False	False	False	False
roughr	ness_scale	30 000.0	30 000.0	20 000.0	20 000.0	12 000.0	12 000.0	12 000.0	12 000.0	12 000.0
shelf_dep smooth_bvfre	oth_cutoff	160.0	160.0	160.0	160.0	-1000.0	-1000.0	-1000.0	-1000.0	-1000.0
	th_rho_n2						True True			
S	peed_min						0.005			
tidal_diss_			_	_			0.333 33	_	_	_
tide_speed_data_ use_drag_d		True True	True True	True True	True True	True True	True True	True True	True True	True True
use_arag_a use_leewave_d		irue	irue	irue	ilue	irue	False	irue	ITue	irue
use_legacy		True				False	False	False	False	False
	s_module	True	True	True	True	True	True	True	True	True
use_wave_d <mark>vel_micor</mark>		True	True	True	True	True	True 0.2	True	True	True
wave_diffusivity_n							True			
wave_energy.		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
&ocean_vert_util_nml							False			
debug_this_module	2_smooth						1			
	ri_smooth						1			
	mooth_n2						True			

Group (continued)	Variable	original/ GFDL ESM2M input- cut.nml	original/ MOM_SIS TOPAZ input.nml	original/ russ- accessom- mom4p1- input.nml	original/ hogg_acces- som2 1deg jra55_ryf input.nml	new/ control/ 1deg jra55_ryf/ ocean/ input.nml	original/ kiss_acces- som2 025deg jra55_ryf log- file.000000.oi	new/ control/ 025deg jra55_ryf/ ocean/ input.nml	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new/ control/ 01deg jra55_ryf/ ocean/ input.nml
	smooth_ri_number						True			
&ocean_wave_nml	damp_where_ice						True			
	debug_this_module						False			
	filter_wave_mom						True			
	use_this_module						False			
	use_tma						True			
	wavedamp						-10.0			
&ocean_xlandinser	write_a_restart	True	True	False	False	False	True	False	False	False
use_this_module						raise		raise	raise	raise
	verbose_init	True	True	True	True					
&ocean_xlandmix_r	nml use_this_module	True	True	False	False	False		False	False	False
	verbose_init	True	True	True	True					
0 ast	xlandmix_kmt	True True	True True	True	True					
&sat_vapor_pres_nr construct_table_wrt	:_liq									
	able_wrt_liq_and_ice	True	True							
	show_all_bad_values								True	
&surface_flux_nml	ncar_ocean_flux								True	
	old_dtaudv	False							-	
0.1	raoult_sat_vap								True	
&time_interp_exter debug_this_module							False			
	max_fields						100			
	max_files						40			
0	num_io_buffers						2			
&time_interp_nml	perthlike_behavior	WIDLIT (WIDIT /				False			
&topography_nml	topog_file	'INPUT/	'INPUT/							
		navy_topog-	navy_topog-							
		ra- phy.data.nc'	ra- phy.data.nc'							
&xgrid_nml	do_alltoall	priy.uata.ric	priy.uata.iiC						True	True
angriu_riiit	do_alltoally								True	True
	interp_method	'second	'second		'second	'second		'second	'second	'second
	incorp_incorou	order'	order'		order'	order'		order'	order'	order'
make_	exchange_reproduce	True	True		False	False		False	False	False
	nsubset					16		16	16	16
	xgrid_log								False	

1.2 All variables in new configs (differences highlighted)

Baisscom_ice_nml	0.15 Palse P
Chillip Chil	False
Chk.o21.fields	False False 600 600 E False 1.0 1.0 E False 1.0 5 True 1.0 1.0 True 1.0 Tru
Maintain	E False 600 E False 1.0 E False 1.0 E False 1.0 E False 1.0 E True
	600 600 False 1.0 1.0 5 5 True 1.0 1.0 5 5 True 1.0 True 1.0 True 1.0 True 1.0 True 1.0 True 1.0 True
Final Factor Fa	False 1.0 False 1.0 False 1.0 False 1.0 False 1.0 False True 1.0 False False True True True True
	Palse False 1.0 1.0 5 5 True 1.0 1.0 1.0 True True True True True True True
Seminanger	1.0 1.0 5 True 1.0 1.0 6 —0.216 True 1.0 True
Marie Mari	5 5 True 1.0 1.0 5 —0.216 True 2 True
Page 1 Page 2 Page 3 P	2 True 1.0 1.0 6 —0.216 7 True 7 True
Personance Per	1.0 5 —0.216 e True
Sign.stffx 10 10 10 10 10 10 10 1	-0.216 True True
diag-manager.nml tmet use.ioaice use.	-0.216 True True
&diag.manager.mil debug.diag.manager True TT &fins.jo.nml filisset.write single m &fims.jo.nml filisest.write single m &fms.nml clock.grain COMPONENT	e True E True
&diag_manager_nml debug_diag_manager True T &fms_io.nml fileset_write Single muti'	e True
&fms.io.nml fisest.wite Single True True<	
Kims.io.nml fileset write threading read threading read threading read threading read threading write single	Triio
kfms.nml threading.read treatments. stack.size 'muti' 'COMPONENT' 'Unit	
&fms.nml clock.grain of clock.grain of components compone	
&fms.nml clock.grain COMPONENT 155 List V. Full	
&mom_oasis3_interface_nml domains_stack_size 115200 11520 &mom_oasis3_interface_nml fields_in 'u_flux', 'v_flux', 'v_fl 'v_flux', 'v_fl 'v_flux', 'v_fl 'v_flux', 's_alt_flx', 's_alt_flx', 's_ml_ux', 's_ml_ux', 's_ml_ux', 's_ml_ux', 's_ml_ux', 's_ml_ux', 's_ml_ux', 's_ml_ux', 'l_ml_ux', 'l	
&mom_oasis3_interface_nml fields_in 'u_flux, 'v_fl 'u_flux, 'v_fl 'v_flux, 'v_fl 'v_flux, 'v_fl 'v_flux, 'v_fl 'salt_flx, 'salt_flx, 'salt_flx, 'salt_flx, 'su_fl 'mh_flux, 'mh_flux, 'mh_flux, 'mh_flux, 'r_flux, 't_flux, '	
V.flux, 'v.fl 'iprec', 'fprec', 'fp	
Salt_flx, Salt_mh_flux, mh_flux, mh_	
mh_flux, mh_flux, mh_flux, sw.flux,	
Sw.flux, 'sw.flux, 'q.flux, 'q.flux, 't.flux,	
'q_flux', 'q_fl 't_flux', 't_fl 'lw_flux', 'lw_fl 'runof,'p', 'runof,'p', 'r	
't_flux', 't_f	
'lw_flux', 'lw_fl' 'runof,'p', 'runof,'p	
'runof, 'p', 'runof, 'p', 'aicc', 'aicc', 'aicc', 'aicc', 'aicc', 'wfimelt', 'wfiform' 'wfifor	
'aicc', 'aicc', 'wfimelt', 'wfimelt', 'wfiform' 'wfifo	
kmmonin_obukhov_nmt 'wfimelt', 'wfimelt', 'wfiform' 'wfimelt', 'wfiform' 'wfimelt', 'wfiform' 'wfimelt', 'wfiform' 'wfiform' 'wfiform' 't.suf', 't.s 't.suf', 'v.s 't.suf', 'v.s 'v.suf', 'v.s' 'v.suf', 'v.s' 'v.suf', 'v.s' 'v.suf', 'v.s' <t< td=""><td></td></t<>	
kmonin_obukhov_nml 'wfiform' 'wfiform' 'wfiform' 'wfiform' 'wfiform' 'wfiform' 'k_surf, 't_s 1 csurf, 'u_surf, 'u_surf, 'v_surf,	
fields_out	
S_surf, S_su	
\tag{\tag{\tag{\tag{\tag{\tag{\tag{	
\begin{align*} \begin	
'dssldx, 'd	
'dssldy, 'frazil' 'dssldy, 'frazil' 'dssldy, 'frazil' 'dssldy, 'frazil' 'dssldy, 'frazil'	
frazil' 'frazil'	•
num_fields_in 15 num_fields_out 7 send_after_ocean_update True T send_before_ocean_update False Fa &monin_obukhov_nml neutral True T	
num_fields_out 7 send_after_ocean_update True T send_before_ocean_update False Fa &monin_obukhov_nml neutral True T	
send_after_ocean_updateTrueTsend_before_ocean_updateFalseFa&monin_obukhov_nmlneutralTrueT	5 15 7 7
send_before_ocean_updateFalseFa&monin_obukhov_nmlneutralTrueT	
&monin_obukhov_nml rrue T	
&mpp_io_nml deflate_level 5	5 5
shuffle 1	1
&ocean_adv_vel_diag_nml diag_step 4320 43	
large_cfl_value 10.0 1	
max_cfl_value 1000 10	
verbose_cfl True T	
	5 0.5
&ocean_albedo_nml ocean_albedo_option 2	2 2
) 10
barotropic_time_stepping_a True T	
barotropic_time_stepping_b False Fa	
debug_this_module False Fa	
diag_step 4320 43	
	8.0
	2 0.2
smooth_eta_diag_laplacian True T	0.2
smooth_eta_t_biharmonic False Fa	2 0.2 True
smooth_eta_t_laplacian True T	e True
smooth_pbot_t_biharmonic False Fa	True False
smooth_pbot_t_laplacian True T	e True E False E True
truncate_eta False Fa	e True False True False
use_legacy_barotropic_halos False Fa	e True False True False True

Group (continued)	Variable	new/ control/ 1deg jra55_ryf/ ocean/	new/ control/ 025deg jra55_ryf/ ocean/	new/ control/ 01deg jra55_ryf/ ocean/
		input.nml	input.nml	input.nml
	vel_micom_bih	0.01	0.01	0.01
	vel_micom_lap vel_micom_lap_diag	0.05 0.2	0.05 0.2	0.05 0.2
	verbose_truncate	True	True	True
	zero_tendency	False	False	False
&ocean_bbc_nml	bmf_implicit	True	True	True
	cdbot cdbot_hi	0.001 0.007	0.001 0.007	0.001 0.007
	cdbot_ni cdbot_roughness_length	0.007 False	0.007 False	0.007 False
	cdbot_roughness_uamp	True	True	True
	uresidual	0.05	0.05	0.05
	use_geothermal_heating	False	False	False
&ocean_bih_friction_nml	bih_friction_scheme	'general'	'general'	'general'
&ocean_bih_tracer_nml &ocean_bihcst_friction_nml	use_this_module use_this_module	False	False False	False False
&ocean_bihgen_friction_nml	bottom_5point	False True	False	False
&occan_bingen_metion_nine	eq_lat_micom	0.0	0.0	0.0
	eq_vel_micom_aniso	0.0	0.0	0.0
	eq_vel_micom_iso	0.0	0.0	0.0
	equatorial_zonal	False	False	False
	k_smag_aniso k_smag_iso	0.0 2.0	0.0 2.0	0.0 2.0
	ncar_boundary_scaling	True	True	True
	ncar_boundary_scaling_read	False	False	False
	ncar_rescale_power	2	2	2
	ncar_vconst_4	2×10^{-8}	2×10^{-8}	2×10^{-8}
	ncar_vconst_5	5	5 T::	5
	use_this_module vel_micom_aniso	True 0.0	True 0.0	True 0.0
	vel_micom_bottom	0.01	0.0	0.0
	vel_micom_iso	0.04	0.0	0.0
	visc_crit_scale	0.25	1.0	1.0
&ocean_convect_nml	use_this_module	False	False	False
&ocean_coriolis_nml	acor use_this_module	0.5 True	0.5 True	0.5 True
&ocean_density_nml	eos_Linear	False	False	False
a contraction of the contraction	eos_preteos10	True	True	True
	layer_nk	80	80	80
	neutralrho_max	1030.0	1030.0	1030.0
	neutralrho_min potrho_max	1020.0 1038.0	1020.0 1038.0	1020.0 1038.0
	potrho_min	1028.0	1038.0	1038.0
&ocean_domains_nml	max_tracers	5	5	5
&ocean_form_drag_nml	use_this_module	False	False	False
&ocean_frazil_nml	debug_this_module	False	False	False
	frazil_only_in_surface	False	False	False
	freezing_temp_preteos10 freezing_temp_simple	True False	True False	True False
	use_this_module	True	True	True
&ocean_grids_nml	debug_this_module	False	False	False
&ocean_increment_eta_nml	use_this_module	False	False	False
&ocean_increment_tracer_nml	use_this_module	False	False	False
&ocean_increment_velocity_nml	use_this_module	False	False	False
&ocean_lap_friction_nml &ocean_lap_tracer_nml	lap_friction_scheme use_this_module	'general' False	'general' False	'general' False
&ocean_lapcst_friction_nml	use_this_module	False	False	False
&ocean_lapgen_friction_nml	bottom_5point	True	ratsc	ruisc
	k_smag_aniso	0.0		
	k_smag_iso	0.0		
	restrict_polar_visc	True		
	restrict_polar_visc_lat restrict_polar_visc_ratio	60.0 0.35		
	use_this_module	True	False	False
	vel_micom_iso	0.1	. 3100	. 4.50
	viscosity_ncar	False		
	viscosity_scale_by_rossby	True		
Pagan mindanmalana mal	viscosity_scale_by_rossby_power	4.0		
&ocean_mixdownslope_nml	debug_this_module	False		
	mixdownslope_mask_gfdl mixdownslope_npts	False 4		
	read_mixdownslope_nask	False		
	use_this_module	True	False	False
&ocean_model_nml	baroclinic_split	1	1	1

Variable	new/ control/ 1deg jra55_ryf/	new/ control/ 025deg jra55_ryf/	new/ control/ 01deg jra55_ryf/
		•	ocean/ input.nml
barotropic_split	80	80	80
cmip_units	True	True	True
			False 150
			10, 15
layout	16, 15	48, 40	80,75
	1		1
•			'twolevel' 'zstar'
			False
use_rayleigh_damp_table	True	True	True
use_this_module	True	True	True
			False
			False False
use_nphysicsc	True	False	False
use_this_module	True	False	False
agm	600.0	100.0	100.0
agm_closure			True
			True 0.004
agm_closure_eady_ave_mixed	True	0.00	0.007
agm_closure_eady_cap	True		
-	True		
	True		
agm_closure_length	50 000.0	50 000.0	50 000.0
	False	False	False
			False
			False 2000.0
agm_closure_max	600.0	600.0	600.0
agm_closure_min	50.0	100.0	100.0
agm_closure_scaling			0.07
		100.0	100.0
agm_smooth_time	False		
aredi	600.0	600.0	600.0
			False
			False False
drhodz_smooth_vert	False	False	False
nphysics_util_zero_init	True		
			100 000.0
			15 000.0 False
			0.0
use_this_module	False	False	False
use_this_module	False	False	False
	False		
do_gm_skewsion	True		
neutral_eddy_depth	True		
neutral_physics_limit	True		
number_bc_modes	2		
tmask_neutral_on	True		
turb_blayer_min	50.0		
use_this_module	True	False	False
	False	False	False
debug_this_module	False	False	False
	barotropic.split cmip.units debug dt.ocean jo.layout layout surface.height.split time.tendency vertical.coordinate rayleigh.damp.exp.from.bottom use.rayleigh.damp.table use.nphysicsa use.nphysicsa use.nphysicsa use.physicsa use.physicsa use.physicsa use.physicsa use.physicsa use.physicsa use.physicsa use.physicsa use.this.module agm.closure.baroclinic agm.closure.baroclinic agm.closure.baroclinic agm.closure.baroclinic agm.closure.eady.ave agm.closure.eady.ave agm.closure.eady.ave agm.closure.eady.ave agm.closure.eady.smooth.vort agm.closure.eady.smooth.vort agm.closure.eden.gamma agm.closure.eden.gamma agm.closure.length.fixed agm.closure.length.fixed agm.closure.length.fixed agm.closure.length.fixed agm.closure.length.fixed agm.closure.length.fixed agm.closure.lower.depth agm.closure.epth agm.closure.min agm.closure.scaling agm.closure.min agm.closure.min agm.closure.min agm.closure.min agm.smooth.space agm.smooth.brac drhodz.smooth.horz drhodz.smooth.horz drhodz.smooth.horz drhodz.smooth.horz drhodz.smooth.horz drhodz.smooth.horz drhodz.smooth.vert byp.sc.util.zero.init rossby.radius.min tracer.mix.micom vel.micom use.this.module	barotropic.split 80 camp_mints True debug False debug Git ocean 3600 io.ajaout 4,3 layout 16,15 Surface_height.split 1 time_tendency vertical_coordinate 2star rayleigh.damp_exp_from_bottom use_rayleigh.damp_table use_rayleigh.damp_table use_rayleigh.damp_table use_rayleigh.damp_table use_rayleigh.damp_table use_rayleigh.damp_table use_rayleigh.damp_table use_rayleigh.damp_table use_rayleigh.damp_table rure debug_this_module use_physicss False use_nphysics False use_nphysics False use_nphysics True agm_closure_brootlinic True agm_closure_brootlinic True agm_closure_brootlinic True agm_closure_eady_scap True agm_closure_eady_bcap True agm_smooth_broot agm_closure_eady_bcap True agm_smo	10 10 10 10 10 10 10

Group (continued)	Variable	new/ control/ 1deg jra55_ryf/ ocean/ input.nml	new/ control/ 025deg jra55_ryf/ ocean/ input.nml	new/ control/ 01deg jra55_ryf/ ocean/ input.nml
	overexch_npts	4	4	4
	overexch_weight_far	False	False	False
	overflow_umax use_this_module	5.0 False	5.0 False	5.0 False
&ocean_overflow_nml	use_this_module	False	False	False
&ocean_overflow_ofp_nml	use_this_module	False	False	False
&ocean_polar_filter_nml	use_this_module	False	False	False
&ocean_pressure_nml	zero_pressure_force	False	False	False
&ocean_rivermix_nml	debug_this_module river_diffuse_salt	False True	False True	False True
	river_diffuse_temp	True	True	True
	river_diffusion_thickness	0.0	0.0	0.0
	river_diffusivity	0.0	0.0	0.0
	river_insertion_thickness use_this_module	40.0 True	40.0 True	40.0 True
&ocean_riverspread_nml	use_this_module	False	False	False
&ocean_rough_nml	rough_scheme	'beljaars'	'beljaars'	'beljaars'
&ocean_sbc_nml	avg_sfc_temp_salt_eta	True	True	True
	avg_sfc_velocity	True	True	True
	calvingspread do_bitwise_exact_sum	False False	False False	False False
	do_bltwise_exact_sum do_flux_correction	False	False	False
	land_model_heat_fluxes	False	False	False
	max_delta_salinity_restore	0.5	0.5	0.5
	max_ice_thickness	0.0	0.0	0.0
	read_restore_mask	False False	False False	False False
	restore_mask_gfdl runoff_salinity	0.0	0.0	0.0
	salt_correction_scale	0.0	0.0	0.0
	salt_restore_as_salt_flux	True	True	True
	salt_restore_tscale	60.0	60.0	60.0
	salt_restore_under_ice	True —10.0	True —10.0	True —10.0
	temp_restore_tscale use_full_patm_for_sea_level	— 10.0 False	— 10.0 False	- 10.0 False
	use_waterflux	True	True	True
	zero_heat_fluxes	False	False	False
	zero_net_salt_correction	False	False	False
	zero_net_salt_restore zero_net_water_correction	True False	True False	True False
	zero_net_water_couple_restore	True	True	True
	zero_net_water_coupler	True	True	True
	zero_net_water_restore	True	True	True
	zero_surface_stress	False	False	False
&ocean_shortwave_csiro_nml	zero_water_fluxes use_this_module	False False	False False	False False
&ocean_shortwave_csiro_nint &ocean_shortwave_gfdl_nml	debug_this_module	False	False	False
Woccum_Shortwave_grate_mint	enforce_sw_frac	True	True	True
	optics_manizza	True	True	True
	optics_morel_antoine	False	False	False
	read_chl use_this_module	True True	True True	True True
	use_tnis_module zmax_pen	300.0	300.0	300.0
&ocean_shortwave_jerlov_nml	use_this_module	False	False	False
&ocean_shortwave_nml	use_shortwave_csiro	False	False	False
	use_shortwave_gfdl	True	True	True
	use_shortwave_jerlov	False	False	False
&ocean_sigma_transport_nml	use_this_module use_this_module	True False	True False	True False
&ocean_solo_nml	calendar	'NOLEAP'	'NOLEAP'	'NOLEAP'
	date_init	1, 1, 1, 0, 0, 0	1, 1, 1, 0, 0, 0	1, 1, 1, 0, 0, 0
	days	7.000	31	30
	dt_cpld hours	3600 0	1200 0	600
	minutes	0	0	0
	months	0	0	0
	seconds	0	0	0
		2	0	0
	years			
&ocean_sponges_eta_nml	use_this_module	False	False	False
&ocean_sponges_tracer_nml	use_this_module use_this_module	False False	False False	False
&ocean_sponges_tracer_nml &ocean_sponges_velocity_nml	use_this_module use_this_module use_this_module	False False False	False False False	False False
&ocean_sponges_tracer_nml	use_this_module use_this_module	False False	False False	False

Group (continued)	Variable	new/ control/ 1deg jra55_ryf/ ocean/ input.nml	new/ control/ 025deg jra55_ryf/ ocean/ input.nml	new/ control/ 01deg jra55_ryf/ ocean/ input.nml
	front_length_deform_radius	True	True	True
	limit_psi limit_psi_velocity_scale	True 0.5	True 0.5	True 0.5
	min_kblt	4	4	4
	smooth_advect_transport	True	True	True
	smooth_advect_transport_num	4	4	4
	smooth_hblt	False	False	False
	smooth_psi	True 3	True	True
	smooth_psi_num submeso_advect_flux	False	3 False	3 False
	submeso_advect_limit	True	True	True
	submeso_advect_upwind	True	True	True
	submeso_advect_zero_bdy	True	True	True
	submeso_diffusion	False	False	False
	submeso_diffusion_biharmonic	True	True	True
	submeso_diffusion_scale	10.0	10.0	10.0
	submeso_skew_flux	True	True	True
	use_hblt_equal_mld use_psi_legacy	True False	True False	True False
	use_this_module	True	True	True
&ocean_tempsalt_nml	debug_this_module	False	False	False
	pottemp_2nd_iteration	True	True	True
	pottemp_equal_contemp	True	True	True
	s_max	70.0	70.0	70.0
	s_max_limit	42.0	42.0	42.0
	s_min	0.0	0.0	0.0
	s_min_limit	2.0	2.0	2.0
	t_max	55.0	55.0 32.0	55.0 32.0
	t_max_limit t_min	32.0 — 20.0	-20.0	- 20.0
	t_min_limit	-20.0 -5.0	-20.0 -5.0	-20.0 -5.0
	temperature_variable	'potential	'potential	'potential
	temperature=randote	temp'	temp'	temp'
&ocean_thickness_nml	debug_this_module	False	False	False
	debug_this_module_detail	False	False	False
	rescale_mass_to_get_ht_mod	False	False	False
	thickness_method	'energetic'	'energetic'	'energetic'
&ocean_tracer_advect_nml	debug_this_module	False	False	False
Second tracer dies and	read_basin_mask	False 4320	False 4320	False 576
&ocean_tracer_diag_nml	<mark>diag_step</mark> do_bitwise_exact_sum	False	False	False
	tracer_conserve_days	30.0	30.0	30.0
&ocean_tracer_nml	age_tracer_max_init	0.0	0.0	0.0
West and the second sec	debug_this_module	False	False	False
	frazil_heating_after_vphysics	True	True	True
	frazil_heating_before_vphysics	False	False	False
	limit_age_tracer	True	True	True
	remap_depth_to_s_init	False	False	False
	use_tempsalt_check_range	True	True	True
	zero_tendency zero_tracer_source	False False	False False	False False
&ocean_velocity_diag_nml	debug_this_module	False	False	False
account retoury and gamme	debug_triis_inodute diag_step	4320	4320	576
	energy_diag_step	4320	4320	5760
	large_cfl_value	10.0	10.0	10.0
	max_cfl_value	100.0	100.0	100.0
&ocean_velocity_nml	adams_bashforth_third	True	True	True
	max_cgint	1.0	1.0	1.0
	truncate_velocity	False	False	False
	truncate_velocity_value	2.0 True	2.0	2.0 Truo
	truncate_verbose	True	True False	True
	zero_tendency zero_tendency_explicit_a	False False	False	False False
	zero_tendency_explicit_b	False	False	False
	zero_tendency_implicit	False	False	False
&ocean_vert_kpp_iow_nml	use_this_module	False	False	False
&ocean_vert_kpp_mom4p1_nml	diff_cbt_iw	0.0	0.0	0.0
	double_diffusion	True	True	True
	kbl_standard_method	False	False	False
	ricr	0.3	0.3	0.3
	smooth_blmc	False	False	False
	smooth_ri_kmax_eq_kmu	True	True	True
	use_this_module	True	True	True

Group (continued)	Variable	new/ control/ 1deg jra55_ryf/ ocean/ input.nml	new/ control/ 025deg jra55_ryf/ ocean/ input.nml	new/ control/ 01deg jra55_ryf/ ocean/ input.nml
	visc_cbu_iw	0.0	0.0	0.0
&ocean_vert_mix_nml	aidif	1.0	1.0	1.0
COCCUI_YETEIMA_IMIC	bryan_lewis_diffusivity	False	False	False
	bryan_lewis_lat_depend	False	False	False
	hwf_diffusivity	False	False	False
	hwf_min_diffusivity	2×10^{-6}	2×10^{-6}	2×10^{-6}
	hwf_n0_2omega	20.0	20.0	20.0
	use_diff_cbt_table	False	False	False
	vert_diff_back_via_max	True	True	True
	vert_mix_scheme	'kpp mom4p1'	'kpp mom4p1'	'kpp mom4p1'
&ocean_vert_tidal_nml	background_diffusivity	0.0	0.0	0.0
	background_viscosity	0.0001	0.0001	0.0001
	decay_scale	500.0	500.0	500.0
	drag_dissipation_use_cdbot	True	True	True
	drhodz_min	$1 imes 10^{-10}$	$1 imes 10^{-10}$	$1 imes 10^{-10}$
	fixed_wave_dissipation	False	False	False
	max_wave_diffusivity	0.01	0.01	0.01
	mixing_efficiency_n2depend	True	True	True
	read_roughness	True	True	True
	read_tide_speed	True	True	True
	read_wave_dissipation	False	False	False
	reading_roughness_amp	True	True	True
	reading_roughness_length	False	False	False
	roughness_scale	12 000.0	12 000.0	12 000.0
	shelf_depth_cutoff	-1000.0	-1000.0	-1000.0
	tide_speed_data_on_t_grid	True	True	True
	use_drag_dissipation	True	True	True
	use_legacy_methods	False	False	False
	use_this_module use_wave_dissipation	True True	True True	True True
	wave_energy_flux_max	0.1	0.1	0.1
&ocean_xlandinsert_nml	use_this_module	False	False	False
&ocean_xlandmix_nml	use_this_module	False	False	False
&xgrid_nml	do_alltoall	1 0136	1 0136	True
unginu_iiiit	do_attoatt do_atltoatly			True
	interp_method	'second	'second	'second
	interp_metriou	order'	order'	order'
	make_exchange_reproduce	False	False	False
	nsubset	16	16	16

1.3 All variables in new 1/10 deg config (differences highlighted)

Originals are from a fresh git clone, 2017-11-18.

Group	Variable	original/ control/ 01deg jra55_ryf/ ocean/ input.nml	new/ control/ 01deg jra55_ryf/ ocean/ input.nml
&auscom_ice_nml	aice_cutoff	0.15	0.15
	chk_i2o_fields	False	False
	chk_o2i_fields	False	False
	do_ice_once	False	False
	dt_cpl	150 Falso	600 Falso
	fixmeltt frazil_factor	False 1.0	False 1.0
	iceform_adj_salt	False	False
	icemlt_factor	1.0	1.0
	kmxice	5	5
	pop_icediag	True	True
	sign_stflx	1.0	1.0
	tmelt	-0.216	-0.216
	use_ioaice	True	True
&diag_manager_nml	debug_diag_manager		True
	issue_oor_warnings	False	True
	max_axes	300	
	max_files	1000	
	max_input_fields	700	
	max_num_axis_sets	40	
	max_output_fields	700	
&fms_io_nml	checksum_required	False	
	fileset_write	'multi'	'multi'
	max_files_r	700	
	max_files_w	700	'multi'
	threading_read	'multi'	'multi'
&fms_nml	threading_write	'multi' 'LOOP'	'multi' 'COMPONENT'
&IIIIS_IIIII	<mark>clock_grain</mark> domains_stack_size	115200	115200
	print_memory_usage	False	113200
&generic_tracer_nml	do_generic_cfc	False	
Wychene Ludder Limit	do_generic_topaz	False	
	do_generic_tracer	False	
&mom_oasis3_interface_nml	fields_in	'u_flux',	'u_flux',
		'v_flux', 'lprec', 'fprec', 'salt_flx', 'mh_flux', 'sw_flux', 'q_flux', 't_flux', 'lw_flux', 'runof', 'p',	'v_flux', 'lprec', 'fprec', 'salt_flx', 'mh_flux', 'sw_flux', 'q_flux', 't_flux', 'lw_flux', 'runof', 'p',
		'aice', 'wfimelt', 'wfiform'	'aice', 'wfimelt', 'wfiform'
	fields_out	't_surf, 's_surf, 'u_surf, 'v_surf, 'dssldx', 'dssldy', 'frazil'	't_surf', 's_surf', 'u_surf', 'v_surf', 'dssldx', 'dssldy', 'frazil'
	num_fields_in	15	15
	num_fields_out	7	7
	send_after_ocean_update	True	True
	send_before_ocean_update	False	False
&monin_obukhov_nml	neutral	True	True
&mpp_io_nml	deflate_level	5	5
&ocean_adv_vel_diag_nml	shuffle	4320	1 576
QUEEdit_auv_vet_ulay_fillit	diag_step large_cfl_value		
	targe_ctt_value max_cfl_value	10.0 100.0	10.0 100.0
	verbose_cfl	True	True
&ocean_advection_velocity_nml	max_advection_velocity	0.2	0.5
&ocean_albedo_nml	ocean_albedo_option	2	2
&ocean_barotropic_nml	barotropic_halo	10	10
woccun_burotropic_nint	barotropic_time_stepping_a	True	True
	barotropic_time_stepping_b	False	False

ol/ control/ g 01deg yf/ jra55_ryf/ an/ ocean/	original/ control/ 01deg jra55_ryf/ ocean/	Variable	Group (continued)
	input.nml False	debug_this_module	
	4320	diag_step	
	8.0	eta_max	
	0.2	frac_crit_cell_height	
	0.2 True	pred_corr_gamma smooth_eta_diag_laplacian	
	False	smooth_eta_t_biharmonic	
	True	smooth_eta_t_laplacian	
	False	smooth_pbot_t_biharmonic	
	True	smooth_pbot_t_laplacian	
	False False	truncate_eta use_legacy_barotropic_halos	
	0.01	use_tegacy_balotropic_riatos vel_micom_bih	
	0.05	vel_micom_lap	
	0.5	vel_micom_lap_diag	
	True	verbose_truncate	
	False	zero_tendency	
	True 0.001	bmf_implicit cdbot	&ocean_bbc_nml
	0.001	cdbot_hi	
	False	cdbot_roughness_length	
	True	cdbot_roughness_uamp	
	0.05	uresidual	
	False	use_geothermal_heating bih_friction_scheme	&ocean_bih_friction_nml
	'general' True	tracer_mix_micom	&ocean_bih_tracer_nml
	False	use_this_module	doccur_on_cracer_min
	0.001	vel_micom	
	False	use_this_module	&ocean_bihcst_friction_nml
	False	bottom_5point	&ocean_bihgen_friction_nml
0.0	0.0 0.0	eq_lat_micom	
	0.0	eq_vel_micom_aniso eq_vel_micom_iso	
	False	equatorial_zonal	
	0.0	k_smag_aniso	
	_2.0	k_smag_iso	
	True	ncar_boundary_scaling	
rue False 2	True 2	<mark>ncar_boundary_scaling_read</mark> ncar_rescale_power	
	2×10^{-8}	ncar_vconst_4	
5 5		ncar_vconst_5	
	True	use_this_module	
	0.0	vel_micom_aniso	
	0.0 0.0	vel_micom_bottom vel_micom_iso	
	1.0	visc_crit_scale	
	True	convect_full_scalar	&ocean_convect_nml
	False	convect_full_vector	
	False	use_this_module	
	0.5 True	acor use_this_module	&ocean_coriolis_nml
	True False	use_tnis_module eos_linear	&ocean_density_nml
	True	eos_preteos10	accommodification and a second accommodification accommodification and a second accommodification accommodification and a second accommodification accommodificatio
80 80	80	layer_nk	
	1038.0	neutralrho_max	
	1028.0	neutralrho_min	
	1038.0 1028.0	potrho_max potrho_min	
5 5		max_tracers	&ocean_domains_nml
	False	use_this_module	&ocean_form_drag_nml
lse False	False	debug_this_module	&ocean_frazil_nml
	False	frazil_only_in_surface	
	True False	freezing_temp_preteos10	
	True	freezing_temp_simple use_this_module	
	False	debug_this_module	&ocean_grids_nml
	False	use_this_module	&ocean_increment_eta_nml
I	False	use_this_module	&ocean_increment_tracer_nml
lse False	False	use_this_module	&ocean_increment_velocity_nml
lse False ral' 'general'	False 'general'	lap_friction_scheme	&ocean_increment_velocity_nml &ocean_lap_friction_nml
lse False ral' 'general' lse False	False		&ocean_increment_velocity_nml

Group (continued)	Variable	original/ control/ 01deg jra55_ryf/ ocean/	new/ control/ 01deg jra55_ryf/ ocean/
	use_this_module	input.nml False	input.nml False
&ocean_mixdownslope_nml	debug_this_module	False	
&ocean_model_nml	use_this_module baroclinic_split	False 1	False 1
xocean_modet_mint	barotropic_split	80	80
	cmip_units		True
	debug	False	False
	dt_ocean io_layout	150 10, 15	150 10, 15
	layout	80,75	80, 75
	surface_height_split	1	1
	time_tendency vertical_coordinate	'twolevel' 'zstar'	'twolevel' 'zstar'
&ocean_momentum_source_nml	rayleigh_damp_exp_from_bottom	False	False
	use_rayleigh_damp_table	True	True
	use_this_module	True	True
&ocean_nphysics_nml	debug_this_module	False	False
	use_nphysicsa use_nphysicsb	False False	False False
	use_nphysicsc use_nphysicsc	False	False
	use_this_module	False	False
&ocean_nphysics_util_nml	agm	100.0	100.0
	agm_closure agm_closure_baroclinic	True	True True
	agm_closure_baroclinic agm_closure_buoy_freq	True 0.004	0.004
	agm_closure_length	50 000.0	50 000.0
	agm_closure_length_bczone	False	False
	agm_closure_length_fixed	False	False
	agm_closure_length_rossby agm_closure_lower_depth	False 2000.0	False 2000.0
	agm_closure_max	600.0	600.0
	agm_closure_min	100.0	100.0
	agm_closure_scaling	0.07	0.07
	agm_closure_upper_depth aredi	100.0 600.0	100.0 600.0
	aredi_equal_agm	False	False
	drhodz_mom4p1	False	False
	drhodz_smooth_horz	False	False
	drhodz_smooth_vert	False 100 000.0	False 100 000.0
	rossby_radius_max rossby_radius_min	15 000.0	15 000.0
	smax	0.002	
	swidth	0.002	
	tracer_mix_micom	False	False
&ocean_nphysicsa_nml	vel_micom use_this_module	0.0 False	0.0 False
&ocean_nphysicsb_nml	use_this_module	False	False
&ocean_nphysicsc_nml	use_this_module	False	False
&ocean_operators_nml	use_legacy_div_ud	False	False
&ocean_overexchange_nml	debug_this_module overexch_npts	False 4	False 4
	overexch_npts overexch_weight_far	False	False
	overflow_umax	5.0	5.0
	use_this_module	False	False
&ocean_overflow_nml	debug_this_module	False	Fals-
&ocean_overflow_ofp_nml	use_this_module debug_this_module	False False	False
account of the state of the sta	diag_step	5760	
	do_entrainment_para_ofp	False	
	do_mass_ofp	True	
	frac_exchange_src max_vol_trans_ofp	1.0 10 000 000.0	
	use_this_module	False	False
&ocean_polar_filter_nml	use_this_module	False	False
&ocean_pressure_nml	zero_pressure_force	False	False
v	debug_this_module river_diffuse_salt	False True	False True
&ocean_rivermix_nml		True	True
xocean_rivermix_nmt	river diffuse temp		
xocean_rivermix_nml	river_diffuse_temp river_diffusion_thickness	0.0	
xocean_rivermix_nmi	river_diffusion_thickness river_diffusivity	0.0 0.0	0.0 0.0
xocean_rivermix_nmi	river_diffusion_thickness	0.0	0.0 0.0 40.0 True

Group (continued)	Variable	original/ control/ 01deg jra55_ryf/ ocean/ input.nml	new/ control/ 01deg jra55_ryf/ ocean/ input.nml
	use_this_module	True	False
&ocean_rough_nml	rough_scheme	'beljaars'	'beljaars'
&ocean_sbc_nml	avg_sfc_temp_salt_eta avg_sfc_velocity	True True	True True
	calvingspread	False	False
	do_bitwise_exact_sum	False	False
	do_flux_correction	False	False
	land_model_heat_fluxes	False	False
	max_delta_salinity_restore	0.5	0.5
	max_ice_thickness	8.0	0.0
	read_restore_mask restore_mask_gfdl	False False	False False
	runoff_salinity	0.0	0.0
	salt_correction_scale	0.0	0.0
	salt_restore_as_salt_flux	True	True
	salt_restore_tscale	60.0	60.0
	salt_restore_under_ice	True	True
	temp_restore_tscale	-10.0 Falsa	-10.0
	use_full_patm_for_sea_level	False True	False
	use_waterflux zero_heat_fluxes	True False	True False
	zero_net_salt_correction	False	False
	zero_net_salt_restore	True	True
	zero_net_water_correction	False	False
	zero_net_water_couple_restore	True	True
	zero_net_water_coupler	True	True
	zero_net_water_restore	True	True
	zero_surface_stress	False	False
Paccan charturate scire and	zero_water_fluxes	False	False
&ocean_shortwave_csiro_nml &ocean_shortwave_gfdl_nml	use_this_module debug_this_module	False False	False False
&ocean_snortwave_grut_nint	enforce_sw_frac	True	True
	optics_manizza	True	True
	optics_morel_antoine	False	False
	read_chl	True	True
	use_this_module	True	True
	zmax_pen	300.0	300.0
&ocean_shortwave_jerlov_nml	use_this_module	False	False
&ocean_shortwave_nml	use_shortwave_csiro	False	False
	use_shortwave_igrlov	True False	True False
	use_snortwave_jeriov use_this_module	True	True
&ocean_sigma_transport_nml	sigma_advection_on	False	
	sigma_advection_sgs_only	False	
	sigma_diffusion_on	True	
	sigma_diffusivity_ratio	1×10^{-6}	
	sigma_just_in_bottom_cell	True	
	sigma_umax	0.01	
	smooth_sigma_thickness smooth_sigma_velocity	True True	
	smooth_velmicom	0.2	
	thickness_sigma_layer	100.0	
	thickness_sigma_max	100.0	
	thickness_sigma_min	100.0	
	tmask_sigma_on	False	
	tracer_mix_micom	True	.
	use_this_module	False	False
&ocean_solo_nml	vel_micom calendar	0.05 'NOLEAP'	'NOLEAP'
COCCUIT_SOLU_IIIIL	cateridal date_init	1, 1, 1, 0, 0, 0	1, 1, 1, 0, 0, 0
	days	30	30
	dt_cpld	150	600
	hours	0	0
	minutes	0	0
	months	0	0
	seconds	0	0
&ocean sponges eta pml	years use this module	O Ealso	0 False
&ocean_sponges_eta_nml &ocean_sponges_tracer_nml	use_this_module damp_coeff_3d	False False	False
woccun_ppungco_tracer_nint	use_this_module	False	False
		iuisc	iuisc
&ocean_sponges_velocity_nml		False	False
&ocean_sponges_velocity_nml &ocean_submesoscale_nml	use_this_module coefficient_ce	False 0.05	False 0.05

	Group (continued)	Variable	original/ control/ 01deg jra55_ryf/ ocean/ input.nml	new/ control/ 01deg jra55_ryf/ ocean/ input.nml
Prof. Prof		front_length_const		
		front_length_deform_radius		
Same same same same same same same same s				
			False	False
Submess anders zero bird False F			True	True
Pate				
Submess different bill brain state True Submess different bill brain state True True Submess different bill brain True		•		
Submers skew flux Tue Tiue Ti				
No. 1991 Part Par				
Page				
Secon_tempsalt_mmil Secon_tempsalt_mmil False False Secon_tempsalt_mmil Secon_tempsalt_mmil True False Secon_tempsalt_mmil Secon_tempsalt_mmil True				
Pottern, pequal, robinering, counts of the pottern, equal,		use_this_module	True	
	&ocean_tempsalt_nml			
S.max.lmit S.m			True	True
S. max Limit 47,0 47,0 57,0				
Samini, limit				
Between thickness.ml temperature variable to the time of t				
& ocean.thickness.nml debug.this.module. detail. debug.this.module. detail. rescale.mass.to.get.ht.mod rescale.mass.to.get.ht.get.get.get.get.get.get.get.get.get.ge				
Socean.thickness.nml debug.this.module_detail debug.this.module_detail rescale_mass.to_get.ht.mod thickness.det.min_init 20 False False False False Engretic energetic en		temperature_variable	'potential	'potential
Page	&ocean_thickness_nml			
Accean.tracer.advect.mml thistoness.drt min. Init. 10.0 thistoness.drt min. Init. 10.0 thistoness.method energetic' energetic' energetic' & ocean.tracer.advect.mml debug.this.module read basin.mask False False False read basin.mask False False False (ab. phis.module false tracer.conserve.days) 575 576				
				i alse
&ccean_tracer_advect_nml thickness_method energetic' energetic' &ccean_tracer_advect_nml debug_this_module read_basin_mask False False False False False False False Go. bit bits sexact sum False False Go. bit bits sexact sum False False Tacer_conserve_days \$756 \$756 \$756 \$756 \$756 \$756 \$756 \$756 \$756 \$756 \$756 \$750				
& ocean_tracer_diag.nml feat_basin_mask diag.step 4520 bits False do		thickness_method		'energetic'
&ocean_tracer_diag_nml diag_step do_bitwise_exact_sum 4320 False False 576 False &ocean_tracer_nms tracer_conserve_days 300 300 &ocean_tracer_nmxl 0 00 00 debug_this_module frazil_heating_after_vphysics False F	&ocean_tracer_advect_nml			
&ocean_tracer_nml tracer_conserve_days 30.0 30.0 &ocean_tracer_nml age_tracer_max_init 0.0 0.0 debug_this_module False False False False False False True <	&ocean_tracer_diag_nml			
&ocean_tracer_nml age_tracer_max_init debugthis_module false false false fasice fazice. In the properties of the properties facility and the properties facility and the properties false false fazice. It imit_age_tracer for the properties false false limit_age_tracer for the properties false fa				
Rebug.this.module False False False Fazit.heating.after.vphysics True True Fazit.heating.after.vphysics False False Fazit.heating.before.vphysics False False False Limit.age_tracer True	9			
frazil.heating_after_vphysics True True frazil.heating_before_vphysics False Fals	&ocean_tracer_nml			
False Imit.age.tracer True Tr				
Palse Pals				
Use_tempsalt_check_range True True 2ero_tendency False False 2ero_tendency False False 2ero_tendency False False 3ero_tendency Seplicit_a Seplicit_a Seplicit_a Seplicit_a Seplicit_a 3ero_tendency Seplicit_a				
&ccean_velocity_diag_nml zero_tracer_source False False &ccean_velocity_diag_nml debug_this_module False False diag_step 4320 576 energy_diag_step 5760 5760 b large_cfl_value 100 100 max_cfl_value 1000 1000 &ccean_velocity_nml adams_bashforth_third True True max_cgint 1.0 1.0 truncate_velocity False False truncate_velocity_value 2.0 2.0 truncate_velocity_value 2.0 2.0 truncate_verbose True True zero_tendency_explicit_a False False zero_tendency_explicit_a False False zero_tendency_explicit_b False False &ccean_vert_kpp_iow_nml use_this_module False False &ccean_vert_kpp_mom4p1_nml diff_cbt_iw 0.0 0.0 double_diffusion True True kbl_standard_method		use_tempsalt_check_range	True	True
& ocean_velocity_diag_nmldebug_this_module diag_step energy_diag_step large_cfl_valueFalse 4320 576& cean_velocity_nmllarge_cfl_value max_cfl_value max_cgint truncate_velocity_nml100 10		zero_tendency		
diag_step 4320 576 energy_diag_step 5760 5760 large_cfl_value 100 100 max_cfl_value 1000 1000 max_cfl_value 1000 1000 max_cfl_value 1000 1000 max_cgint 1.0 1.0 max_cgint 1.0 1.0 truncate_velocity False False truncate_velocity_value 2.0 2.0 truncate_verbose True True truncate_verbose True True zero_tendency_explicit_a False False zero_tendency_explicit_a False False zero_tendency_explicit_b False False diff_cbt_iw 600 000 double_diffusion True True truncate_vert_kpp_mom4p1_nml 6 double_diffusion True True truncate_vert_kpl_sion True Truncate_vert_kpl_sion True Truncate_vert_kpl_sion True Truncate_vert_kpl_sion True Truncate_vert_kpl_sion Truncate_				
energy_diag_step 5760 5760 100 1	&ocean_velocity_diag_nml			
darge_cfl_value 100 100 & ocean_velocity_nml adams_bashforth_third True True max_cgint 1.0 1.0 truncate_velocity False False truncate_velocity_value 2.0 2.0 truncate_verbose True True zero_tendency_explicit_a False False zero_tendency_explicit_b False False zero_tendency_implicit False False &ocean_vert_kpp_iow_nml use_this_module False False &ocean_vert_kpp_mom4p1_nml diff_cbt_iw 0.0 0.0 double_diffusion True True kbl_standard_method False False				
&ocean_velocity_nml max_cfl_value 100.0 100.0 &ocean_velocity_nml adams_bashforth_third True True max_cgint 1.0 1.0 truncate_velocity False False truncate_velocity_value 2.0 2.0 truncate_verbose True True zero_tendency_explicit_a False False zero_tendency_explicit_a False False zero_tendency_explicit_b False False zero_tendency_implicit False False &ocean_vert_kpp_iow_nml use_this_module False False &ocean_vert_kpp_mom4p1_nml diff_cbt_iw 0.0 0.0 double_diffusion True True kbl_standard_method False False				
&ocean_velocity_nml adams_bashforth_third max_cgint True True max_cgint 1.0 1.0 truncate_velocity False False truncate_velocity_value 2.0 2.0 truncate_verbose True True zero_tendency False False zero_tendency_explicit_a False False zero_tendency_explicit_b False False zero_tendency_implicit False False &ocean_vert_kpp_iow_nml use_this_module False False &ocean_vert_kpp_mom4p1_nml diff_cbt_iw 0.0 0.0 double_diffusion True True kbl_standard_method False False				
max_cgint 1.0 1.0 truncate_velocity False False truncate_velocity_value 2.0 2.0 truncate_verbose True True zero_tendency False False zero_tendency_explicit_a False False zero_tendency_explicit_b False False &ocean_vert_kpp_iow_nml use_this_module False False &ocean_vert_kpp_mom4p1_nml diff_cbt_iw 0.0 0.0 double_diffusion True True kbl_standard_method False False	&ocean_velocity_nml			
truncate_velocity False False truncate_velocity_value 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0	,			
truncate_verbose True True zero_tendency False False zero_tendency_explicit_a False False zero_tendency_explicit_b False False zero_tendency_explicit_b False False zero_tendency_implicit False False &ocean_vert_kpp_iow_nml use_this_module False False &ocean_vert_kpp_mom4p1_nml diff_cbt_iw 0.0 0.0 double_diffusion True True kbl_standard_method False False		truncate_velocity	False	False
zero_tendencyFalseFalsezero_tendency_explicit_aFalseFalsezero_tendency_explicit_bFalseFalsezero_tendency_explicit_bFalseFalsezero_tendency_implicitFalseFalse&ocean_vert_kpp_iow_nmluse_this_moduleFalseFalse&ocean_vert_kpp_mom4p1_nmldiff_cbt_iw0.00.0double_diffusionTrueTruekbl_standard_methodFalseFalse				
zero_tendency_explicit_a False False zero_tendency_explicit_b False False zero_tendency_explicit_b False False zero_tendency_implicit False False &ocean_vert_kpp_iow_nml use_this_module False False &ocean_vert_kpp_mom4p1_nml diff_cbt_iw 0.0 0.0 double_diffusion True True kbl_standard_method False False				
zero_tendency_explicit_bFalseFalsezero_tendency_implicitFalseFalse&ocean_vert_kpp_iow_nmluse_this_moduleFalseFalse&ocean_vert_kpp_mom4p1_nmldiff_cbt_iw0.00.0double_diffusionTrueTruekbl_standard_methodFalseFalse		•		
& ccean_vert_kpp_iow_nmlzero_tendency_implicitFalseFalse& ocean_vert_kpp_mom4p1_nmluse_this_moduleFalseFalse& ocean_vert_kpp_mom4p1_nmldiff_cbt_iw0.00.0double_diffusionTrueTruekbl_standard_methodFalseFalse				
&ocean_vert_kpp_iow_nml use_this_module False False &ocean_vert_kpp_mom4p1_nml diff_cbt_iw 0.0 0.0 double_diffusion True True kbl_standard_method False False				
&ocean_vert_kpp_mom4p1_nml diff_cbt_iw 0.0 0.0 double_diffusion True True kbl_standard_method False False	&ocean vert knn jow nml			
double_diffusion True True kbl_standard_method False False				
kbl_standard_method False False				
ricr 0.3 0.3			False	
		ricr	0.3	0.3

Sample S	Group (continued)	Variable	original/ control/ 01deg jra55_ryf/ ocean/ input.nml	new/ control/ 01deg jra55_ryf/ ocean/ input.nml
		smooth_blmc	False	False
& cocan.vert.mix.mml visc.du.jiw 0.0 0.0 & cocan.vert.mix.mml distiff 10 10 byan.lewis.diffusivity False False <td></td> <td></td> <td></td> <td></td>				
&ocean.vert.mix.mml boyan.lewis.idifusivity bryan.lewis.idifusivity bryan.lewis.idifus		use_this_module		
byan.lewis.diffusivity False Fal		visc_cbu_iw		
	&ocean_vert_mix_nml			
Part Part Part Part Part Part				
Monte Mont		bryan_lewis_lat_depend	False	False
New Joint New		•		
Pate			$2 imes 10^{-6}$	$2 imes 10^{-6}$
Kocean.vert.tidal.nml Vert.mik s.cheme vert.mik s.c		hwf_n0_2omega	20.0	20.0
kocean.vert.tidal.nml kopp montpolit ktopp montpolit & cocan.vert.tidal.nml background.diffusivity 00 00 & cocan.vert.tidal.nml background.viscosity 0000 0				
δοcean_vert_tidal_nml background_diffusivity background_viscosity 0.0001 0.000				
Background.viscosity 0,0001 0,000			mom4p1'	mom4p1'
decay.scale 5000 5000 drag.dissipation.use.cubbet Titue Table False	&ocean_vert_tidal_nml			
False				
max.wave.diffusivity 0.01 0.01 mixing.efficiency_n2depend True True <td></td> <td></td> <td>$1 imes 10^{-10}$</td> <td></td>			$1 imes 10^{-10}$	
mixing_efficiency_n2depend True True <th< td=""><td></td><td></td><td></td><td></td></th<>				
True				
True				
Palse Pals				
Page				
Palse				
Toughness scale 12 00000 12 0000 12 00				
Shelf_depth_cutoff -1000.0 -1000.0				
tide_speed_data_on_t_grid True True use_drag_dissipation True True use_legacy_methods False False use_this_module True True wave_energy_flux_max 0.1 0.1 &ccean_xlandnisert_mnl use_this_module False False &ccean_xlandmix_nml use_this_module False False &sat_vapor_pres_nml show_all_bad_values True &surface_flux_mml ncar_ocean_flux True &surface_flux_mml do_alltoalt True &surface_flux_mnl false True &surface_flux_mml false True &surface_flux_mnl false True &surface_flux_mnl false True &surface_flux_mnl false True &surface_flux_mnl false false &surface_flux_mnl false false &surface_flux_mnl false false &surface_flux_mnl false false &surface_flux_mnl				
kocean xlandmix.rml make_exchange_reproduce True				
Second		tide_speed_data_on_t_grid		
kocean_xlandinsert_nml use_this_module use_wave_dissipation use_this_module use_this_module ralse True True True True True True True True True D.1 Accean_xlandinsert_nml use_this_module ralse False False<				
kocean_xlandinsert_nml use_wave_dissipation wave_energy_flux_max True True & ocean_xlandinisert_nml use_this_module False False & ocean_xlandmix_nml use_this_module False False & sat_vapor_pres_nml show_all_bad_values True & surface_flux_nml ncar_ocean_flux True & xgrid_nml do_alltoall True True & do_alltoall True True interp_method 'second' 'second' order' order' order' order' order' order' make_exchange_reproduce False False nsubset 16 16				
kocean_xlandinsert_nml wave_energy_flux_max 0.1 0.1 &ocean_xlandinisert_nml use_this_module False False &cocean_xlandmix_nml use_this_module False False &sat_vapor_pres_nml show_all_bad_values True &surface_flux_nml ncar_ocean_flux True &xgrid_nml do_alltoall True True &xgrid_nml do_alltoall True True and the properties of the pro				
& ocean_xlandinsert_nml use_this_module False False & ocean_xlandmix_nml use_this_module False False & sat_vapor_pres_nml show_all_bad_values True & surface_flux_nml ncar_ocean_flux True & xgrid_nml do_alltoall True True & do_alltoall True True interp_method 'second 'second order order order make_exchange_reproduce False False nsubset 16 16				
& ocean_xlandmix_nml use_this_module False False & sat_vapor_pres_nml show_all_bad_values True & surface_flux_nml ncar_ocean_flux True & xgrid_nml do_alltoall True True & do_alltoall True True interp_method 'second' 'second' order false False False nsubset 16 16	Roccom vlandingert nml	•		
&sat_vapor_pres_nml show_all_bad_values True &surface_flux_nml ncar_ocean_flux True &xgrid_nml do_alltoall True True &xgrid_nml do_alltoallv True True interp_method 'second 'second order order order make_exchange_reproduce False False nsubset 16 16				
&surface_flux_nml ncar_ocean_flux frue True &xgrid_nml do_alltoall frue True do_alltoall frue True True interp_method 'second order' 'second order' order order' order' make_exchange_reproduce False False nsubset 16 16				ralse
kxgrid_nml faoult_sat_vap True do_alltoall True True do_alltoallv True True interp_method 'second 'second order' order' order' make_exchange_reproduce False False nsubset 16 16				
&xgrid_nml do_alltoall do_alltoall do_alltoally True True<	\(\text{SUITIBLE}_I\)\(\text{UX_IIIII}\)			
do_alltoallv True True interp_method 'second 'second 'second 'order' order' order' make_exchange_reproduce False False nsubset 16 16	&varid nml	•		True
interp_method 'second 'second order' order' make_exchange_reproduce False False nsubset 16 16	www.min.			
order order order make_exchange_reproduce False False nsubset 16 16				
make_exchange_reproduce False False rsubset 16 16		interp_method		
nsubset 16 16		make evehance considure		
		xqrid_loq	False	10

2 CICE namelists 'cice_in.nml', 'input_ice.nml', 'input_ice_gfdl.nml', 'input_ice_monin.nml'

Originals are from a fresh git clone, 2017-11-18. CICE documentation is here: http://oceans11.lanl.gov/trac/CICE/attachment/wiki/WikiStart/cicedoc.pdf?format=raw (HunkeLipscombTurnerJefferyElliott2015a-CICE5p1.pdf). Section 4.5.1 explains the meaning of '1', 'h', 'd', 'm', 'y', 'x' and their dependence on histfreq and histfreq_n. Mushy formulation (ktherm=2) was recommended by Hallberg to solve MOM problems with sea ice potentially being saltier than ocean when it has a fixed bulk salinity: https://github.com/OceansAus/access-om2/issues/56

See AK email to Petra 2017-11-15 and highlights in HunkeLipscombTurnerJefferyElliott2015a-CICE5p1.pdf TODO: check whether all ice nmls are relevant

2.1 cice_in.nml

2.1.1 All variables in new configs (differences highlighted)

	Variable	new/ control/ 1deg jra55_ryf/ ice/ cice_in.nml	new/ control/ 025deg jra55_ryf/ ice/ cice_in.nml	new/ control/ 01deg jra55_ryf/ ice/ cice_in.nml
	distribution_type	'cartesian'	'cartesian'	'cartesian'
	distribution_wght	'latitude'	'latitude'	'latitude'
	w_boundary_type	'cyclic'	'cyclic'	'cyclic'
	maskhalo_bound	True	True	True
	maskhalo_dyn	True	True	True
	maskhalo_remap	True	True	True
	nprocs	24	480	1200
r	ns_boundary_type	'tripole'	'tripole'	'tripole'
	processor_shape	'slenderX1'	'square-ice'	'square-ice'
	advection	'remap'	'remap'	'remap'
	cosw	0.96	0.96	0.96
	dragio	0.005 36	0.005 36	0.005 36
	iceruf	0.0005	0.0005	0.0005
	kdyn	1	1	1
	$krdg_partic$	1	1	1
	$krdg_redist$	1	1	1
	kstrength	1	1	1
	mu_rdg	3	3	3
	ndte	120	120	120
	revised_evp	False	False	False
	sinw	0.28	0.28	0.28
	atm_data_dir	'unknown atm_data dir'	'unknown atm_data dir'	'unknown atm_data dir'
	atm_data_format	'nc'	'nc'	'nc'
	atm_data_type	'default'	'default'	'default'
	atmbndy	'default'	'default'	'default'
	calc_strair	True	True	True
	calc_tsfc	True	True	True
	formdrag	False	False	False
	fyear_init	1	1	1
	oceanmixed_file	'unknown ocean- mixed_file'	'unknown ocean- mixed_file'	'unknown ocean- mixed_file'
	oceanmixed_ice	False	False	False
	ocn_data_dir	'unknown	'unknown	'unknown
	ocn_data_dii	ocn_data dir'	ocn_data dir'	ocn_data dir'
	ocn_data_format	'nc'	'nc'	'nc'
	precip_units	'mks'	'mks'	'mks'
	restore_ice	False	False	False
	restore_sst	False	False	False
	sss_data_type	'default'	'default'	'default'
	sst_data_type	'default'	'default'	'default'
	trestore	0	0	0
	update_ocn_f	True	True	True
	ustar_min	0.0005	0.0005	0.0005
	ycycle	1	1	1
	grid_file	'RESTART/	'RESTART/	'RESTART/
	3	grid.nc'	grid.nc'	grid.nc'
	grid_format	'nc'	'nc'	'nc'
	grid_type	'tripole'	'tripole'	'tripole'
	kcatbound	. 0	. 0	. 0

Group (continued)	Variable	new/ control/ 1deg jra55_ryf/ ice/ cice_in.nml	new/ control/ 025deg jra55_ryf/ ice/ cice_in.nml	new/ control/ 01deg jra55_ryf/ ice/ cice_in.nml
	kmt_file	'RESTART/ kmt.nc'	'RESTART/ kmt.nc'	'RESTART/ kmt.nc'
&icefields_bgc_nml	f_aero	'X'	'X'	'X'
•	f_bgc_am_ml	'x'	'x'	'x'
	f_bgc_am_sk	'x'	'x'	'x'
	f_bgc_c_sk	'X'	'X'	'x' 'x'
	f_bgc_chl_sk f_bgc_dms_sk	'x' 'x'	'x' 'x'	, X , X,
	f_bgc_dmsp_ml	, ,X,	, 'X'	, 'X'
	f_bgc_dmspd_sk	'x'	'x'	'x'
	f_bgc_dmspp_sk	'x'	'x'	'x'
	f_bgc_n_sk	'X'	'X'	'X'
	f_bgc_nit_ml f_bgc_nit_sk	'x' 'x'	'x' 'x'	'x' 'x'
	f_bgc_sil_ml	, X,	, 'X'	, ,X,
	f_bgc_sil_sk	'x'	'x'	'x'
	f_bphi	'x'	'x'	'x'
	f_btin	, X,	'x'	'X'
	f_faero_atm f_faero_ocn	'x' 'x'	'x' 'x'	'x' 'x'
	r_raero_ocri <mark>f_fbri</mark>	x 'm'	x 'm'	, x 'x'
	f_fn	'x'	'x'	'x'
	f_fn_ai	'x'	'x'	'x'
	f_fnh	'X'	'x'	'x'
	f_fnh_ai f_fno	'x' 'x'	'X' 'v'	'x' 'x'
	f_fno_ai	, x 'x'	'x' 'x'	, X 'X'
	f_fsil	'X'	'x'	'x'
	f_fsil_ai	'x'	'x'	'x'
	f_grownet	'X'	'X'	'x'
	f_hbri	'm'	'm' '~'	'χ' ''
&icefields_drag_nml	f_ppnet f_cdn_atm	'x' 'x'	'x' 'x'	'X' 'X'
Citchetas_dray_min	f_cdn_ocn	, 'X'	'x'	, X
	f_drag	'x'	'x'	'x'
&icefields_mechred_nml	f_alvl	'm'	'm'	'x'
	f_aparticn	'X'	'X'	'X'
	f_araftn <mark>f_ardg</mark>	'x' 'm'	'x' 'm'	'x' 'x'
	f_ardgn	'x'	'x'	, 'X'
	f_aredistn	'x'	'x'	'x'
	f_dardg1dt	'x'	'x'	'x'
	f_dardg1ndt f_dardg2dt	'X'	'X'	'X'
	f_dardg2ndt f_dardg2ndt	'x' 'x'	'x' 'x'	'x' 'x'
	f_dvirdgdt	,x,	'x'	'x'
	f_dvirdgndt	'x'	'x'	'x'
	f_krdgn	'x'	'x'	'x'
	f_opening	'X'	'X'	'X'
	f_vlvl f_vraftn	'm' 'x'	'm' 'x'	'x' 'x'
	f_vrdg	'm'	'm'	'x'
	f_vrdgn	'x'	'x'	'x'
0: 611	f_vredistn	'x'	'x'	'X'
&icefields_nml	f_aice f_aicen	'm' 'm'	'm' 'm'	'm' 'x'
	f_aisnap	m 'x'	'm' 'x'	x 'x'
	f_albice	'm'	'm'	'x'
	f_albpnd	'x'	'x'	'x' 'x'
	f_albsni	'm'	'm'	'x'
	<mark>f_albsno</mark> f_alidr	'm' 'x'	'm' 'x'	'x' 'x'
	f_alvdr	'X'	, x 'x'	, x 'x'
	f_angle	True	True	True
	f_anglet	True	True	True
	f_bounds	False	False	False
	<mark>f_congel</mark> f_coszen	'm' 'x'	'm' 'x'	'x' 'x'
	f_daidtd	x 'm'	x 'm'	, x 'x'
	f_daidtt	'm'	'm'	'x'
	f_divu	'm'	'm'	'x'
	f_dsnow	'x'	'X'	'x'
	f_dvidtd	'm' 'm'	'm' 'm'	'x' 'x'
	f_dvidtt	'm'	'm'	X

Group (continued) Variable	new/ control/ 1deg jra55_ryf/ ice/ cice_in.nml	new/ control/ 025deg jra55_ryf/ ice/ cice_in.nml	new/ control/ 01deg jra55_ryf/ ice/ cice_in.nml
f_dxt	True	True	True
f_dxu f_dyt	True True	True True	True True
f_dyu	True	True	True
f_evap	'x'	'x'	'x'
f_evap_ai f_fcondtop_ai	'm' 'm'	'm' 'm'	'x' 'x'
f_fcondtopn_ai	'm'	'm'	'x'
f_fhocn	'X'	'X'	'x'
f_fhocn_ai f_flat	'm' 'x'	'm' 'x'	'x' 'x'
f.flat.al	'm'	'm'	'x'
f_flatn_ai f_flwdn	'm' 'm'	'm' 'm'	'x' 'x'
f_flwup	'x'	'x'	, x , X,
f_flwup_ai	'm'	'm'	'x'
f_fmeltt_ai	'x' 'm'	'x' 'm'	'x' 'x'
f_frazil	'm'	'm'	'x'
f_fresh	'X' 'm'	'X' 'm'	'x'
f_fresh_ai f_frz_onset	'm' 'm'	'm' 'm'	'x' 'x'
f_frzmlt	'm'	'm'	'x'
f_fsalt f_fsalt_ai	'x' 'm'	'x' 'm'	'x' 'x'
f_fsens	'x'	'x'	'x'
f_fsens_ai	'm'	'm'	'x'
f_fsurf_ai f_fsurfn_ai	'x' 'm'	'x' 'm'	'x' 'x'
f_fswabs	'x'	'x'	'x'
f_fswabs_ai	'm'	'm'	'x'
f_fswdn f_fswfac	'm' 'm'	'm' 'm'	'x' 'x'
f_fswthru	'x'	'x'	'x'
f_fswthru_ai	'm'	'm'	'x'
f_fy f_hi	'x' 'm'	'x' 'm'	'x' 'm'
f_hisnap	'x'	'x'	'x'
f_hs f_hte	'm' True	'm' True	'm' True
f_htn	True	True	True
f_iage	'm'	'm'	'x'
f_icepresent f_meltb	'm' 'm'	'm' 'm'	'x' 'x'
f_meltl	'm'	'm'	'x'
f_melts f_meltt	'm' 'm'	'm' 'm'	'x' 'x'
f_mlt_onset	'm'	'm'	, X , X,
f_ncat	True	True	True
f_qref	'x' 'x'	'x' 'x'	'x' 'x'
f_rain_al	'm'	'm'	'x'
f_shear	'm'	'm'	'x'
f_sice f_sig1	'm' 'x'	'm' 'x'	'x' 'x'
f_sig2	'x'	'x'	'x'
f_sinz f_snoice	'x' 'm'	'x' 'm'	'x' 'x'
f_snow	'x'	'x'	'x'
f_snow_ai	'm'	'm'	'x'
f_sss f_sst	'm' 'm'	'm' 'm'	'x' 'x'
f_strainx	'm'	'm'	'x'
f_strainy f_strainy	'm' 'm'	'm'	'x'
f_strcorx f_strcory	'm' 'm'	'm' 'm'	'x' 'x'
f_strength	'm'	'm'	'x'
f_strintx	'm' 'm'	'm' 'm'	'x' 'x'
f_strinty f_strocnx	m 'm'	m 'm'	'x'
f_strocny	'm'	'm'	'x'
f_strtltx f_strtlty	'm' 'm'	'm' 'm'	'x' 'x'
f_tair	'm'	'm'	'x'

control/ 1deg jra55_ryf/ ice/ cice_in.nml	new/ control/ 025deg jra55_ryf/ ice/ cice_in.nml	new/ control/ 01deg jra55_ryf/ ice/ cice_in.nml
f_tarea True f_tinz 'x'	True 'x'	True 'x'
f_tmask True	True	True
f_tref 'X'	'X'	'X'
f_trsig 'm' f_tsfc 'm'	'm' 'm'	'x' 'm'
f_tsnz 'x'	'X'	'X'
f_uarea True	True	True
f_uocn 'm' f_uvel 'm'	'm' 'm'	'x' 'x'
f_vgrdb False	False	False
f_vgrdi False	False	False
f_vgrds False f_vicen 'm'	False 'm'	False 'x'
f_vocn 'm'	'm'	'x'
f_wel 'm'	'm'	'x' 'x'
&icefields_pond_nml f_apeff 'm' f_apeff_ai 'm'	'm' 'm'	'X' 'X'
f_apeffn 'X'	'x'	'x'
f_apond 'm'	'm'	'x'
f_apond_ai 'm' f_apondn 'x'	'm' 'x'	'x' 'x'
T_apondr X f_hpond 'm'	x 'm'	, x 'x'
f_hpond_ai 'm'	'm'	'x'
f_hpondn 'X'	'X' 'm'	'X'
f_ipond 'm' f_ipond_ai 'm'	'm' 'm'	'x' 'x'
&ponds_nml dpscale 0.001	0.001	0.001
frzpnd 'hlid'	'hlid'	'hlid'
hp1 0.01	0.01	0.01
hs0 0.0 hs1 0.03	0.0 0.03	0.0 0.03
pndaspect 0.8	0.8	0.8
rfracmax 1.0	1.0	1.0
& setup_nmlfracmin0.15& setup_nmldays_per_year365	0.15 365	0.15 365
&setup_nml days_per_year 365 dbug False	False	False
diag_file 'ice_diag.d'	'ice_diag.d'	'ice_diag.d'
diag_type 'file'	'file'	'file'
diagfreq 24 dt 3600	960 1200	960 400
dump_last True	True	True
dumpfreq 'y'	'y'	'm'
<mark>dumpfreq_n</mark> 1 hist_avg True	1 True	3 True
histfreq 'd', 'm', 'x', 'x', 'x'	'd', 'm', 'x', 'x', 'x'	'd', 'm', 'x', 'x', 'x'
histfreq_n 1,1,1,1,1	1, 1, 1, 1, 1	1, 1, 1, 1, 1
history_dir ','OUTPUT/' history_file 'iceh'	'./OUTPUT/' 'iceh'	'./OUTPUT/' 'iceh'
ice_ic 'default'	'default'	'default'
incond_dir './OUTPUT/'	'./OUTPUT/'	'./OUTPUT/'
incond_file 'iceh_ic' istep0 0	'iceh_ic' 0	'iceh_ic' 0
latpnt 90.0, —65.0	90.0, -65.0	90.0, -65.0
lcdf64 True	True	True
lonpnt 0.0, -45.0	0.0, -45.0	0.0, -45.0
ndtd 1 npt 35040	1 2232	1 6480
pointer_file './RESTART/ ice.restart	'./RESTART/ ice.restart	'./RESTART/ ice.restart
file' print_global False	file' False	file' False
print_global False print_points True	True	True
restart False	False	False
restart_dir '/RESTART/	'./RESTART/'	'./RESTART/'
restart_ext False restart_file 'iced'	False 'iced'	False 'iced'
restart_format 'nc'	'nc'	'nc'
runtype 'initial'	'initial'	'initial'
use_leap_years False use_restart_time True	False True	False True
use_restart_time True write_ic False	False	False

Group (continued)	Variable	new/ control/ 1deg jra55_ryf/ ice/ cice_in.nml	new/ control/ 025deg jra55_ryf/ ice/ cice_in.nml	new/ control/ 01deg jra55_ryf/ ice/ cice_in.nml
	year_init	1	1	1
&shortwave_nml	ahmax	0.1	0.1	0.1
	albedo_type	'default'	'default'	'default'
	albicei	0.44	0.44	0.44
	albicev	0.86	0.86	0.86
	albsnowi albsnowv	0.7 0.98	0.7 0.98	0.7 0.98
	dalb_mlt	-0.02	-0.02	-0.02
	dt_mlt	1.0	1.0	1.0
	r_ice	0.0	0.0	0.0
	r_pnd	0.0	0.0	0.0
	r_snw	0.0	0.0	0.0
	rsnw_mlt	1500.0	1500.0	1500.0
	shortwave tocnfrz	'default' — 1.8	'default' —1.8	'default' —1.8
&thermo_nml		0.0005	0.0005	0.0005
&thefino_nint	a_rapid_mode aspect_rapid_mode	1.0	1.0	1.0
	chio	0.004	0.004	0.004
	conduct	'bubbly'	'bubbly'	'bubbly'
	dsdt_slow_mode	$-5 \times$	$-5 \times$	$-5 \times$
		10^{-8}	10^{-8}	10^{-8}
	kitd	1	1	1
	ktherm	1	1	1
	phi_c_slow_mode	0.05	0.05	0.05
	phi_i_mushy	0.85 10.0	0.85 10.0	0.85
&tracer_nml	rac_rapid_mode restart_aero	False	False	10.0 False
CLICAL TIME	restart_age	False	False	False
	restart_fy	False	False	False
	restart_lvl	False	False	False
	restart_pond_cesm	False	False	False
	restart_pond_lvl	False	False	False
	restart_pond_topo	False	False	False
	tr_aero	False	False	False
	tr_fy tr_iage	False False	False False	False False
	tr_lvl	False	False	False
	tr_pond_cesm	False	False	False
	tr_pond_lvl	False	False	False
	tr_pond_topo	False	False	False
&zbgc_nml	bgc_data_dir	'unknown	'unknown	'unknown
		bgc_data	bgc_data	bgc_data
	has flow tone	dir'	dir'	dir'
	bgc_flux_type nit_data_type	'Jin2006' 'default'	'Jin2006' 'default'	'Jin2006' 'default'
	phi_snow	0.5	0.5	0.5
	restart_bgc	False	False	False
	restart_hbrine	False	False	False
	restore_bgc	False	False	False
	sil_data_type	'default'	'default'	'default'
	skl_bgc	False	False	False
	tr_bgc_am_sk	False	False	False
	tr_bgc_c_sk tr_bgc_chl_sk	False False	False False	False False
	tr_bgc_dms_sk	False	False	False
	tr_bgc_dmspd_sk	False	False	False
	tr_bgc_dmspp_sk	False	False	False
	tr_bgc_sil_sk	False	False	False
	tr_brine	False	False	False

2.1.2 Old and new configs (differences only)

Group Variable	original/	new/
	control/	control/
	1deg	1deg
	jra55_ryf/	jra55_ryf/
	ice/	ice/
	cice_in.nml	cice_in.nml
&setup_nml lcdf64	False	True
print_points	False	True

Group	Variable	original/	new/
		control/	control/
		025deg	025deg
		jra55_ryf/	jra55_ryf/
		ice/	ice/
		cice_in.nml	cice_in.nml
&setup_nml	print_points	False	True

Group	Variable	original/	new/
·		control/	control/
		01deg	01deg
		jra55_ryf/	jra55_ryf/
		ice/	ice/
	c	ice_in.nml	cice_in.nml
&setup_nml	print_points	False	True

2.2 input_ice.nml

2.2.1 All variables in new configs (differences highlighted)

Group	Variable	new/ control/	new/ control/	new/ control/
		1deg	025deg	01deg
		jra55_ryf/	jra55_ryf/	jra55_ryf/
		ice/input	ice/input	ice/input
		ice.nml	ice.nml	ice.nml
&coupling_nml	chk_a2i_fields	False	False	False
	chk_frzmlt_sst	False	False	False
	chk_gfdl_roughness	False	False	False
	chk_i2a_fields	False	False	False
	chk_i2o_fields	False	False	False
	chk_o2i_fields	False	False	False
	cst_ocn_albedo	True	True	True
	dt_cpl_ai	10800	10800	10800
	dt_cpl_io	3600	1200	400
	gfdl_surface_flux	True	True	True
	ice_fwflux	True	True	True
	ice_pressure_on	True	True	True
	limit_icemelt	False	False	False
	meltlimit	—200.0	-200.0	—200.0
	ocn_albedo	0.1	0.1	0.1
	pop_icediag	True	True	True
	precip_factor	1.0	1.0	1.0
	rotate_winds	True	True	True
	use_ocnslope	False	False	False
	use_umask	False	False	False

2.2.2 Old and new configs (differences only)

Group		original/ control/ 1deg jra55_ryf/ ice/input ice.nml	new/ control/ 1deg jra55_ryf/ ice/input ice.nml
9 coupling am	chk_frzmlt_sst	ice.iiiit	False
&coupling_nml			
	chk_i2a_fields		False
	chk_i2o_fields		False
	chk_o2i_fields		False

2.3 input_ice_gfdl.nml

2.3.1 All variables in new configs (differences highlighted)

Group	Variable	new/ control/ 1deg jra55_ryf/ ice/ input_ice gfdl.nml	new/ control/ 025deg jra55_ryf/ ice/ input_ice gfdl.nml	new/ control/ 01deg jra55_ryf/ ice/ input_ice gfdl.nml
&ocean_rough_nml	charnock	0.032	0.032	0.032
	do_cap40	False	False	False
	do_highwind	False	False	False
	rough_scheme	'beljaars'	'beljaars'	'beljaars'
	roughness_heat	5.8×10^{-5}	5.8×10^{-5}	5.8×10^{-5}
	roughness_min	$1 imes 10^{-6}$	$1 imes10^{-6}$	$1 imes 10^{-6}$
	roughness_moist	5.8×10^{-5}	5.8×10^{-5}	5.8×10^{-5}
	roughness_mom	5.8×10^{-5}	$5.8 imes 10^{-5}$	5.8×10^{-5}
	zcoh1	0.0	0.0	0.0
	zcoq1	0.0	0.0	0.0
&surface_flux_nml	alt_gustiness	False	False	False
	gust_const	1.0	1.0	1.0
	gust_min	0.0	0.0	0.0
	ncar_ocean_flux	True	True	True
	ncar_ocean_flux_orig	False	False	False
	no_neg_q	False	False	False
	old_dtaudv	False	False	False
	raoult_sat_vap	False	False	False
	use_mixing_ratio	False	False	False
	use_virtual_temp	True	True	True

2.3.2 Old and new configs (differences only)

2.4 input_ice_monin.nml

2.4.1 All variables in new configs (differences highlighted)

Group	Variable	new/	new/	new/
		control/	control/	control/
		1deg	025deg	$01deg_{-}$
		jra55_ryf/	jra55_ryf/	jra55_ryf/
		ice/	ice/	ice/
		input_ice	input_ice	input_ice
		monin.nml	monin.nml	monin.nml
&monin_obukhov_nml	neutral	True	True	True

2.4.2 Old and new configs (differences only)

3 MATM namelist 'input_atm.nml'

Originals are from a fresh git clone, 2017-11-18.

3.1 All variables in new configs (differences highlighted)

Group	Variable	new/ control/ 1deg jra55_ryf/ atmosphere/ input atm.nml	new/ control/ 025deg jra55_ryf/ atmosphere/ input atm.nml	new/ control/ 01deg jra55_ryf/ atmosphere/ input atm.nml
&coupling	caltype	0	0	0
	dataset	'jra55'	'jra55'	'jra55'
day	s_per_year	365	365	365
det de la companya de	output	False		
	dt_atm	3600	1200	400
	dt_cpl	10800	10800	10800
	inidate	10101	10101	10101
	init_date	10101	10101	10101
	runtime	126144000	2678400	2592000
	runtype	'NY'	'NY'	'NY'
	truntime0	0	0	0

3.1.1 Old and new configs (differences only)

Group	Variable	original/	new/
		control/	control/
		1deg	1deg
		jra55_ryf/	jra55_ryf/
		atmosphere/	atmosphere/
		input	input
		atm.nml	atm.nml
&coupling	chk_a2i_fields	False	
	chk_i2a_fields	False	

Group	Variable	original/	new/
		control/	control/
		025deg	025deg
		jra55_ryf/	jra55_ryf/
		atmosphere/	atmosphere/
		input	input
		atm.nml	atm.nml
&coupling	chk_a2i_fields	False	
	chk_i2a_fields	False	

4 Andy's 1 deg configs (differences highlighted)

4.1 MOM namelist 'input.nml'

Easternier mit abez auchtif (nix 10 halb) (nix	Group	Variable	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2/ 1deg jra55v13 ryf8485 spinup_A/ output000/ ocean/	new/ control/ 1deg jra55_ryf/ ocean/ input.nml
Pate			input.nml	0.45
Common	&auscom_ice_nml			
Martin M				
Manual				False
			3600	3600
Part		fixmeltt		False
Programmer Pro				1.0
Memory M				False
Product Prod				1.0
Programmer Pro				5 True
Sign.cht Sign.cht		pop_iceuldy redsea_culfbay_sfiv		True
Kaliag, manager, mil finest — 27.16 <td></td> <td></td> <td></td> <td>1.0</td>				1.0
Kelsig.manager.mil Sebug kisig.manager.mis Tales False Single <				-0.216
Sisse.oi.wanings Ture Single Si				True
Efmsio.ml filest.ex.wite threading.read multi multi threading.read multi multi multi threading.read multi mu	&diag_manager_nml			True
kms.ml threading.read threading.re				True
&fms.nmi threading.wite single single Component Component Component Component Component Component Component Institute Linux Linux <th< td=""><td>&tms_1o_nml</td><td></td><td></td><td>'single'</td></th<>	&tms_1o_nml			'single'
Birms.mil doors, state, size 10.00° OMMONE Amom.oasis5.interface.mil fields.in U. flux, V. fl				
Momm.asis5.interface.mlt Interface.mlt Interface.mlt 115.00 115.20 <th< td=""><td>&fmc nml</td><td></td><td></td><td>'COMPONENT'</td></th<>	&fmc nml			'COMPONENT'
Emontosi53.interface.nml fields.in u.flux, v.flux,	XIIIIZ_IIIIIL			
	&mom_oasis3_interface_nml			'u_flux',
Satt.Rt, S				'v_flux',
			'lprec', 'fprec',	'lprec', 'fprec',
Sw.flux, Sw.flux 1.1				
T. flux, 't. flux '				
				't flux'
Tunof, p. Tuno				'lw_flux',
Minet Mine				'runof', 'p',
Minternation Mint				'aice',
Fields.out T.surf, S.surf,				'wfimelt',
		nelds_out		
				'v_surf',
kmoninobukhov.nml disastory				'dssldx',
Num_fields_in num_fields_out num_f			'dssldy',	'dssldy',
Num_fields_out False Fal				'frazil'
kmonin_obukhov_nml send_before_ocean_update True True &monin_obukhov_nml neutral True True &mpp_io_nml deflate_level 5 &ocean_adv_vel_diag_nml diag_step 4320 4320 &ocean_adv_ect_diag_nml large_cfl_value 100 100 &ocean_adv_ect_or_diag_nml verbose_cfl True True &ocean_adv_ect_or_velocity_nml max_advect_or_velocity 0.5 0.0 &ocean_advect_or_velocity_nml max_advect_or_velocity 0.5 0.0 &ocean_abedo_nml ocean_abedo_option 2 &ocean_barotropic_nml barotropic_time_stepping_a True True barotropic_time_stepping_a True True True debug_this_module False False False diag_step 4320 4320				15
&monin_obukhov_nml False False &monin_obukhov_nml neutral True True &mpp_io_nml deflate_level 5 1 &ocean_adv_vel_diag_nml diag_step 4320 4320 & large_cfl_value 100 100 & max_cfl_value 1000 100 & ocean_advection_velocity_nml max_advection_velocity 0.5 0. & ocean_albedo_nml ocean_albedo_option 2 0. & ocean_barotropic_nml barotropic_time_stepping_a True True & barotropic_time_stepping_a True True True & debug_this_module False False & debug_this_module False False & diag_step 4320 4320				7 True
&monin_obukhov_nml neutral deflate_level True True &mpp_io_nml deflate_level 5 &ocean_adv_vel_diag_nml shuffle 1 &ocean_adv_vel_diag_nml diag_step 4320 4320 max_cfl_value 10.0 10.0 10.0 max_cfl_value 100.0 100.0 100.0 &ocean_advection_velocity_nml max_advection_velocity 0.5 0. &ocean_albedo_nml ocean_albedo_option 2 &ocean_barotropic_nml barotropic_time_stepping_a True True barotropic_time_stepping_a True True barotropic_time_stepping_a True True debug_this_module False False debug_this_module False False diag_step 4320 4320				False
&mpp_io_nml deflate_level 5 shuffle 1 &ocean_adv_vel_diag_nml diag_step 4320 4320 large_cfl_value 10.0 10.0 10.0 max_cfl_value 100.0 100.0 100.0 100.0 &ocean_advection_velocity_nml max_advection_velocity 0.5 0. &ocean_albedo_nml ocean_albedo_option 2 2 &ocean_barotropic_nml barotropic_time_stepping_a True True barotropic_time_stepping_a True True True barotropic_time_stepping_a False False False debug_this_module False False False diag_step 4320 4320	&monin_obukhov_nml			True
Shuffle 1 &ocean_adv_vel_diag_nml diag_step 4320 4320 large_cfl_value 100 100 max_cfl_value 1000 1000 verbose_cfl True True &ocean_advection_velocity_nml max_advection_velocity 0.5 0.0 &ocean_albedo_nml ocean_albedo_option 2 &ocean_barotropic_nml barotropic_time_stepping_a True True barotropic_time_stepping_b False False debug_this_module False False diag_step 4320 4320				5
Large_cfl_value 100		shuffle	1	1
Max_cfl_value 100.0 100.0 verbose_cfl True True &ocean_advection_velocity_nml max_advection_velocity 0.5 0.0 &ocean_albedo_nml ocean_albedo_option 2 &ocean_barotropic_nml barotropic_time_stepping_a True True barotropic_time_stepping_b False False False debug_this_module False False False diag_step 4320 4320	&ocean_adv_vel_diag_nml			4320
& ccean_advection_velocity_nmlverbose_cflTrueTrue& ccean_advection_velocity_nmlmax_advection_velocity0.50.5& ccean_albedo_nmlocean_albedo_option2& ccean_barotropic_nmlbarotropic_tallo1010barotropic_time_stepping_aTrueTruebarotropic_time_stepping_bFalseFalsedebug_this_moduleFalseFalsediag_step43204320				10.0
&ocean_advection_velocity_nml max_advection_velocity 0.5 0.0 &ocean_albedo_nml ocean_albedo_option 2 &ocean_barotropic_nml barotropic_tallo 10 10 barotropic_time_stepping_a True True barotropic_time_stepping_b False False debug_this_module False False diag_step 4320 4320				
&ocean_albedo_nml ocean_albedo_option 2 &ocean_barotropic_nml barotropic_halo 10 10 barotropic_time_stepping_a True True barotropic_time_stepping_b False False debug_this_module False False diag_step 4320 4320	&ocean advection velocity nml			0.5
& ocean_barotropic_nmlbarotropic_halo1010barotropic_time_stepping_aTrueTruebarotropic_time_stepping_bFalseFalsedebug_this_moduleFalseFalsediag_step43204320				2
barotropic_time_stepping_a True Tru barotropic_time_stepping_b False Fals debug_this_module False Fals diag_step 4320 4321				10
barotropic_time_stepping_b False False debug_this_module False False diag_step 4320 4321		barotropic_time_stepping_a		True
debug_this_module False Fals diag_step 4320 4321		barotropic_time_stepping_b	False	False
		debug_this_module		False
eta max 80 80				4320
Callan		eta_max	8.0	8.0

		access- om2/ 1deg jra55v13 ryf8485 spinup_A/ output000/ ocean/	ocean/ input.nml
		input.nml	
	frac_crit_cell_height pred_corr_gamma	0.2 0.2	0.2 0.2
	smooth_eta_diag_laplacian	True	True
	smooth_eta_t_biharmonic	False	False
	smooth_eta_t_laplacian	True	True
	smooth_pbot_t_biharmonic smooth_pbot_t_laplacian	False True	False True
	truncate_eta	False	False
	use_legacy_barotropic_halos	False	False
	vel_micom_bih	0.01	0.01
	vel_micom_lap	0.05	0.05 0.2
	vel_micom_lap_diag verbose_truncate	0.2 True	U.2 True
	zero_tendency	False	False
&ocean_bbc_nml	bmf_implicit	True	True
	cdbot	0.001	0.001
	cdbot_hi cdbot_roughness_length	0.007 False	0.007 False
	cdbot_roughness_uamp	True	True
	uresidual	0.05	0.05
	use_geothermal_heating	False	False
&ocean_bih_friction_nml &ocean_bih_tracer_nml	bih_friction_scheme	'general'	'general
&ocean_bin_tracer_nml &ocean_bihcst_friction_nml	use_this_module use_this_module	False False	False False
&ocean_bihgen_friction_nml	bottom_5point	True	True
	eq_lat_micom	0.0	0.0
	eq_vel_micom_aniso	0.0	0.0
	eq_vel_micom_iso	0.0	0.0
	equatorial_zonal k_smag_aniso	False 0.0	False 0.0
	k_smag_iso	2.0	2.0
	ncar_boundary_scaling	True	True
	ncar_boundary_scaling_read	False	False
	ncar_rescale_power ncar_vconst_4	2×10^{-8}	2×10^{-8}
	ncar_vconst_5	5	5
	use_this_module	True	True
	vel_micom_aniso	0.0	0.0
	<pre>vel_micom_bottom vel_micom_iso</pre>	0.1 0.04	0.01 0.04
	visc_crit_scale	0.25	0.25
&ocean_convect_nml	use_this_module	False	False
&ocean_coriolis_nml	acor	0.5	0.5
&ocean_density_nml	use_this_module eos_linear	True False	True False
xoccan_ucnorty_milt	eos_preteos10	True	True
	layer_nk	80	80
	neutralrho_max	1030.0	1030.0
	neutralrho_min potrho_max	1020.0 1038.0	1020.0 1038.0
	potrho_min	1038.0	1038.0
&ocean_domains_nml	max_tracers	5	5
&ocean_form_drag_nml	use_this_module	False	False
&ocean_frazil_nml	debug_this_module	False False	False False
	frazil_only_in_surface freezing_temp_preteos10	True	False True
	freezing_temp_simple	False	False
	use_this_module	True	True
&ocean_grids_nml	debug_this_module	False	False
&ocean_increment_eta_nml &ocean_increment_tracer_nml	use_this_module use_this_module	False False	False False
&ocean_increment_velocity_nml	use_this_module	False	False
&ocean_lap_friction_nml	lap_friction_scheme	'general'	'general'
work and the state of the state			
&ocean_lap_tracer_nml &ocean_lapcst_friction_nml	use_this_module use_this_module	False False	False False

barotropic_split 80 80 cmip_units True True debug False False dt_ocean 3600 3600 io_layout 4,3 4,3 4,3 layout 16,15 16,15 surface_height_split 1 1 1 time_tendency 'twolevel' 'twolevel' vertical_coordinate 'zstar' 'zstar'	Group (continued)	Variable	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2/ 1deg jra55v13 ryf8485 spinup_A/ output000/ ocean/	new/ control/ 1deg jra55_ryf/ ocean/ input.nml
Ratingation County Count		li anna anta		0.0
Peter Pete				
Petritri polar visc part Sol S				
			0.35	0.35
Pate		use_this_module		
				False
				True
middownstope_mask_pful False False middownstope_mask pful False middownstope_mask pful False middownstope_mask False False	&ocean mixdownslone nml			
Michael September Mich				
Read mixidownstopen mask False False False Socean model .mml barrollmic split 1 1 1 1 1 1 1 1 1		mixdownslope_npts		
Boreclinic split			False	False
Barotropic.spitt S0			True	
Crimpunits True True False F	&ocean_model_nml			1
debug False False Grace Grac				
1				
Surface_height_spite				
Surface, height, spilt 1 1 1 1 1 1 1 1 1				
Two lever Two				
&ocean_momentum_source_nml rayleigh_damp_table use_rayleigh_damp_table use_this_module rayleigh_damp_table use_this_module rayleigh_damp_table use_this_module rayleigh_damp_table use_this_module rayleigh_damp_table use_physics_rayleigh_damp_table use_physics_rayleigh_damp_table_physics_rayleigh_damp_table_use_physics_rayleigh_damp_table_physics_rayleigh_damp_table_physics_rayleigh_damp_table_physics_rayleigh_damp_table_physics_rayleigh_damp_table_physics_rayleigh_damp_table_physics_rayleigh_damp_table_physics_rayleigh_damp_table_physics_rayleigh_damp_table_physics_rayleigh_damp_table_physics_rayleigh_damp_table_physics_rayleigh_damp_table_physics_rayleig				
Sezent S		vertical_coordinate	'zstar'	'zstar'
& cean.nphysics.nml use.nphysics blass False False False False False False use.nphysics False False False use.nphysics False False use.nphysics False False use.nphysics. True True True True True True agm.closure.pandule True True True agm.closure.pandule True True agm.closure.pandule True True True agm.closure.pandule True True True agm.closure.pandule True True True True True True True Tru	&ocean_momentum_source_nml		False	False
&ocean.nphysics.nml debug_this_module use_nphysics use_nphysics use_nphysics and use_nphysics that see False use_nphysics. True use_this_module use_this_this_module use_this_module use_this_module use_this_this_module use_this_module use_this_thi				
See				
Balance Bala	&ocean_nphysics_nml			
decean_nphysics_util_nml use_nphysics_module True True &ccean_nphysics_util_nml agm 60000 60000 agm_closure_addy_cave_mixed frue True True agm_closure_buoy_freq 0,004 0,004 agm_closure_buoy_freq 0,004 0,004 agm_closure_buoy_freq 0,004 0,004 agm_closure_eady_ave_mixed True True agm_closure_eady_smooth_horz True True True agm_closure_eady_smooth_horz True				
&ocean_nphysics_util_nml use_this_module True True &ocean_nphysics_util_nml agm_closure True True agm_closure_baroclinic True True True agm_closure_buoy_freq 0.004 0.004 agm_closure_eady_cap True True True agm_closure_eady_cap True True True agm_closure_eady_smooth_vert True True True agm_closure_eady_smooth_vert True True True agm_closure_eady_smooth_vert True True True agm_closure_eady_smooth_vert True T			_	_
&ocean_nphysics_util.nml agm_closure agm_closure True True agm_closure_baroctinic True True agm_closure_baroctinic True True agm_closure_baroctinic True True agm_closure_baroctinic True True agm_closure_eady_are_mixed True True agm_closure_eady_smooth_horz True True agm_closure_eady_smooth_horz True True agm_closure_eady_smooth_horz True True agm_closure_eady_smooth_vert True True agm_closure_eady_smooth_horz True True agm_closure_eady_smooth_vert True True agm_closure_eady_smooth_vert True True agm_closure_eady_smooth_vert True True agm_closure_length True True agm_closure_length_force True True agm_closure_length_force True True agm_closure_length True True agm_closure_length </td <td></td> <td></td> <td></td> <td></td>				
Agm.closure buoy.freq Agm.	&ocean_nphysics_util_nml			
agm_closure_buoy_freq	1,	agm_closure		
agm_closure_eady_ave_mixed agm_closure_eady_ave_mixed agm_closure_eady_smooth_norz True agm_closure_eady_smooth_horz True agm_closure_eady_smooth_horz True agm_closure_eady_smooth_horz True agm_closure_eady_smooth_vert True True agm_closure_eady_smooth_vert True True agm_closure_eady_smooth_vert True True agm_closure_eady_smooth_vert agm_closure_eady_smooth_vert True True agm_closure_eady_scaling True True agm_closure_length_fised False False agm_closure_length_fised False False agm_closure_length_fixed False False agm_closure_length_fixed False False agm_closure_length_fixed False False agm_closure_lower_depth 2000, 2000, agm_closure_max 600, 600, agm_closure_max 600, 600, agm_closure_max 600, 600, agm_closure_max 600, 600, agm_closure_scaling 0,07 0,07 agm_closure_upper_depth 100, 100, 100, agm_closure_upper_depth 100, agm_closure_upper_depth 100, agm_closure_upper_depth 100, agm_closure_upper_depth 100, agm_closure_upper_depth 100, agm_closure_upper_depth 100, agm_closure_length 100, agm_closure_length 100, agm_closure_length 100, agm_closure_length 100, agm_closure_length		agm_closure_baroclinic		True
agm_closure_eady_cap				
agm_closure_eady_smooth_norz True True agm_closure_eady_smooth_vert True True agm_closure_eady_smooth_vert True True agm_closure_eden_gamma 0,0		agm_closure_eady_ave_mixed		
agm_closure_eady_smooth_vert agm_closure_eden_gamma 0.0 0.		agm_closure_eady_cap		
agm.closure_eden_grambar agm.closure_eden_grambar False False agm.closure_ength_scaling True True agm.closure_length 50 000.0 50 000.0 agm.closure_length 50 000.0 50 000.0 agm.closure_length_bczone False False agm.closure_length_rossby False False agm.closure_length_rossby False False agm.closure_length_rossby False False agm.closure_max 600.0 600.0 agm.closure_min 50.0 50.0 agm.closure_scaling 0.07 0.07 0.07 agm.closure_upper_depth 100.0 100.0 agm.closure_upper_depth 100.0 100.0 agm.closure_upper_depth 100.0 100.0 agm.smooth_space False False agm.smooth_time False False agm.smooth_time False False aredi 600.0 600.0 aredi.equal_agm False False drhodz_mon4p1 True True drhodz_smooth_horz False False false drhodz_smooth_horz False False False Adhodz_smooth_horz False False False True Tru		agm_closure_eady_smooth_horz		
agm_closure_eden_greatbatch False False agm_closure_grid_scaling True True agm_closure_length 50 000.0 50 000.0 agm_closure_length_bczone False False False agm_closure_length_fixed False False agm_closure_length_rossby False False agm_closure_length_rossby False False Agm_closure_length_grid 50 000.0 2000.0 agm_closure_max 600.0 600.0 agm_closure_max 600.0 600.0 agm_closure_max 600.0 600.0 agm_closure_scaling 0.07 0.07 agm_closure_upper_depth 100.0 100.0 agm_closure_upper_depth 100.0 100.0 agm_closure_upper_depth 100.0 100.0 agm_smooth_space False Fa		agiii_ctosure_eduy_siiiootii_vert		
agm_closure_grid_scaling agm_closure_length				
agm_closure_length 50 000.0 50 000.0 agm_closure_length_bczone False False agm_closure_length_fixed False False agm_closure_length_fixed False False agm_closure_lower_depth 2000.0 2000.0 agm_closure_lower_depth 2000.0 2000.0 agm_closure_min 50.0 50.0 agm_closure_scaling 0.07 0.07 0.07 agm_closure_upper_depth 100.0 100.0 agm_closure_upper_depth 100.0 100.0 agm_smooth_space False F		agm_closure_grid_scaling		
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agm_closure_length_fixed False False agm_closure_length_rossby False False agm_closure_length_rossby False False agm_closure_length_rossby False False agm_closure_length 2000.0 2000.0 agm_closure_max 600.0 600.0 agm_closure_min 50.0 50.0 agm_closure_scaling 0.07 0.07 0.07 0.07 agm_closure_upper_depth 100.0 100.0 agm_damping_time 45.0 45.0 45.0 agm_smooth_space False False		agm_closure_length_bczone	False	False
agm_closure_Lower_depth 2000.0 2000.0 agm_closure_max 600.0 600.0 agm_closure_min 50.0 50.0 agm_closure_scaling 0.07 0.07 agm_closure_upper_depth 100.0 100.0 agm_damping_time 45.0 45.0 agm_smooth_space False False agm_smooth_time False False aredi_equal_agm False False aredi_equal_agm False False drhodz_mooth_horz False False drhodz_smooth_torz False False drhodz_smooth_vert False False aredi_equal_agm False False ar		agm_closure_length_fixed		
agm_closure_max 600.0 600.0 agm_closure_min 50.0 50.0 agm_closure_scaling 0.07 0.07 agm_closure_upper_depth 100.0 100.0 agm_damping_time 45.0 45.0 agm_smooth_space False False agm_smooth_time False False aredi_equal_agm False False drhodz_smooth_horz False False drhodz_smooth_vert False False drhodz_smooth_vert False False nphysics_util_zero_init True True rossby_radius_max 100 000.0 100 000.0				
agm_closure_min 50.0 50.0 agm_closure_scaling 0.07 0.07 agm_closure_upper_depth 100.0 100.0 agm_damping_time 45.0 45.0 agm_smooth_space False False agm_smooth_time False False aredi_equal_agm False False drhodz_smooth_horz False False drhodz_smooth_horz False False drhodz_smooth_vert False False nphysics_util_zero_init True True rossby_radius_max 100 000.0 100 000.0				
agm_closure_scaling 0.07 0.07 agm_closure_upper_depth 100.0 100.0 agm_damping_time 45.0 45.0 agm_smooth_space False False agm_smooth_time False False aredi_equal_agm False False drhodz_smooth_horz False False drhodz_smooth_horz False False drhodz_smooth_vert False False nphysics_util_zero_init True True rossby_radius_max 100 000.0 100 000.0				
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agm_smooth_space False False agm_smooth_time False False aredi 600.0 600.0 aredi_equal_agm False False drhodz_mom4p1 True True drhodz_smooth_horz False False drhodz_smooth_vert False False nphysics_util_zero_init True True rossby_radius_max 100 000.0 100 000.0				
agm_smooth_time False False aredi 600.0 600.0 aredi_equal_agm False False drhodz_mom4p1 True True drhodz_smooth_horz False False drhodz_smooth_vert False False nphysics_util_zero_init True True rossby_radius_max 100 000.0 100 000.0				
aredi 600.0 600.0 aredi_equal_agm False False drhodz_mom4p1 True True drhodz_smooth_horz False False drhodz_smooth_vert False False nphysics_util_zero_init True True rossby_radius_max 100 000.0 100 000.0			False	False
drhodz_mom4p1 True True drhodz_smooth_horz False False drhodz_smooth_vert False False nphysics_util_zero_init True True rossby_radius_max 100 000.0 100 000.0		aredi		
drhodz_smooth_horz False False drhodz_smooth_vert False False nphysics_util_zero_init True True rossby_radius_max 100 000.0 100 000.0				
drhodz_smooth_vert False False nphysics_util_zero_init True True rossby_radius_max 100 000.0 100 000.0				
nphysics_util_zero_init True True rossby_radius_max 100 000.0 100 000.0				
rossby_radius_max				

Group (continued)	Variable	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2/ 1deg jra55v13 ryf8485 spinup_A/ output000/ ocean/	new/ control/ 1deg jra55_ryf/ ocean/ input.nml
	tracer_mix_micom	input.nml False	False
	vel_micom	0.0	0.0
&ocean_nphysicsa_nml	use_this_module	False	False
&ocean_nphysicsb_nml	use_this_module	False	False
&ocean_nphysicsc_nml	bv_freq_smooth_vert	True	True
	bvp_bc_mode	2	2
	bvp_min_speed	0.1 0.0	0.1 0.0
	bvp_speed debug_this_module	0.0 False	0.0 False
	do_qm_skewsion	True	True
	do_gneutral_diffusion	True	True
	epsln_bv_freq	1×10^{-12}	1×10^{-12}
	gm_skewsion_bvproblem	True	True
	gm_skewsion_modes	False	False
	neutral_eddy_depth	True	True
	neutral_physics_limit	True	True
	number_bc_modes	2	2
	regularizepsi smaxpsi	False 0.01	False 0.01
	smooth_psi	True	True
	tmask_neutral_on	True	True
	turb_blayer_min	50.0	50.0
	use_this_module	True	True
&ocean_operators_nml	use_legacy_div_ud	False	False
&ocean_overexchange_nml	debug_this_module	False	False
	overexch_npts	4	4
	overexch_weight_far overflow_umax	False 5.0	False 5.0
	use_this_module	False	False
&ocean_overflow_nml	use_this_module	False	False
&ocean_overflow_ofp_nml	use_this_module	False	False
&ocean_polar_filter_nml	use_this_module	False	False
&ocean_pressure_nml	zero_pressure_force	False	False
&ocean_rivermix_nml	debug_this_module	False	False
	river_diffuse_salt	True	True
	river_diffuse_temp	True	True
	river_diffusion_thickness river_diffusivity	0.0 0.0	0.0 0.0
	river_insertion_thickness	40.0	40.0
	use_this_module	True	True
&ocean_riverspread_nml	use_this_module	False	False
&ocean_rough_nml	rough_scheme	'beljaars'	'beljaars'
&ocean_sbc_nml	avg_sfc_temp_salt_eta	True	True
	avg_sfc_velocity	True	True
	calvingspread	False	False
	do_bitwise_exact_sum do_flux_correction	False	False
	do_nux_correction land_model_heat_fluxes	False False	False False
	max_delta_salinity_restore	0.5	0.5
	max_ice_thickness	0.0	0.0
	read_restore_mask	False	False
	restore_mask_gfdl	False	False
	runoff_salinity	0.0	0.0
	salt_correction_scale	0.0 True	0.0
	salt_restore_as_salt_flux salt_restore_tscale	True 60.0	True 60.0
	satt_restore_tscate salt_restore_under_ice	True	True
	temp_restore_tscale	-10.0	-10.0
	use_full_patm_for_sea_level	False	False
	use_waterflux	True	True
	zero_heat_fluxes	False	False
	zero_net_salt_correction	False	False
	zero_net_salt_restore	True	True
	zero_net_water_correction	False	False
	zero_net_water_couple_restore	True True	True
	zero_net_water_coupler	irue	True

Group (continued)	Variable	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2/ 1deg jra55v13 ryf8485 spinup.A/ output000/ ocean/	new/ control/ 1deg jra55_ryf/ ocean/ input.nml
		input.nml	
	zero_net_water_restore zero_surface_stress	True False	True False
	zero_water_fluxes	False	False
&ocean_shortwave_csiro_nml	use_this_module	False	False
&ocean_shortwave_gfdl_nml	debug_this_module	False	False
	enforce_sw_frac	True	True
	optics_manizza	True	True
	optics_morel_antoine read_chl	False True	False True
	use_this_module	True	True
	zmax_pen	300.0	300.0
&ocean_shortwave_jerlov_nml	use_this_module	False	False
&ocean_shortwave_nml	use_shortwave_csiro	False	False
	use_shortwave_gfdl use_shortwave_jerlov	True False	True False
	use_shiotwave_jertov use_this_module	True	True
&ocean_sigma_transport_nml	use_this_module	False	False
&ocean_solo_nml	calendar	'NOLEAP'	'NOLEAP'
	date_init	1, 1, 1, 0, 0, 0	1, 1, 1, 0, 0, 0
	days	7.000	7.00
	dt_cpld hours	3600 0	3600 0
	minutes	0	0
	months	0	0
	seconds	0	0
	years	2	2
&ocean_sponges_eta_nml	use_this_module	False	False
&ocean_sponges_tracer_nml	use_this_module use_this_module	False False	False False
&ocean_sponges_velocity_nml &ocean_submesoscale_nml	coefficient_ce	0.05	0.05
xoccur-submesoscute_mit	debug_this_module	False	False
	front_length_const	5000.0	5000.0
	front_length_deform_radius	True	True
	limit_psi limit_psi_velocity_scale	True 0.5	True 0.5
	tillit_psi_vetocity_scate min_kblt	0.5 4	4
	smooth_advect_transport	True	True
	smooth_advect_transport_num	4	4
	smooth_hblt	False	False
	smooth_psi	True 3	True 3
	smooth_psi_num submeso_advect_flux	False	False
	submeso_advect_limit	True	True
	submeso_advect_upwind	True	True
	submeso_advect_zero_bdy	True	True
	submeso_diffusion	False	False
	submeso_diffusion_biharmonic submeso_diffusion_scale	True 10.0	True 10.0
	submeso_skew_flux	True	True
	use_hblt_equal_mld	True	True
	use_psi_legacy	False	False
0 t	use_this_module	True	True
kocean_tempsalt_nml	debug_this_module pottemp_2nd_iteration	False True	False True
	pottemp_znd_iteration pottemp_equal_contemp	True	True
	s_max	70.0	70.0
	s_max_limit	42.0	42.0
	s_min	0.0	0.0
	s_min_limit	2.0	2.0
	t_max t_max_limit	55.0 32.0	55.0 32.0
	t_max_umit t_min	-20.0	- 20.0
	t_min_limit	-20.0 -5.0	-20.0 -5.0
	temperature_variable	'potential	'potential
		temp'	temp'
Rocean_thickness_nml	debug_this_module	False	False

Group (continued)	Variable	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2/ 1deg jra55v13 ryf8485 spinup_A/ output000/ ocean/	new/ control/ 1deg jra55_ryf/ ocean/ input.nml
	debug_this_module_detail	input.nml False	False
	rescale_mass_to_get_ht_mod	False	False
	thickness_method	'energetic'	'energetic'
&ocean_tracer_advect_nml	debug_this_module read_basin_mask	False False	False False
&ocean_tracer_diag_nml	diag_step	4320	4320
	do_bitwise_exact_sum	False	False
&ocean_tracer_nml	tracer_conserve_days age_tracer_max_init	30.0 0.0	30.0 0.0
&ocean_tracer_nime	debug_this_module	False	False
	frazil_heating_after_vphysics	True	True
	frazil_heating_before_vphysics	False	False
	limit_age_tracer remap_depth_to_s_init	True False	True False
	use_tempsalt_check_range	True	True
	zero_tendency	False	False
9 again valority diag and	zero_tracer_source	False False	False False
&ocean_velocity_diag_nml	debug_this_module diaq_step	4320	4320
	energy_diag_step	4320	4320
	large_cfl_value	10.0	10.0
&ocean_velocity_nml	max_cfl_value adams_bashforth_third	100.0 True	100.0 True
&ocean_vetocity_nint	max_cqint	1.0	1.0
	truncate_velocity	False	False
	truncate_velocity_value	2.0	2.0
	truncate_verbose zero_tendency	True False	True False
	zero_tendency_explicit_a	False	False
	zero_tendency_explicit_b	False	False
&ocean_vert_kpp_iow_nml	zero_tendency_implicit use_this_module	False False	False False
&ocean_vert_kpp_mom4p1_nml	diff_cbt_iw	0.0	0.0
The second secon	double_diffusion	True	True
	kbl_standard_method	False	False
	ricr smooth_blmc	0.3 False	0.3 False
	smooth_ri_kmax_eq_kmu	True	True
	use_this_module	True	True
	visc_cbu_iw	0.0	0.0
&ocean_vert_mix_nml	aidif bryan_lewis_diffusivity	1.0 False	1.0 False
	bryan_lewis_lat_depend	False	False
	hwf_diffusivity	False	False
	hwf_min_diffusivity	2×10^{-6}	2×10^{-6}
	hwf_n0_2omega use_diff_cbt_table	20.0 False	20.0 False
	vert_diff_back_via_max	True	True
	vert_mix_scheme	'kpp	'kpp
&ocean_vert_tidal_nml	background_diffusivity	mom4p1' 0.0	mom4p1' 0.0
COCCUIT OF CHARLETING	background_unitosivity background_viscosity	0.0001	0.0001
	decay_scale	500.0	500.0
	drag_dissipation_use_cdbot	True	True
	drhodz_min fixed_wave_dissipation	$1 imes 10^{-10}$ False	$1 imes 10^{-10}$ False
	max_wave_diffusivity	0.01	0.01
	mixing_efficiency_n2depend	True	True
	read_roughness	True	True
	read_tide_speed read_wave_dissipation	True False	True False
	reading_roughness_amp	True	True
	reading_roughness_length	False	False
	roughness_scale shelf_depth_cutoff	12 000.0 1000.0	12 000.0 —1000.0
	snetr_deptn_cutorr tide_speed_data_on_t_grid	— 1000.0 True	— 1000.0 True
	tiuc_specu_uata_on_t_grid	iiuc	iiuc

Group (continued) Varia	,	new/
	data3/hh5/	control/
	tmp/ cosima/	1deg jra55_ryf/
	access-	ocean/
	om2/	input.nml
	1deg	приспп
	jra55v13	
	ryf8485	
	spinup_A/	
	output000/	
	ocean/	
	input.nml	
use_drag_dissipa		True
use_legacy_meth		False
use_this_mod	ule True	True
use_wave_dissipa	ion True	True
wave_energy_flux_i	nax 0.1	0.1
&ocean_xlandinsert_nml use_this_moc	ule False	False
&ocean_xlandmix_nml use_this_moc	ule False	False
&xgrid_nml interp_met	nod 'second	'second
	order'	order'
make_exchange_reprod	uce False	False
nsut	set 16	16

4.2 CICE namelists 'cice_in.nml', 'input_ice.nml', 'input_ice_gfdl.nml', 'input_ice_monin.nml'

data3/h tr cosii acco or 1de jra55v1 ryf848 spinup output0	raijin/g/ new, data3/hh5/ control, tmp/ 1deg_ cosima/ jra55_ryf, access- ice, om2/ cice_in.nm 1deg jra55v13 ryf8485 spinup_A/ output000/ ice/ cice_in.nml	data 3/l t cosi acc 1d jra 5 5 v ryf 8 4 spinu output 0
	'cartesian' 'cartesian	
	'latitude' 'latitude	
ry_type 'cy	'cyclic' 'cyclic	
	True True	
lo_dyn 1	True True	
	True True	
nprocs	24 24	
	'tripole' 'tripole	
	'slenderX1' 'slenderX1	
	'remap' 'remap	
	0.96 0.96	
	0.005 36 0.005 36	
	0.0005 0.0005	0.0
kdyn 	1 1	
_partic	1 1	
_redist	1 1	
rength	1 1	
nu_rdg ndte	120 120	
	False False	
	0.28 0.28	
	'unknown 'unknown_	
	atm_data atm_data_ dir' dir	
format	'nc' 'nc	
	'default' 'default	
	'default' 'default	
	True True	
	True True	
•	False False	F
ear_init	1 1	, ,
000	'unknown ocean- mixed_file' 'unknown_ ocean mixed_file'	00
	False False	
ata_dir 'unknov	'unknown ocn_data dir' orn_data dir'	'unkno

Group (continued)	Variable	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2/ 1deg jra55v13 ryf8485 spinup_A/ output000/ ice/ cice_in.nml	new/ control/ 1deg jra55_ryf/ ice/ cice_in.nml
	ocn_data_format	'nc'	'nc'
	precip_units	'mks'	'mks'
	restore_ice restore_sst	False False	False False
	sss_data_type	'default'	'default'
	sst_data_type	'default'	'default'
	trestore	0	0
	update_ocn_f	True	True
	ustar_min ycycle	0.0005 1	0.0005 1
&grid_nml	grid_file	'RESTART/	'RESTART/
-		grid.nc'	grid.nc'
	grid_format	'nc'	'nc'
	grid_type kcatbound	'tripole' 0	'tripole' 0
	kmt_file	'RESTART/	'RESTART/
		kmt.nc'	kmt.nc'
&icefields_bgc_nml	f_aero	'X'	'X'
	f_bgc_am_ml f_bgc_am_sk	'x' 'x'	'x' 'x'
	f_bgc_c_sk	'x'	'x'
	f_bgc_chl_sk	'x'	'x'
	f_bgc_dms_sk	'X'	'X'
	f_bgc_dmsp_ml f_bgc_dmspd_sk	'x' 'x'	'x' 'x'
	f_bgc_dmspp_sk	'x'	'x'
	f_bgc_n_sk	'x'	'x'
	f_bgc_nit_ml	'X'	,χ, ,,,
	f_bgc_nit_sk f_bgc_sil_ml	'x' 'x'	'x' 'x'
	f_bgc_sil_sk	'x'	'x'
	f_bphi	'X'	'X'
	f_btin f_faero_atm	'x' 'x'	'x' 'x'
	f_faero_ocn	, x , X,	, X , X,
	f_fbri	'm'	'm'
	f_fn	'x'	'x'
	f_fn_ai f_fnh	'x' 'x'	'x' 'x'
	f_fnh_ai	, 'X'	, ,X,
	f_fno	'x'	'x'
	f_fno_ai	'x'	'X'
	f_fsil f_fsil_ai	'x' 'x'	'x' 'x'
	f_grownet	'x'	'x'
	f_hbri	'm'	'm'
&icefields_drag_nml	f_ppnet f_cdn_atm	'x' 'x'	'X' 'X'
CICCICIOS_CIAG_IIIIII	f_cdn_atm f_cdn_ocn	, x 'x'	, x 'x'
	f_drag	'x'	'x'
&icefields_mechred_nml	f_alvl	'm'	'm'
	f_aparticn f_araftn	'x' 'x'	'x' 'x'
	f_ardg	x 'm'	'm'
	f_ardgn	'x'	'x'
	f_aredistn	'X'	'X'
	f_dardg1dt f_dardg1ndt	'x' 'x'	'x' 'x'
	f_dardg2dt	'x'	'x'
	f_dardq2ndt	'x'	'x'
	f_dvirdgdt	'X'	'X'
	f_dvirdgndt f_krdgn	'x' 'x'	'x' 'x'
	f_opening	, 'X'	'x'
	f_vlvl	'm'	'm'
	f_vraftn	'X' 'm'	'X' 'm'
	f_vrdg	'm'	'm'

Group (continued) Variable	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2/ 1deg jra55v13 ryf8485 spinup_A/ output000/ ice/ cice_in.nml	new/ control/ 1deg jra55_ryf/ ice/ cice_in.nml
f_vrdgn	'x'	'x'
f_vredistn	'X'	'x' 'm'
&icefields_nml f_aice f_aicen	'm' 'm'	'm' 'm'
f_aicer	'X'	'X'
f_albice	'm'	'm'
f_albpnd	'x'	'x'
f_albsni	'm'	'm'
f_albsno f_alidr	'm' 'x'	'm' 'x'
f_alvdr	, X 'X'	,x 'X'
f_angle	True	True
f_anglet	True	True
f_bounds	False	False
f_congel f_coszen	'm' 'x'	'm' 'x'
f_daidtd	'm'	'm'
f_daidtt	'm'	'm'
f_divu	'm'	'm'
f_dsnow	'x'	'x'
f_dvidtd f_dvidtt	'm' 'm'	'm' 'm'
f_dxt	True	True
f_dxu	True	True
f_dyt	True	True
f_dyu	True	True
f_evap f_evap_ai	'x' 'm'	'x' 'm'
f_evap_ai	'm'	'm'
f_fcondtopn_ai	'm'	'm'
f_fhocn	'x'	'x'
f_fhocn_ai	'm'	'm'
f_flat f_flat_ai	'X' 'm'	'x' 'm'
f_flatn_ai	'm' 'm'	'm'
f_flwdn	'm'	'm'
f_flwup	'x'	'x'
f_flwup_ai	'm'	'm'
f_fmeltt_ai f_fmelttn_ai	'x' 'm'	'x' 'm'
f_frazil	'm'	'm'
f_fresh	'x'	'x'
f_fresh_ai	'm'	'm'
f_frz_onset	'm' 'm'	'm' 'm'
f_frzmlt f_fsalt	'm' 'x'	'm' 'x'
f_fsalt_ai	'm'	'm'
f_fsens	'x'	'm' 'x'
f_fsens_ai	'm'	'm'
f_fsurf_ai f_fsurfn_ai	'x' 'm'	'X' 'm'
f_fswabs	'X'	'm' 'x'
f_fswabs_ai	'm'	'm'
f_fswdn	'm'	'm'
f_fswfac f_fswthru	'm' 'x'	'm' '∨'
f_rswtnru f_fswthru_ai	'm'	'x' 'm'
f_fy	'X'	'x'
f_hi	'm'	'm'
f_hisnap	'x'	'x'
f_hs	'm'	'm'
f_hte f_htn	True True	True True
f_iage	'm'	'm'
f_icepresent	'm'	'm'
f_meltb	'm'	'm'
f_meltl	'm'	'm'

Group (continued)	Variable	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2/ 1deg jra55v13 ryf8485 spinup_A/ output000/ ice/ cice_in.nml	new/ control/ 1deg jra55_ryf/ ice/ cice_in.nml
	f_melts	'm'	'm'
	f_meltt f_mlt_onset	'm' 'm'	'm' 'm'
	f_ncat	True	True
	f_qref	'x'	'x'
	f_rain	'x'	'x'
	f_rain_ai f_shear	'm' 'm'	'm' 'm'
	f_sice	'm'	'm'
	f_sig1	'x'	'x'
	f_sig2	'x'	'x'
	f_sinz f_snoice	'X' 'm'	'X' 'm'
	f_snow	'm' 'x'	'm' 'x'
	f_snow_ai	'm'	'm'
	f_sss	'm'	'm'
	f_sst	'm' ''	'm' ''
	f_strairx f_strairy	'm' 'm'	'm' 'm'
	f_strcorx	'm'	'm'
	f_strcory	'm'	'm'
	f_strength	'm' ''	'm' ''
	f_strintx f_strinty	'm' 'm'	'm' 'm'
	f_strocnx	'm'	'm'
	f_strocny	'm'	'm'
	f_strtltx	'm' ''	'm'
	f_strtlty f_tair	'm' 'm'	'm' 'm'
	f_tarea	True	True
	f_tinz	'x'	'x'
	f_tmask	True	True
	f_tref f_trsig	'x' 'm'	'x' 'm'
	f_tsfc	'm'	'm'
	f_tsnz	'x'	'x'
	f_uarea	True	True
	f_uocn f_uvel	'm' 'm'	'm' 'm'
	f_vgrdb	False	False
	f_vgrdi	False	False
	f_vgrds f_vicen	False 'm'	False 'm'
	f_vocn	'm'	'm'
	f_vvel	'm'	'm'
&icefields_pond_nml	f_apeff	'm'	'm'
	f_apeff_ai f_apeffn	'm' 'x'	'm' 'x'
	f_apond	'm'	'm'
	f_apond_ai	'm'	'm'
	f_apondn f_hpond	'X' 'm'	'X' 'm'
	f_hpond_ai	'm' 'm'	'm' 'm'
	f_hpondn	'x'	'x'
	f_ipond	'm'	'm'
& ponds pm	f_ipond_ai	'm'	'm' 0.001
&ponds_nml	dpscale frzpnd	0.001 'hlid'	0.001 'hlid'
	hp1	0.01	0.01
	hs0	0.0	0.0
	hs1	0.03 0.8	0.03 0.8
	pndaspect rfracmax	1.0	1.0
	rfracmin	0.15	0.15
&setup_nml	days_per_year	365	365
	dbug diag_file	False 'ice_diag.d'	False
	uiag_file	ice_uiag.a	'ice_diag.d'

Group (continued) Vari	able raijin/g/ data3/hh5/ tmp/ cosima/ access- om2/ 1deg jra55v13 ryf8485 spinup.A/ output000/ ice/	control/ 1deg jra55_ryf/ ice/ cice_in.nml
diag.	type 'file	
diag	ofreq 24 dt 3600	
dump		
dump	ofreq 'y	
dumpfr		1
	_avg True tfreq 'd', 'm', 'x', 'x'	
	'X	
histfr		1, 1, 1, 1, 1
histor history		
	ce_ic 'default'	
incone	d_dir './OUTPUT/	'./OUTPUT/'
incond		
	tep0 0 htpnt 90.0, —65.0	
lo In	df64 False	True
	npnt 0.0, —45.0	0.0, -45.0
	ndtd 1 npt 17520	
pointer		
	ice.restart file	ice.restart file'
print_gl		
print_pi re	start False	
restar		'./RESTART/'
restart		
restart_fo		
	type 'initial	
use_leap_y	rears False	False
use_restart_		True
	te_ic False :_init 1	
	ımax 0.1	
albedo.	type 'default'	
	bicei 0.44 picev 0.86	
albs		
albsr	10WV 0.98	0.98
	_mlt	
	r_ice 0.0	
r	_pnd 0.0	0.0
	_snw 0.0	0.0
rsnw shortv		
	-1.8	-1.8
&thermo_nml a_rapid_n		
aspect_rapid_n	node 1.0 chio 0.004	
	duct 'bubbly	'bubbly'
dsdt_slow_n	$-5 \times$	$-5 \times$
	10 ⁻⁸ kitd 1	1
kti phi_c_slow_n	nerm 1 node 0.05	
pni_c_stow_n phi_i_m		
rac_rapid_n	node 10.0	10.0
&tracer_nml restart_	aero False	False
restart restart		
restar		
restart_pond_	cesm False	False
restart_pon	d_lvl False	False

new/ control/ 1deg jra55_ryf/ ice/ cice_in.nml	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2/ 1deg jra55v13 ryf8485 spinup_A/ output000/ ice/ cice_in.nml	oup (continued) Variable
False	False	restart_pond_topo
False	False	tr_aero tr_aero
False	False	tr_fy
False	False	tr_iage
False	False	tr_lvl
False	False	tr_pond_cesm
False	False	tr_pond_lvl
False	False	tr_pond_topo
'unknown bgc_data dir'	'unknown bgc_data dir'	bgc_nml bgc_data_dir
'Jin2006'	'Jin2006'	bgc_flux_type
'default'	'default'	nit_data_type
0.5	0.5	ph_snow
False	False	restart_bgc
False	False	restart_hbrine
False	False	restore_bgc
'default'	'default'	siL.data_type
False	False	skL-bgc
False	False	tr_bgc_am_sk
False	False	tr_bgc_c_sk
False	False	tr_bgc_chl_sk
False	False	tr_bgc_dms_sk
False	False	tr_bgc_dmspd_sk
False	False	tr_bgc_dmspp_sk
False	False	tr_bgc_siL_sk
False	False	tr_brine

	jı : ol	raijin/g/ lata3/hh5/ tmp/ cosima/ access- om2/ 1deg jra55v13 ryf8485 spinup_A/ utput000/ ice/input ice.nml	control/ 1deg jra55_ryf/ ice/input ice.nml
chk_a2i		False	False
<u>Chk_frzn</u>			False
chk_gfdL_roug		False	False
chk i2a			False
chk.i2o			False
chk_o2i			False
cst_ocn_c		True	True
dt.	_cpl_ai	10800	10800
dt.	_cpl_io	3600	3600
gfdl_surfac		True	True
	_fwflux	True	True
ice_pressu	ure_on	True	True
limit_id		False	False
	eltlimit	-200.0	-200.0
	albedo	0.1	0.1
	cediag	True 1.0	True 1.0
precip. rotate.		True	True
USE_OCI		False	False
	umask	False	False

Group	Variable	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2/ 1deg jra55v13 ryf8485 spinup_A/ output000/ ice/ input_ice gfdLnml	new/ control/ 1deg jra55_ryf/ ice/ input_ice gfdl.nml
&ocean_rough_nml	charnock	0.032	0.032
	do_cap40	False	False
	do_highwind	False	False
	rough_scheme	'beljaars'	'beljaars'
	roughness_heat	5.8×10^{-5}	5.8×10^{-5}
	roughness_min	1×10^{-6}	1×10^{-6}
	roughness_moist	5.8×10^{-5}	5.8×10^{-5}
	roughness_mom	5.8×10^{-5}	5.8×10^{-5}
	zcoh1	0.0	0.0
	zcoq1	0.0	0.0
&surface_flux_nml	alt_gustiness	False	False
	gust_const	1.0	1.0
	gust_min	0.0	0.0
	ncar_ocean_flux	True	True
	ncar_ocean_flux_orig	False	False
	no_neg_q	False	False
	old_dtaudv	False	False
	raoult_sat_vap	False	False
	use_mixing_ratio	False	False
	use_virtual_temp	True	True

Group	Variable raiji	n/g/ new/
	data3/	
	1	tmp/ 1deg
		ima/ jra55_ryf/
	acc	cess- ice/
	d	m2/ input_ice
	10	leg monin.nml
	jra55v	13
	ryf84	·85
	spinu	p_A/
	output	000/
		ice/
	input_	ice
	monin	.nml
&monin_obukhov_nml	neutral	True True

4.3 MATM namelist 'input_atm.nml'

Group	Variable	raijin/g/	new/
		data3/hh5/	control/
		tmp/	1deg
		cosima/	jra55_ryf/
		access-	atmosphere/
		om2/	input
		1deg	atm.nml
		jra55v13	
		ryf8485	
		spinup_A/	
		output000/	
		atmosphere/	
		input	
		atm.nml	
&coupling	caltype	0	0
	chk_a2i_fields	False	
	chk_i2a_fields	False	
	dataset	'jra55'	'jra55'
	days_per_year	365	365
	debug_output	False	False
	dt_atm	3600	3600
	dt_cpl	10800	10800
	·		20000

Group (continued)	Variable	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2/ 1deg jra55v13 ryf8485 spinup A/ output000/ atmosphere/ input atm.nml	new/ control/ 1deg jra55_ryf/ atmosphere/ input atm.nml
	inidate	10101	10101
	init_date	10101	10101
	runtime	63072000	126144000
	runtype	'NY'	'NY'
	truntime0	0	0

5 Changes between all 1/10 runs

$5.1 \quad access-om 2-01/01 deg_jra 55v 13_ryf8 485_spinup^*$

Group \	/ariable	raijin/g/								
		data3/hh5/								
		tmp/								
		cosima/								
		access-								
		om2-01/								
		01deg								
		jra55v13								
		ryf8485								
		spinup1/	spinup1/	spinup3/	spinup3/	spinup4/	spinup4/	spinup4/	spinup5/	spinup6/
		output000/	output001/	output000/	output002/	output004/	output006/	output007/	output000/	output000/
		ocean/								
		input.nml								
&auscom_ice_nml	dt_cpl	120	300	300	300	240	240	240	180	300
&fms_io_nml checksum_r	equired					False	False	False	False	False
&ocean_model_nml d	t_ocean	120	300	300	300	240	240	240	180	300
io	_layout	10, 15	10, 15	10, 15	10, 15	5, 5	5, 5	5, 5	5,5	5, 5
&ocean_riverspread_nml debu module	g_this				False	False	False	False	False	False
&ocean_sbc_nml ocean_ice_sa	alt_limit						0.006	0.006		0.006
runof	ffspread				False	False	False	False	False	False
salt_restore	e_tscale	60.0	60.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
&ocean_solo_nml	days	0	0	0	0	0	3	27	0	0
	dt_cpld	120	300	300	300	240	240	240	180	300
	months	1	2	2	2	1	0	0	1	2
&ocean_tempsalt_nml	s_min	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0

Variable	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup1/ output000/ ice/ cice_in.nml	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup1/ output001/ ice/ cice_in.nml	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup2/ output000/ ice/ cice_in.nml	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup2/ output001/ ice/ cice_in.nml	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup3/ output000/ ice/ cice_in.nml	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup3/ output001/ ice/ cice_in.nml	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup3/ output003/ ice/ cice_in.nml	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup3/ output004/ ice/ cice_in.nml	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup3/ output006/ ice/ cice_in.nml	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup3/ output007/ ice/ cice_in.nml	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup3/ output009/ ice/ cice_in.nml	raijin/s data3/hh: tml cosim: acces om2-0: 01deg jra55v13 ryf8485 spinup- output000 ccice_in.nr
nml tfrz op- tion												
&icel nml f aice	'm'	ì										
f aicen	'x'	:										
f con- gel	'x'	,										
f divu	'x'	,										
f flatn. ai	'x'	į										
f fmelt ai	'x'	,										
f frz on- set	'x'											
f fsalt	'x'	,										
f fsalt. ai	'x'											

Grou (con- tin- ued) Vari- able	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup1/ output000/ ice/ cice_in.nml	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup1/ output001/ ice/ cice_in.nml	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup2/ output000/ ice/ cice_in.nml	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup2/ output001/ ice/ cice_in.nml	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup3/ output000/ ice/ cice_in.nml	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup3/ output001/ ice/ cice_in.nml	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup3/ output003/ ice/ cice_in.nml	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup3/ output004/ ice/ cice_in.nml	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup3/ output006/ ice/ cice_in.nml	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup3/ output007/ ice/ cice_in.nml	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup3/ output009/ ice/ cice_in.nml	raijin/g data3/hh5 tmp cosima access om2-01 01deg- jra55v13. ryf8485_ spinup4 output000 ice
f hi	'm'	'n										
f mlt on- set	'x'	' X'	'x'	'X'	' x'	'						
f	'x'	'										
shear f sig1	'x'	'										
f	'x'	'										
sig2 f	'x'	'										
sss f	'x'	'>										
sst f	'x'	,										
strair												,
f strair	'x'	,										
f stren	'x'	''										
f uvel	'x'	''										
f vi-	'x'	'										
cen f vvel	'x'	'										
&set nml dbug	False	Fals										
dt	120	300	300	300	300	300	300	300	300	300	300	300
is- tep0	0	8928	0	16992	0	16992	52128	69984	105120	122112	157248	(
latpn	90.0, —65.0	90.0, —65.0	90.0, —65.0	90.0, —65.0	90.0, —65.0	90.0, —65.0	90.0, —65.0	90.0, —65.0	90.0, —65.0	90.0, —65.0	90.0, -65.0	90.0, —65.
lonpr	0.0, —45.0	0.0, -45.0	0.0, -45.0	0.0, -45.0	0.0, —45.0	0.0, —45.0	0.0, -45.0	0.0, -45.0	0.0, -45.0	0.0, —45.0	0.0, —45.0	0.0, —45.
npt	22320	16992	16992	17568	16992	17568	17856	17568	16992	17568	17856	1699
print point	True	Tru										
	False	True	False	True	False	True	True	True	True	True	True	False
resta	'initial'	'continue'	'initial'	'continue'	'initial'	'continue'	'continue'	'continue'	'continue'	'continue'	'continue'	'initia
&the nml	1	1	1	1	1	1	1	1	1	1	1	;

Group	Variable	raijin/g/	raijin/g/	raijin/g/	raijin/g/	raijin/g/
·		data3/hh5/	data3/hh5/	data3/hh5/	data3/hh5/	data3/hh5/
		tmp/	tmp/	tmp/	tmp/	tmp/
		cosima/	cosima/	cosima/	cosima/	cosima/
		access-	access-	access-	access-	access-
		om2-01/	om2-01/	om2-01/	om2-01/	om2-01/
		01deg	01deg	01deg	01deg	01deg
		jra55v13	jra55v13	jra55v13	jra55v13	jra55v13
		ryf8485	ryf8485	ryf8485	ryf8485	ryf8485
		spinup1/	spinup1/	spinup4/	spinup5/	spinup6/
		output000/	output001/	output004/	output000/	output000/
		ice/input	ice/input	ice/input	ice/input	ice/input
		ice.nml	ice.nml	ice.nml	ice.nml	ice.nml
&coupling_nml	dt_cpl_io	120	300	240	180	300

Grou Vari- able	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup1/ output000/ atmosphere/ input atm.nml	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup1/ output001/ atmosphere/ input atm.nml	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup2/ output001/ atmosphere/ input atm.nml	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup3/ output000/ atmosphere/ input atm.nml	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup3/ output001/ atmosphere/ input atm.nml	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup3/ output003/ atmosphere/ input atm.nml	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup3/ output004/ atmosphere/ input atm.nml	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup3/ output006/ atmosphere/ input atm.nml	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup3/ output007/ atmosphere/ input atm.nml	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup3/ output009/ atmosphere/ input atm.nml	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup4/ output000/ atmosphere/ input atm.nml	raijin/g data3/hh5 tmp cosima access om2-01 01deg jra55v13. ryf8485. spinup4 output001 atmospher input atm.nn
&cou dt	120	300	300	300	300	300	300	300	300	300	300	30
atm												
inida	10101	10201	10301	10101	10301	10701	10901	20101	20301	20701	10101	1030
num. runof caps										3	3	
runof cap								0.01	0.01			
runot caps										0.03, 0.003, 0.003, 0.0	0.03, 0.003, 0.003, 0.0	0.03, 0.003 0.003, 0.
runol caps.										1000000, 3530, 240, -1	1000000, 3530, 240, -1	1000000 3530, 240
runol caps.										0, 3470, 180, 0	0, 3470, 180, 0	0, 347(180,
runol caps.										1000000, 2650, 99999, -1	1000000, 2650, 99999, -1	1000000 2650 99999, -
runol caps.										0, 2270, 2670, 0	0, 2270, 2670, 0	0, 227(2670,
run- time	2678400	5097600	5270400	5097600	5270400	5356800	5270400	5097600	5270400	5356800	5097600	527040
trun- time(0	2678400	5097600	0	5097600	15638400	20995200	31536000	36633600	47174400	0	509760

6 Changes between 1/10 spinups 4 and 6

6.1 access-om2-01/01deg_jra55v13_ryf8485_spinup[46]

Group	Variable	raijin/g/ data3/hh5/	raijin/g/ data3/hh5/	raijin/g/ data3/hh5/	raijin/g/ data3/hh5/	raijin/g/ data3/hh5/
		tmp/	tmp/	tmp/	tmp/	tmp/
		cosima/	cosima/	cosima/	cosima/	cosima/
		access-	access-	access-	access-	access-
		om2-01/	om2-01/	om2-01/	om2-01/	om2-01/
		$01{ m deg}$ -	01 deg-	$01{ m deg}$ -	$01{ m deg}$ -	01 deg-
		jra55v13	jra55v13	jra55v13	jra55v13	jra55v13
		ryf8485	ryf8485	ryf8485	ryf8485	ryf8485
		spinup4/ output000/	spinup4/ output004/	spinup4/ output006/	spinup4/ output007/	spinup6/ output000/
		ocean/	ocean/	ocean/	ocean/	ocean/
		input.nml	input.nml	input.nml	input.nml	input.nml
&auscom_ice_nml	dt_cpl	300	240	240	240	300
&fms_io_nml	checksum_required		False	False	False	False
&ocean_model_nml	dt_ocean	300	240	240	240	300
	io_layout	10, 15	5, 5	5, 5	5, 5	5, 5
&ocean_sbc_nml	ocean_ice_salt_limit			0.006	0.006	0.006
&ocean_solo_nml	days	0	0	3	27	0
	dt_cpld	300	240	240	240	300
	months	2	1	0	0	2

Tinear_salt' Tine	Grou Vari- able	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup4/ output000/ ice/ cice_in.nml	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup4/ output001/ ice/ cice_in.nml	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup4/ output003/ ice/ cice_in.nml	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup4/ output004/ ice/ cice_in.nml	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup4/ output005/ ice/ cice_in.nml	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup4/ output006/ ice/ cice_in.nml	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup4/ output007/ ice/ cice_in.nml	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup6/ output000/ ice/ cice_in.nml	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup6/ output001/ ice/ cice_in.nml	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup6/ output003/ ice/ cice_in.nml	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup6/ output004/ ice/ cice_in.nml	raijin/g data3/hh5 tmp cosima access om2-01 01deg jra55v13. ryf8485. spinup6 output006 ice
&cice m'	nml tfrz op-		•	•	•	·							'mush
f X	&icel nml f aice				'm'	'm'							'm(
f 'X' 'X' <td>f</td> <td>'x'</td> <td>,</td>	f	'x'	'x'	'x'	'X'	'x'	'x'	'x'	'x'	'x'	'x'	'x'	,
f X X X X X X X Y	f con-	'x'	'X'	'x'	'x'	'x'	'x'	'x'	'X'	'x'	'x'	'x'	'n
f 'X' 'X' 'X' 'X' 'X' 'X' 'X' 'M' 'm' <td>f</td> <td>'x'</td> <td>'x'</td> <td>'x'</td> <td>'x'</td> <td>'x'</td> <td>'x'</td> <td>'x'</td> <td>'m'</td> <td>'m'</td> <td>'m'</td> <td>'m'</td> <td>'n</td>	f	'x'	'x'	'x'	'x'	'x'	'x'	'x'	'm'	'm'	'm'	'm'	'n
f 'X' '	f flatn.	'x'	'x'	'x'	'x'	'x'	'x'	'x'	'm'	'm'	'm'	'm'	'n
f 'x' 'x' 'x' 'x' 'x' 'x' 'm' 'm' <td>f fmelt</td> <td>'x'</td> <td>'x'</td> <td>'x'</td> <td>'x'</td> <td>'x'</td> <td>'x'</td> <td>'x'</td> <td>'m'</td> <td>'m'</td> <td>'m'</td> <td>'m'</td> <td>'n</td>	f fmelt	'x'	'x'	'x'	'x'	'x'	'x'	'x'	'm'	'm'	'm'	'm'	'n
f 'X' 'X' <td>f frz on-</td> <td>'x'</td> <td>'x'</td> <td>'x'</td> <td>'X'</td> <td>'x'</td> <td>'x'</td> <td>'x'</td> <td>'m'</td> <td>'m'</td> <td>'m'</td> <td>'m'</td> <td>'n</td>	f frz on-	' x '	'x'	'x'	' X '	'x'	'x'	'x'	'm'	'm'	'm'	'm'	'n
f 'x' 'x' 'x' 'x' 'x' 'x' 'x' 'd' 'md' 'md' <td>f</td> <td>'x'</td> <td>'x'</td> <td>'x'</td> <td>'x'</td> <td>'x'</td> <td>'x'</td> <td>'x'</td> <td>'d'</td> <td>'d'</td> <td>'d'</td> <td>'d'</td> <td>,</td>	f	'x'	'x'	'x'	'x'	'x'	'x'	'x'	'd'	'd'	'd'	'd'	,
hi f 'x' 'x' 'x' 'x' 'x' 'x' 'x' 'm' 'm' 'm'	f fsalt_	'x'	'x'	'x'	'x'	'x'	'x'	'x'	'd'	'd'	'd'	'd'	'(
f 'x' 'x' 'x' 'x' 'x' 'x' 'x' 'x' 'm' 'm' 'm' 'm' m' mt on-		'm'	'm'	'm'	'm'	'm'	'm'	'm'	'md'	'md'	'md'	'md'	'm
	f mlt	'x'	'x'	'x'	'x'	'x'	'x'	'x'	'm'	'm'	'm'	'm'	'n

Grou (con- tin- ued) Vari- able	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup4/ output000/ ice/	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup4/ output001/ ice/	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup4/ output003/ ice/	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup4/ output004/ ice/	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup4/ output005/ ice/	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup4/ output006/ ice/	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup4/ output007/ ice/	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup6/ output000/ ice/	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup6/ output001/ ice/	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup6/ output003/ ice/	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup6/ output004/ ice/	raijin/g, data3/hh5, tmp, cosima, access om2-01, 01deg_ jra55v13_ ryf8485_ spinup6, output006,
	cice_in.nml	cice_in.nml	cice_in.nml	cice_in.nml	cice_in.nml	cice_in.nml	cice_in.nml	cice_in.nml	cice_in.nml	cice_in.nml	cice_in.nml	cice_in.nm
f sheai	'X'	'x'	'x'	'x'	'x'	'x'	'x'	'm'	'm'	'm'	'm'	m
f sig1	'χ'	'x'	'x'	'x'	'x'	'x'	'x'	'm'	'm'	'm'	'm'	'n
f sig2	'x'	'x'	'x'	'x'	'x'	'x'	'x'	'm'	'm'	'm'	'm'	'n
f	'x'	'x'	'x'	'x'	'x'	'x'	'x'	'd'	'd'	'd'	'd'	'c
sss f sst	'x'	'x'	'x'	'X'	'x'	'x'	'x'	'm'	'm'	'm'	'm'	'd
f strair	'χ'	'X'	'x'	'x'	'x'	'x'	'x'	'x'	'χ'	'x'	'x'	'n
f strair	'x'	'x'	'x'	'x'	'x'	'x'	'x'	'x'	'x'	'x'	'x'	'n
f stren	'x'	'x'	'x'	'x'	'x'	'X'	'x'	'x'	'X'	'x'	'x'	'n
f uvel	'x'	'x'	'x'	'x'	'x'	'x'	'x'	'm'	'm'	'm'	'm'	'n
f vi- cen	'x'	'x'	'x'	'x'	'x'	'x'	'x'	'm'	'm'	'm'	'm'	'n
f vvel	'x'	'x'	'x'	'x'	'x'	'x'	'x'	'm'	'm'	'm'	'm'	'n
&set nml dbug	False	False	False	False	False	False	False	True	True	True	True	False
dt	300	300	300	240	240	240	240	300	300	300	300	300
is- tep0	0	16992	52128	87480	98280	109440	110520	0	16992	52128	69984	105120
latpn	90.0, -65.0	90.0, -65.0	90.0, —65.0	90.0, —65.0	90.0, —65.0	90.0, —65.0	90.0, —65.0	66.75, 68.0	66.75, 68.0	66.75, 68.0	66.75, 68.0	66.75, 68.0
lonpr	0.0, -45.0	0.0, -45.0	0.0, —45.0	0.0, —45.0	0.0, —45.0	0.0, —45.0	0.0, —45.0	72.5, 74.0	72.5, 74.0	72.5, 74.0	72.5, 74.0	72.5, 74.0
npt	16992	17568	17856	10800	11160	1080	9720	16992	17568	17856	17568	16992
print point	True	True	True	True	True	True	True	True	True	True	True	False
resta	False	True	True	True	True	True	True	False	True	True	True	True
runty	'initial'	'continue'	'continue'	'continue'	'continue'	'continue'	'continue'	'initial'	'continue'	'continue'	'continue'	'continue
&the nml kther	1	1	1	1	1	1	1	1	1	2	2	

Group	Variable	raijin/g/	raijin/g/	raijin/g/
·		data3/hh5/	data3/hh5/	data3/hh5/
		tmp/	tmp/	tmp/
		cosima/	cosima/	cosima/
		access-	access-	access-
		om2-01/	om2-01/	om2-01/
		01deg	01deg	01deg
		jra55v13	jra55v13	jra55v13
		ryf8485	ryf8485	ryf8485
		spinup4/	spinup4/	spinup6/
		output000/	output004/	output000/
		ice/input	ice/input	ice/input
		ice.nml	ice.nml	ice.nml
&coupling_nml	dt_cpl_io	300	240	300

	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup4/ output000/ atmosphere/ input atm.nml	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup4/ output001/ atmosphere/ input atm.nml	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup4/ output003/ atmosphere/ input atm.nml	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup4/ output004/ atmosphere/ input atm.nml	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup4/ output005/ atmosphere/ input atm.nml	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup4/ output006/ atmosphere/ input atm.nml	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup4/ output007/ atmosphere/ input atm.nml	raijin/g/ data 3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup6/ output000/ atmosphere/ input atm.nml	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup6/ output001/ atmosphere/ input atm.nml	input atm.nml	raijin/g/ data3/hh5/ tmp/ cosima/ access- om2-01/ 01deg jra55v13 ryf8485 spinup6/ output004/ atmosphere/ input atm.nml	input_ atm.nm
&cou dt atm	300	300	300	240	240	240	240	300	300	300	300	300
inida	10101	10301	10701	10901	11001	11101	11104	10101	10301	10701	10901	2010:
num. runol caps	3	3	3	4	4	4	4	4	4	4	4	
runof	0.03, 0.003, 0.003, 0.0	0.03, 0.003, 0.003, 0.0	0.03, 0.003, 0.003, 0.0	0.03, 0.003, 0.003, 0.003	0.03, 0.003, 0.003, 0.003	0.03, 0.001, 0.003, 0.003	0.03, 0.001, 0.003, 0.003	0.03, 0.001, 0.003, 0.003	0.03, 0.001, 0.003, 0.003	0.03, 0.001, 0.003, 0.003	0.03, 0.001, 0.003, 0.003	0.03, 0.001 0.003, 0.003
runol caps.	1000000, 3530, 240, -1	1000000, 3530, 240, -1	1000000, 3530, 240, -1	1000000, 3530, 240, 400	1000000, 3530, 240, 400	1000000, 3530, 240, 400	1000000, 3530, 240, 400	1000000 3530, 240 400				
runol caps.	0, 3470, 180, 0	0,3470, 180,0	0, 3470, 180, 0	0, 3470, 180, 300	0, 3470, 180, 300	0, 3470, 180, 300	0, 3470, 180, 300	0, 3470 180, 300				
runol caps. je	1000000, 2650, 99999, -1	1000000, 2650, 99999,-1	1000000, 2650, 99999, -1	1000000, 2650, 99999, 2470	1000000, 2650, 99999, 2470	1000000, 2650, 99999, 2470	1000000, 2650, 99999, 2470	1000000, 2650, 99999, 2470	1000000, 2650, 99999, 2470	1000000, 2650, 99999, 2470	1000000, 2650, 99999, 2470	1000000 2650 99999 2470
runol caps. js	0, 2270, 2670, 0	0, 2270, 2670, 0	0, 2270, 2670, 0	0, 2270, 2670, 2400	0, 2270, 2670, 2400	0, 2270, 2670, 2400	0, 2270, 2670, 2400	0, 2270 2670, 2400				
run- time	5097600	5270400	5356800	2592000	2678400	259200	2332800	5097600	5270400	5356800	5270400	5097600
trun- time(0	5097600	15638400	20995200	23587200	26265600	26524800	0	5097600	15638400	20995200	31536000

References

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