MOM-SIS / ACCESS-OM2 MOM5 namelist comparisons

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

- 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_nphysicsc_nml, ocean_overflow_ofp_nml, ocean_rough_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

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).

References

Griffies, S. M., and Coauthors, 2015: Impacts on ocean heat from transient mesoscale eddies in a hierarchy of climate models. *Journal of Climate*, **28 (3)**, 952–977, doi:10.1175/jcli-d-14-00353.1, URL http://dx.doi.org/10.1175/JCLI-D-14-00353.1.

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1 Differences between new ACCESS-OM2 configs

Only differences are shown. We aim to make this list as short as possible...

Group	Variable	new_acces- som2 1deg jra55_ryf input.nml	new_acces- som2 025deg jra55_ryf input.nml	new_acces- som2 01deg jra55_ryf input.nml
&auscom_ice_nml	dt_cpl	3600	1800	600
9 francis and			'manulai'	'multi'
&TTTS_10_NTNL				mutti 'multi'
&ocean_adv_vel_diag_nml	-	4320	4320	576
&ocean_barotropic_nml		576		
&ocean_lapgen_friction_nml				
			False	False
an_lapgen_friction_nml				
&ocean_mixdownslope_nml				
	mixdownslope_mask_gfdl	False		
	mixdownslope_npts			
O a casa are del ared	Som2	False		
com_ice_nmlio_nml an_adv_vel_diag_nml an_barotropic_nml an_lapgen_friction_nml an_mixdownslope_nml an_model_nml an_nphysics_nml an_nphysics_util_nml				150 10, 15
				80,75
&ocean_nphysics_nml				False
		True	False	False
&ocean_nphysics_util_nml			100.0	100.0
	agm_closure_eden_greatbatch			
			100.0	100.0
			False	False
&auscom_ice_nml &fms_io_nml &ocean_adv_vel_diag_nml		True		
Sample				
	do_am_skewsion			
		True		
	epsln_bv_freq	$1 imes 10^{-12}$		
	gm_skewsion_bvproblem			
	smax_psi	0.01		
	smooth_psi			
		True		
	turb_blayer_min use_this_module	50.0 True	False	False
&ocean_solo_nml	days	1460	31	30
woccur_goto_mit	days dt_cpld	3600	1200	600
&ocean_tracer_diag_nml	diag_step	4320	4320	576
&ocean_velocity_diag_nml	diag_step	4320	4320	576
	energy_diag_step	4320	4320	5760
&xgrid_nml	do_alltoall			True
	do_alltoallv			True

2 Old and new ACCESS-OM2 configs (differences highlighted)

2.1 accessom2_1deg_jra55_ryf

Group	Variable	original/ hogg_acces- som2 1deg jra55_ryf input.nml	new_acces- som2 1deg jra55_ryf 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	3600	3600
	fixmeltt	False	False
	frazil_factor	1.0	1.0
	iceform_adj_salt	False	False
	icemlt_factor	1.0	1.0
	kmxice	5	5
	pop_icediag	True	True
	redsea_gulfbay_sfix	True	True
	sign_stflx	1.0	1.0
	tmelt	-0.216	-0.216
	use_ioaice	True	True
&bg_diff_lat_dependence_nml	bg_diff_eq	1×10^{-6}	
	lat_low_bgdiff	20.0	
&diag_manager_nml	debug_diag_manager		True
	issue_oor_warnings	False	True
&fms_io_nml	fileset_write	'single'	'single'
	threading_read	'multi'	'multi'
	threading_write	'single'	'single'
&fms_nml	clock_grain	'LOOP'	'COMPONENT'
	domains_stack_size		115200
&mom_oasis3_interface_nml	fields_in	'u_flux',	'u_flux',
		'v_flux',	'v_flux',
		'lprec', 'fprec',	'lprec', 'fprec',
		'salt_flx',	'salt_flx',
		'mh_flux',	'mh_flux',
		'sw_flux',	'sw_flux',
		'q_flux',	'q_flux',
		't_flux',	't_flux',
		'lw_flux',	'lw_flux',
		'runof', 'p',	'runof', 'p',
		'aice',	'aice',
		'wfimelt',	'wfimelt',
		'wfiform'	'wfiform'
	fields_out	't_surf',	't_surf',
		's_surf',	's_surf',
		'u_surf',	'u_surf',
		'v_surf',	'v_surf',
		'dssldx',	'dssldx',
		'dssldy',	'dssldy',
		'frazil'	'frazil'
	num_fields_in	15	15
	num_fields_out	7	7
	send_after_ocean_update	True	True
O manife about the more	send_before_ocean_update	False	False
&monin_obukhov_nml	neutral		True
&mpp_io_nml	deflate_level		5
	shuffle	,	1 1720
&ocean_adv_vel_diag_nml	diag_step	4320	4320
	large_cfl_value	10.0	10.0
	max_cfl_value	100.0	100.0
	verbose_cfl	True	True
&ocean_advection_velocity_nml	max_advection_velocity	0.5	0.5
&ocean_albedo_nml	ocean_albedo_option	1.0	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
	eta_max	8.0	8.0
	frac_crit_cell_height	0.2	0.2
	pred_corr_gamma	0.2	0.2
	smooth_eta_diag_laplacian	True	True
	smooth_eta_t_biharmonic	False	False

	Group (continued)	Variable	original/ hogg_acces- som2 1deg jra55_ryf input_r	new_acces- som2 1deg jra55_ryf input.nml
Second Description Second		smooth_eta_t_laplacian	True	True
Page				True
No. No.				False
Part		use_legacy_barotropic_halos		False
				0.01
Second bot mild website burner Fine Time		•		0.05 0.2
Social block and block				True
Commander			nuc	False
Comment	&ocean_bbc_nml	bmf_implicit		True
Content Cont			0.001	0.001
			F-I	0.007
			False	False
March Marc				True
Scoran.bif. criormid False unablander in the control that is a process of the control tha				0.05
				False
Scorean ph Indition and bit Indition scheme general general general <t< td=""><td>&ocean_bbc_ofam_nml</td><td></td><td></td><td></td></t<>	&ocean_bbc_ofam_nml			
Sceen hibstrater, mind in use, this, module of sceen hibstration mind use, this, module of sceen hibstration mind use, this, module of sceen hibstration mind use, this, module of equal training of equal mindmans of equal mi	&ocean hib friction and			'annoral'
Eccess_bilister, friction, mil tose, fination, fination, fination, fination, mil Table of the part of the				general False
Eones hillings fiction mil bottom Spolint True Fall eq. vel. milom mals 0.0 <td< td=""><td></td><td></td><td></td><td>False</td></td<>				False
Registration				False
Requestriational False F		eq_lat_micom		0.0
Page				0.0
				0.0 Falso
Response				0.0
				2.0
				True
				True
				2
				2×10^{-6}
Velmiombiotom Velbiotom Velbio				True
kocean.convect.nml vie.mtom.iss 0.04 bits. 0.05 bits. <				0.0
Scoran.convect.nml Viss. crit. scale former. full. scale former. full. scale former. full. scale former. full. scale for function functions. module former. full. scale for functions. module former. full. scale former. full.				0.0
Coccan_convect_mml Convect_full_scalar convect_mit_vector False convect_mit_mit_vector False convect_mit_mit_mit_mit_mit_mit_mit_representation False convect_mit_mit_mit_mit_mit_mit_mit_mit_mit_mi				0.0
convect.full vector True & cocean.coriolis.nml acor 0.5	Passan somest and			1.0
Base	&ocean_convect_nint			
kocean.coriolis.nml acor use.this.module use.this.module use.this.module acos.incar ensity.nml 0.5 metabolity.module acos.incar ensity.module acos.incar ensity.module acos.incar ensity.module acos.incar ensity.module acos.preteos10 ac				False
Scorean_density.mml eos_interest () False () Fal	&ocean_coriolis_nml			0.5
Bost				True
Rayer of the properties of t	&ocean_density_nml			False
				True 80
Neutralrho_min 10200 102				1030.0
Dottho max 10380				1020.0
&ocean_domains_nml max_tracers 10 &ocean_form_drag_nml cprime_aikl 0.6 &ocean_frazil_nml debug_this_module Fals &ocean_frazil_nml debug_this_module Fal freezing_temp_preteosio Tru Fal freezing_temp_preteosio Tru Fal &ocean_grids_nml debug_this_module True Fal &ocean_increment_eta_nml debug_this_module True Fal &ocean_increment_eta_nml days_to_increment 1.0 Fal &ocean_increment_tracer_nml days_to_increment 1.0 Fal &ocean_increment_tracer_nml days_to_increment 0 Fal &ocean_increment_tracer_nml days_to_increment 1.0 Fal &ocean_increment_tracer_nml days_to_increment 1.0 Fal &ocean_increment_tracer_nml days_to_increment 1.0 Fal &ocean_increment_tracer_nml days_to_increment 0 Fal &ocean_increment_velocity_nml days_to_increment 0 Fal			1038.0	1038.0
& ocean_frazil_nml cprime_alki use_this_module false Fals		•		1028.0
Kocean_inrazil_nml Use_this_module False Fal & ocean_inrazil_nml debug_this_module Fal Fal frazil_only_in_surface Fal Fal Fal True Fal Fal True Fal				5
& ocean_frazil_nmldebug_this_module frazil_only_in_surface freezing_temp_preteos10Fall freezing_temp_preteos10freezing_temp_preteos10TrueFall freezing_temp_simple use_this_moduleTrueFall& ocean_grids_nmldebug_this_module read_rho0_profileTrueFall& ocean_increment_eta_nmldays_to_increment fraction_increment0	&ocean_tornt_utay_nint			False
Fall	&ocean_frazil_nml		1 0130	False
Fall freezing_temp_simple True Fall &ocean_grids_nml debug_this_module True Fall &ocean_increment_eta_nml days_to_increment 0				False
kocean_grids_nml debug_this_module read_rho0_profile True False & ocean_increment_eta_nml days_to_increment 1.0 1.0 & ocean_increment_eta_nml fraction_increment 1.0 1.0 & ocean_increment_eta_nml use_this_module False & ocean_increment_tread_nml days_to_increment 1.0 & ocean_increment_tracer_nml days_to_increment 1.0 & ocean_increment_tracer_nml secs_to_increment 1.0 & ocean_increment_tracer_nml use_this_module False & ocean_increment_velocity_nml days_to_increment 0		freezing_temp_preteos10		True
&ocean_grids_nml debug_this_modute read_rho0_profile True Fals &ocean_increment_eta_nml days_to_increment 1,0 1 fraction_increment 1,0 5 1 secs_to_increment 1,0 1 1 &ocean_increment_tracer_nml days_to_increment 0 1 &ocean_increment_tracer_nml fraction_increment 1,0 1 fraction_increment 1,0 5 5 use_this_module False Fals False Fals &ocean_increment_velocity_nml days_to_increment 0 6				False
& ocean_increment_eta_nml days_to_increment False & ocean_increment_eta_nml days_to_increment 1,0 fraction_increment 1,800 1,0 secs_to_increment 1800 1,0 & ocean_increment_tracer_nml days_to_increment 0 fraction_increment 1,0 1,0 secs_to_increment 1800 1,0 use_this_module False Fal & ocean_increment_velocity_nml days_to_increment 0	&ocean gride nml			True
& ocean_increment_eta_nml days_to_increment 0 fraction_increment 1,0 1800 secs_to_increment 1800 1800 use_this_module False Fal & ocean_increment_tracer_nml days_to_increment 0 fraction_increment 1,0 10 secs_to_increment 1800 10 use_this_module False Fal & ocean_increment_velocity_nml days_to_increment 0	woccan_gnus_nint			raise
Traction_increment 1.0 1800 1	&ocean_increment_eta_nml			
kocean_increment_tracer_nml days_to_increment False Fal fraction_increment 1,0			1.0	
& ocean_increment_tracer_nml days_to_increment 0 fraction_increment 1,0 secs_to_increment 1800 to use_this_module False Fal & ocean_increment_velocity_nml days_to_increment 0			1800	
fraction_increment 1.0 secs_to_increment 1800 use_this_module False Fal &ocean_increment_velocity_nml days_to_increment 0				False
secs_to_increment1800use_this_moduleFalseFal&ocean_increment_velocity_nmldays_to_increment0	&ocean_increment_tracer_nml			
wse_this_module False Fal &ocean_increment_velocity_nml days_to_increment 0				
&ocean_increment_velocity_nml days_to_increment 0				False
fraction_increment 1.0	&ocean_increment_velocity_nml	days_to_increment	0	
secs_to_increment 1800				

Group (continued)	Variable	original/ hogg_acces- som2 1deg jra55_ryf input.nml	new_acces- som2 1deg jra55_ryf input.nml
	use_this_module	False	False
&ocean_lap_friction_nml			'general' False
&ocean_lapcst_friction_nml			False
&ocean_lapgen_friction_nml		True	True
	k_smag_aniso	0.0	0.0
	k_smag_iso		0.0
			Terro
			True 60.0
			0.35
	use_this_module	True	True
	vconst_1	8 000 000.0	
		0.8 F > 10-9	
	vconst_6	300 000 000.0	
	vconst_7	100.0	
	vel_micom_iso	0.1	0.1
	viscosity_ncar		False
		True	True
	viscosity_scale_by_rossby_power	4.0	4.0
&ocean_mixdownslope_nml		False	False
			False
			4 False
			True
&ocean_model_nml		1	
			80
			True
			False
			3600 4, 3
	•		16, 15
			1
	time_tendency	'twolevel'	'twolevel'
		'zstar'	'zstar'
&ocean_momentum_source_nml		True	False
			True True
&ocean_nphysics_nml			False
			False
	use_nphysicsb		False
			True
Socoon polycies util pml			True 600.0
COCCOLITION SICS LUCLIMIN			True
			True
	agm_closure_buoy_freq	0.004	0.004
			True
			True
			True True
			0.0
	agm_closure_eden_greatbatch	False	False
	agm_closure_grid_scaling	True	True
	agm_closure_length agm_closure_length_bczone	50 000.0	50 000.0
	agm closure length hozone	False	False False
		Ealco	
	agm_closure_length_fixed	False False	
		False False 2000.0	False 2000.0
	agm_closure_length_fixed agm_closure_length_rossby agm_closure_lower_depth agm_closure_max	False 2000.0 600.0	False 2000.0 600.0
	agm_closure_length_fixed agm_closure_length_rossby agm_closure_lower_depth agm_closure_max agm_closure_min	False 2000.0 600.0 50.0	False 2000.0 600.0 50.0
	agm_closure_length_fixed agm_closure_length_rossby agm_closure_lower_depth agm_closure_max agm_closure_min agm_closure_scaling	False 2000.0 600.0 50.0 0.07	False 2000.0 600.0 50.0 0.07
	agm_closure_length_fixed agm_closure_length_rossby agm_closure_lower_depth agm_closure_max agm_closure_min agm_closure_scaling agm_closure_upper_depth	False 2000.0 600.0 50.0 0.07 100.0	False 2000.0 600.0 50.0 0.07 100.0
	agm_closure_length_fixed agm_closure_length_rossby agm_closure_lower_depth agm_closure_max agm_closure_min agm_closure_scaling agm_closure_upper_depth agm_damping_time	False 2000.0 600.0 50.0 0.07 100.0 45.0	False 2000.0 600.0 50.0 0.07 100.0 45.0
	agm_closure_length_fixed agm_closure_length_rossby agm_closure_lower_depth agm_closure_max agm_closure_min agm_closure_scaling agm_closure_upper_depth agm_damping_time agm_smooth_space	False 2000.0 600.0 50.0 0.07 100.0	False 2000.0 600.0 50.0 0.07 100.0
	agm_closure_length_fixed agm_closure_length_rossby agm_closure_lower_depth agm_closure_max agm_closure_min agm_closure_scaling agm_closure_upper_depth agm_damping_time	False 2000.0 600.0 50.0 0.07 100.0 45.0 False	False 2000.0 600.0 50.0 0.07 100.0 45.0 False

Group (continued)	Variable	original/ hogg_acces- som2 1deg jra55_ryf input.nml	new_acces- som2 1deg jra55_ryf input.nml
	drhodz_mom4p1	True	True
	drhodz_smooth_horz drhodz_smooth_vert	False False	False False
	nphysics_util_zero_init	True	True
	rossby_radius_max	100 000.0	100 000.0
	rossby_radius_min	15 000.0	15 000.0
	tracer_mix_micom	False	False
2 ocean mahyaissa mad	vel_micom	0.0	0.0
&ocean_nphysicsa_nml &ocean_nphysicsb_nml	use_this_module use_this_module	False False	False False
&ocean_nphysicsc_nml	bv_freq_smooth_vert	True	True
accenia, prijotece i ini	bvp_bc_mode	2	2
	bvp_min_speed	0.1	0.1
	bvp_speed	0.0	0.0
	debug_this_module	False	False
	do_gm_skewsion do_neutral_diffusion	True True	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 2	True 2
			False
	number_bc_modes 2 regularize_psi False smax_psi 0.01 smooth_psi True	0.01	
	smooth_psi	number_bc_modes 2 regularize_psi False smax_psi 0.01 smooth_psi True	True
	tmask_neutral_on	True	True
	turb_blayer_min	50.0	50.0
&ocean_operators_nml	use_this_module use_legacy_div_ud	True	True False
&ocean_overexchange_nml	debug_this_module	False	False
	overexch_check_extrema	False	
	overexch_npts	4	4
	overexch_weight_far	False	False
	overflow_umax use_this_module	5.0 False	5.0 False
&ocean_overflow_nml	debug_this_module	False	raise
accur_svertow_min	use_this_module	False	False
&ocean_overflow_ofp_nml	use_this_module		False
&ocean_polar_filter_nml	use_this_module	False	False
&ocean_pressure_nml	zero_pressure_force		False
&ocean_rivermix_nml	debug_this_module river_diffuse_salt	False False	False True
	river_diffuse_temp	False	True
	river_diffusion_thickness	0.0	0.0
	river_diffusivity	0.0	0.0
	river_insertion_thickness	40.0	40.0
9 ocean viscoveneed and	use_this_module	True	True
&ocean_riverspread_nml &ocean_rough_nml	use_this_module rough_scheme	True	False 'beljaars'
&ocean_sbc_nml	avg_sfc_temp_salt_eta	True	True
Gottan 2002 and	avg_sfc_velocity	True	True
	calvingspread		False
	do_bitwise_exact_sum		False
	do_flux_correction land_model_heat_fluxes		False False
	max_delta_salinity_restore	0.5	0.5
	max_ice_thickness	8.0	0.0
	read_restore_mask	False	False
	restore_mask_gfdl	False	False
	runoff_salinity	0.0	0.0
	<pre>salt_correction_scale salt_restore_as_salt_flux</pre>	True	0.0 True
	salt_restore_tscale	15.0	60.0
	salt_restore_under_ice	True	True
	temp_restore_tscale	-1.0	-10.0
	use_full_patm_for_sea_level	_	False
	use_waterflux	True False	True
	waterflux_tavg zero_heat_fluxes	False False	False
	zero_net_salt_correction	ruisc	False
	zero_net_salt_restore	True	True
	zero_net_water_correction		False

Group (continued)	Variable	original/ hogg_acces- som2 1deg jra55_ryf input.nml	new_acces- som2 1deg jra55_ryf input.nml
	zero_net_water_couple_restore	True	True
	zero_net_water_coupler	True	True
	zero_net_water_restore zero_surface_stress	True False	True False
	zero_surface_stress zero_water_fluxes	False	False
&ocean_sbc_ofam_nml	restore_mask_ofam	False	. 4.50
	river_temp_ofam	False	
&ocean_shortwave_csiro_nml	read_depth	True	
	use_this_module	True	False
	zmax_pen	7000	
&ocean_shortwave_gfdl_nml	debug_this_module enforce_sw_frac	False	False
	optics_manizza	True True	True True
	optics_manizza optics_morel_antoine	IIue	False
	read_chl	False	True
	sw_pen_fixed_depths	False	
	use_this_module	False	True
	zmax_pen	200.0	300.0
&ocean_shortwave_jerlov_nml	use_this_module	False	False
&ocean_shortwave_nml	use_shortwave_csiro	True	False
	use_shortwave_gfdl	False	True
	use_shortwave_jerlov use_this_module	False True	False
&ocean_sigma_transport_nml	sigma_advection_on	False	True
&ocean_signa_transport_nint	sigma_advection_ori	False	
	sigma_diffusion_on	True	
	sigma_diffusivity_ratio	1×10^{-6}	
	sigma_just_in_bottom_cell	True	
	sigma_umax	0.01	
	smooth_sigma_thickness	True	
	smooth_sigma_velocity	True	
	smooth_velmicom	0.2	
	thickness_sigma_layer	100.0 100.0	
	thickness_sigma_max thickness_sigma_min	100.0	
	tmask_sigma_on	False	
	tracer_mix_micom	True	
	use_this_module	True	False
	vel_micom	0.05	
&ocean_solo_nml	calendar	'NOLEAP'	'NOLEAP'
	date_init	1, 1, 1, 0, 0, 0	1, 1, 1, 0, 0, 0
	days debug_this_module	1460 False	1460
	dt_cpld	3600	3600
	hours	0	0
	minutes	0	0
	months	0	0
	seconds	0	0
	years	0	0
&ocean_sponges_eta_nml	use_this_module	False	False
&ocean_sponges_tracer_nml	damp_coeff_3d	False	Falsa
Roccon changes valority had	use_this_module use_this_module	False False	False False
&ocean_sponges_velocity_nml &ocean_submesoscale_nml	coefficient_ce	1.4125	0.05
Section 200 mesoscient	debug_this_module	False	False
	front_length_const	5000.0	5000.0
	front_length_deform_radius	True	True
	limit_psi	True	True
	limit_psi_velocity_scale	0.5	0.5
	min_kblt	4	4 Truo
	smooth_advect_transport smooth_advect_transport_num		True 4
	smooth_hblt	False	False
	smooth_psi	idisc	True
	smooth_psi_num		3
	submeso_advect_flux		False
	submeso_advect_limit		True
	submeso_advect_upwind		True
	submeso_advect_zero_bdy		True
	submeso_diffusion submeso_diffusion_biharmonic		False
	submeso_diffusion_binarmonic submeso_diffusion_scale		True 10.0
	submeso_limit_flux	True	10.0
	Submesoummetak	iiuc	

Group (continued)	Variable	original/ hogg_acces- som2 1deg jra55_ryf input.nml	new_acces- som2 1deg jra55_ryf input.nml
submeso_		True	True
use_hblt_e 	equal_mld osi_legacy	True	True False
use_thi	s_module	True	True
&ocean_tempsalt_nml debug_thi		False	False
pottemp_2nd		True	True True
pottemp_equal	s_max	55.0	70.0
_2	max_limit	42.0	42.0
	s_min	-1.0	0.0
S.	min_limit	0.0	2.0
	t_max max_limit	55.0 32.0	55.0 32.0
t_	max_umit t_min	52.0 —5.0	- 20.0
t.	min_limit	-2.0	-5.0
temperature	·_variable	'conservative temp'	'potential temp'
&ocean_thickness_nml debug_thi		False	False
debug_this_mod	_zero_eta	False False	False
read_rescale_r		False	
rescale_mass_to_ge			False
rescale_rho0_b		7.0	
rescale_rho0_i		False	
rescale_ri	oO_value c_dzt_min	0.75 1.0	
thickness_dzi		2.0	
	s_method	'energetic'	'energetic'
1 3	thickness	25.0	
	sweby_all	True	
async_doma		True	Falsa
debug_thi	s_module isin_mask	False	False False
	diag_step	4320	4320
do_bitwise_6		False	False
tracer_cons		1.0	30.0
&ocean_tracer_nml age_tracer		0.0	0.0
debug_thi frazil_heating_after		False True	False True
frazil_heating_before		False	False
The second secon	ge_tracer	True	True
remap_depth		False	False
use_tempsalt_ch		True	True
	tendency er_source	False False	False False
&ocean_velocity_diag_nml debug_thi		False	False
	diag_step	4320	4320
	diag_step	4320	4320
	_cfl_value	10.0	10.0
&ocean_velocity_nml adams_bashf	cfl_value	100.0 True	100.0 True
	nax_cgint	1.0	1.0
	e_velocity	True	False
truncate_velo	city_value	2.0	2.0
	-verbose	True	True
zero. zero_tendency_	tendency	False	False False
zero_tendency_			False
zero_tendenc			False
&ocean_vert_kpp_iow_nml use_thi	s_module	False	False
	s_module	False	
	iff_cbt_iw con_limit	0.0 0.1	0.0
	_diffusion	True	True
kbl_standar		False	False
	ricr	0.3	0.3
	oth_blmc	False	False
smooth_ri_kma	k_eq_kmu s_module	True	True
	s_module sc_cbu_iw	True 0.0	True 0.0
	con_limit	0.0	0.0
	afkph_00	0.65	
	afkph_90	0.75	

Group (continued)	Variable	original/ hogg_acces- som2 1deg jra55_ryf input.nml	new_acces- som2 1deg jra55_ryf input.nml
	aidif	1.0	1.0
	bryan_lewis_diffusivity	False	False
	bryan_lewis_lat_depend	True	False
	bryan_lewis_lat_transition	35.0	
	dfkph_00	1.15	
	dfkph_90	0.95	
	hwf_diffusivity		False
	hwf_min_diffusivity		2×10^{-6}
	hwf_n0_2omega		20.0
	linear_taper_diff_cbt_table	False	
	sfkph_00	4.5×10^{-5}	
	sfkph_90	4.5×10^{-5}	
	use_diff_cbt_table	False	False
	vert_diff_back_via_max	True	True
	vert_mix_scheme	'kpp	'kpp
	-AL 00	mom4p1'	mom4p1'
	zfkph_00	250 000.0	
	zfkph_90	250 000.0	
&ocean_vert_tidal_nml	background_diffusivity	5×10^{-6}	0.0
	background_viscosity	0.0001	0.0001
	decay_scale	300.0	500.0
	drag_dissipation_use_cdbot	4 40-17	True $1 imes 10^{-10}$
	drhodz_min	1×10^{-12}	
	fixed_wave_dissipation	False	False
	max_drag_diffusivity	0.01	0.01
	max_wave_diffusivity mixing_efficiency_n2depend	0.01 True	0.01 True
	read_roughness	True	True
	read_toughness read_tide_speed	True	True
	read_wave_dissipation	False	False
	reading_roughness_amp	True	True
	reading_roughness_length	False	False
	roughness_tength	20 000.0	12 000.0
	shelf_depth_cutoff	160.0	-1000.0 -1000.0
	tide_speed_data_on_t_grid	True	True
	use_drag_dissipation	True	True
	use_legacy_methods		False
	use_this_module	True	True
	use_wave_dissipation	True	True
	wave_energy_flux_max	0.1	0.1
&ocean_xlandinsert_nml	use_this_module	False	False
	verbose_init	True	
&ocean_xlandmix_nml	use_this_module	False	False
	verbose_init	True	
	xlandmix_kmt	True	
&xgrid_nml	interp_method	'second	'second
		order'	order'
	make_exchange_reproduce	False	False
	nsubset		16

2.2 accessom2_025deg_jra55_ryf

We aim to have as few differences as possible, as this is where we've invested most SU...

Group	Variable	original/ kiss_acces- som2 025deg jra55_ryf input.nml	new_acces- som2 025deg jra55_ryf 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	1200	1800
	fixmeltt	False	False
	frazil_factor	1.0	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

Group (continued)	Variable	original/ kiss_acces- som2 025deg jra55_ryf input.nml	new_acces- som2 025deg jra55_ryf input.nml
	tmelt	-0.216	-0.216
&diag_manager_nml	use_ioaice debug_diag_manager	True True	True True
wildy_manager_mmt	issue_oor_warnings	True	True
&fms_io_nml	fileset_write	'single'	'multi'
	threading_read	'multi'	'multi'
	threading_write	'single'	'multi'
&fms_nml	clock_grain domains_stack_size	'LOOP'	'COMPONENT' 115200
&mom_oasis3_interface_nml	fields_in	'u_flux',	'u_flux',
CHIOH_0d3i35_interface_inite	iictus_iii	u_nux, 'v_flux',	'v_flux',
		'lprec', 'fprec',	'lprec', 'fprec',
		'salt_flx',	'salt_flx',
		'mh_flux',	'mh_flux',
		'sw_flux', 'q_flux',	'sw_flux', 'q_flux',
		q_παx, 't_flux',	q_παχ, 't_flux',
		'lw_flux',	'lw_flux',
		'runof', 'p',	'runof', 'p',
		'aice',	'aice',
		'wfimelt', 'wfiform'	'wfimelt', 'wfiform'
	fields_out	't_surf',	't_surf',
		's_surf',	's_surf',
		'u_surf',	'u_surf',
		'v_surf',	'v_surf',
		'dssldx', 'dssldy',	'dssldx',
		ussiuy, 'frazil'	'dssldy', 'frazil'
	num_fields_in	15	15
	num_fields_out	7	7
	send_after_ocean_update	True	True
	send_before_ocean_update	False	False
8 monin obukhov nml			
&monin_obukhov_nml &mop_io_nml	neutral	True	True
&monin_obukhov_nml &mpp_io_nml		True	True 5 1
	neutral <mark>deflate_level</mark> s <mark>huffle</mark> diag_step	True 4320	True 5 1 4320
&mpp_io_nml	neutral deflate_level shuffle diag_step large_cfl_value	4320 10.0	True 5 1 4320 10.0
&mpp_io_nml	neutral deflate_level shuffle diag_step large_cfl_value max_cfl_value	4320 10.0 100.0	True 5 1 4320 10.0 100.0
&mpp_io_nml &ocean_adv_vel_diag_nml	neutral deflate_level shuffle diag_step large_cfl_value max_cfl_value verbose_cfl	4320 10.0 100.0 True	True 5 1 4320 10.0 100.0 True
&mpp_io_nml	neutral deflate_level shuffle diag_step large_cfl_value max_cfl_value verbose_cfl max_advection_velocity	4320 10.0 100.0	True 5 1 4320 10.0 100.0 True 0.5
&mpp_io_nml &ocean_adv_vel_diag_nml &ocean_advection_velocity_nml	neutral deflate_level shuffle diag_step large_cfl_value max_cfl_value verbose_cfl max_advection_velocity ocean_albedo_option barotropic_halo	4320 10.0 100.0 True 0.5 2	True 5 1 4320 10.0 100.0 True
&mpp_io_nml &ocean_adv_vel_diag_nml &ocean_advection_velocity_nml &ocean_albedo_nml	neutral deflate_level shuffle diag_step large_cfl_value max_cfl_value verbose_cfl max_advection_velocity ocean_albedo_option barotropic_halo barotropic_time_stepping_a	10.0 100.0 True 0.5 2 10 True	True 5 1 4320 10.0 100.0 True 0.5 2 10 True
&mpp_io_nml &ocean_adv_vel_diag_nml &ocean_advection_velocity_nml &ocean_albedo_nml	neutral deflate_level shuffle diag_step large_cfl_value max_cfl_value verbose_cfl max_advection_velocity ocean_albedo_option barotropic_halo barotropic_time_stepping_a barotropic_time_stepping_b	4320 10.0 100.0 True 0.5 2 10 True False	True 5 1 4320 10.0 100.0 True 0.5 2 10 True False
&mpp_io_nml &ocean_adv_vel_diag_nml &ocean_advection_velocity_nml &ocean_albedo_nml	neutral deflate_level shuffle diag_step large_cfl_value max_cfl_value verbose_cfl max_advection_velocity ocean_albedo_option barotropic_halo barotropic_time_stepping_a barotropic_time_stepping_b debug_this_module	4320 10.0 100.0 True 0.5 2 10 True False False	True 5 1 4320 10.0 100.0 True 0.5 2 10 True False False
&mpp_io_nml &ocean_adv_vel_diag_nml &ocean_advection_velocity_nml &ocean_albedo_nml	neutral deflate_level shuffle diag_step large_cfl_value max_cfl_value verbose_cfl max_advection_velocity ocean_albedo_option barotropic_halo barotropic_time_stepping_a barotropic_time_stepping_b	4320 10.0 100.0 True 0.5 2 10 True False	True 5 1 4320 10.0 100.0 True 0.5 2 10 True False
&mpp_io_nml &ocean_adv_vel_diag_nml &ocean_advection_velocity_nml &ocean_albedo_nml	neutral deflate_level shuffle diag_step large_cfl_value max_cfl_value verbose_cfl max_advection_velocity ocean_albedo_option barotropic_halo barotropic_time_stepping_a barotropic_time_stepping_a beloug_this_module diag_step eta_max frac_crit_cell_height	10.0 10.0 100.0 True 0.5 2 10 True False False 4320 8.0 0.2	True 5 1 4320 10.0 100.0 True 0.5 2 10 True False False 4320 8.0 0.2
&mpp_io_nml &ocean_adv_vel_diag_nml &ocean_advection_velocity_nml &ocean_albedo_nml	neutral deflate_level shuffle diag_step large_cfl_value max_cfl_value verbose_cfl max_advection_velocity ocean_albedo_option barotropic_halo barotropic_time_stepping_a barotropic_time_stepping_b debug_this_module diag_step eta_max frac_crit_cell_height pred_corr_gamma	10.0 10.0 100.0 True 0.5 2 10 True False False 4320 8.0 0.2	True 5 1 4320 10.0 100.0 True 0.5 2 10 True False False 4320 8.0 0.2 0.2
&mpp_io_nml &ocean_adv_vel_diag_nml &ocean_advection_velocity_nml &ocean_albedo_nml	neutral deflate_level shuffle diag_step large_cfl_value max_cfl_value verbose_cfl max_advection_velocity ocean_albedo_option barotropic_halo barotropic_time_stepping_a barotropic_time_stepping_b debug_this_module diag_step eta_max frac_crit_cell_height pred_corr_gamma smooth_eta_diag_laplacian	True 4320 10.0 100.0 True 0.5 2 10 True False False 4320 8.0 0.2 0.2 True	True 5 1 4320 10.0 100.0 True 0.5 2 10 True False 4320 8.0 0.2 0.2 True
&mpp_io_nml &ocean_adv_vel_diag_nml &ocean_advection_velocity_nml &ocean_albedo_nml	neutral deflate_level shuffle diag_step large_cfl_value max_cfl_value verbose_cfl max_advection_velocity ocean_albedo_option barotropic_halo barotropic_time_stepping_a barotropic_time_stepping_b debug_this_module diag_step eta_max frac_crit_cell_height pred_corr_gamma smooth_eta_diag_laplacian smooth_eta_t_biharmonic	True 4320 10.0 100.0 True 0.5 2 10 True False False 4320 8.0 0.2 0.2 True False	True 5 1 4320 10.0 100.0 True 0.5 2 10 True False 4320 8.0 0.2 0.2 True False
&mpp_io_nml &ocean_adv_vel_diag_nml &ocean_advection_velocity_nml &ocean_albedo_nml	neutral deflate_level shuffle diag_step large_cfl_value max_cfl_value verbose_cfl max_advection_velocity ocean_albedo_option barotropic_halo barotropic_time_stepping_a barotropic_time_stepping_b debug_this_module diag_step eta_max frac_crit_cell_height pred_corr_gamma smooth_eta_diag_laplacian	True 4320 10.0 100.0 True 0.5 2 10 True False False 4320 8.0 0.2 0.2 True	True 5 1 4320 10.0 100.0 True 0.5 2 10 True False 4320 8.0 0.2 0.2 True
&mpp_io_nml &ocean_adv_vel_diag_nml &ocean_advection_velocity_nml &ocean_albedo_nml	neutral deflate_level shuffle diag_step large_cfl_value max_cfl_value verbose_cfl max_advection_velocity ocean_albedo_option barotropic_halo barotropic_time_stepping_a barotropic_time_stepping_b debug_this_module diag_step eta_max frac_crit_cell_height pred_corr_gamma smooth_eta_t_biharmonic smooth_eta_t_laplacian smooth_pbot_t_laplacian	True 4320 10.0 100.0 True 0.5 2 10 True False False 4320 8.0 0.2 0.2 True False True False True False	True 5 1 4320 10.0 100.0 100.0 True 0.5 2 10 True False False 4320 8.0 0.2 0.2 True False True False True False
&mpp_io_nml &ocean_adv_vel_diag_nml &ocean_advection_velocity_nml &ocean_albedo_nml	neutral deflate_level shuffle diag_step large_cfl_value max_cfl_value verbose_cfl max_advection_velocity ocean_albedo_option barotropic_halo barotropic_time_stepping_a barotropic_time_stepping_b debug_this_module diag_step eta_max frac_crit_cell_height pred_corr_gamma smooth_eta_t_biharmonic smooth_eta_t_laplacian smooth_pbot_t_laplacian truncate_eta	True 4320 10.0 100.0 17rue 0.5 2 10 True False False 4320 8.0 0.2 0.2 True False True False True False True False False	True 5 1 4320 10.0 100.0 100.0 True 0.5 2 10 True False False 4320 8.0 0.2 0.2 True False True False True False True False
&mpp_io_nml &ocean_adv_vel_diag_nml &ocean_advection_velocity_nml &ocean_albedo_nml	neutral deflate_level shuffle diag_step large_cfl_value max_cfl_value verbose_cfl max_advection_velocity ocean_albedo_option barotropic_talo barotropic_time_stepping_a barotropic_time_stepping_b debug_this_module diag_step eta_max frac_crit_cell_height pred_corr_gamma smooth_eta_diag_laplacian smooth_eta_t_biharmonic smooth_pbot_t_biharmonic smooth_pbot_t_laplacian truncate_eta use_legacy_barotropic_halos	True 4320 10.0 100.0 17rue 0.5 2 10 True False False 4320 8.0 0.2 0.2 True False True False True False	True 5 1 4320 10.0 100.0 100.0 True 0.5 2 10 True False False 4320 8.0 0.2 0.2 True False True False True False False True False False False True False False False False
&mpp_io_nml &ocean_adv_vel_diag_nml &ocean_advection_velocity_nml &ocean_albedo_nml	neutral deflate_level shuffle diag_step large_cfl_value max_cfl_value verbose_cfl max_advection_velocity ocean_albedo_option barotropic_halo barotropic_time_stepping_a barotropic_time_stepping_b debug_this_module diag_step eta_max frac_crit_cell_height pred_corr_gamma smooth_eta_diag_laplacian smooth_eta_t_biharmonic smooth_pbot_t_biharmonic smooth_pbot_t_laplacian truncate_eta use_legacy_barotropic_halos vel_micom_bih	True 4320 10.0 100.0 True 0.5 2 10 True False False 4320 8.0 0.2 0.2 True False True False True False False False False False True False	True 5 1 4320 10.0 100.0 True 0.5 2 10 True False False 4320 8.0 0.2 0.2 True False True False True False False True False False True False True False True False Toue False
&mpp_io_nml &ocean_adv_vel_diag_nml &ocean_advection_velocity_nml &ocean_albedo_nml	neutral deflate_level shuffle diag_step large_cfl_value max_cfl_value verbose_cfl max_advection_velocity ocean_albedo_option barotropic_talo barotropic_time_stepping_a barotropic_time_stepping_b debug_this_module diag_step eta_max frac_crit_cell_height pred_corr_gamma smooth_eta_diag_laplacian smooth_eta_t_biharmonic smooth_pbot_t_biharmonic smooth_pbot_t_laplacian truncate_eta use_legacy_barotropic_halos	True 4320 10.0 100.0 17rue 0.5 2 10 True False False 4320 8.0 0.2 0.2 True False True False True False	True 5 1 4320 10.0 100.0 100.0 True 0.5 2 10 True False False 4320 8.0 0.2 0.2 True False True False True False False True False False False True False False False False
&mpp_io_nml &ocean_adv_vel_diag_nml &ocean_advection_velocity_nml &ocean_albedo_nml	neutral deflate_level shuffle diag_step large_cfl_value max_cfl_value verbose_cfl max_advection_velocity ocean_albedo_option barotropic_halo barotropic_time_stepping_a barotropic_time_stepping_a barotropic_time_stepping_b debug_this_module diag_step eta_max frac_crit_cell_height pred_corr_gamma smooth_eta_diag_laplacian smooth_eta_t_biharmonic smooth_eta_t_laplacian smooth_pbot_t_laplacian smooth_pbot_t_laplacian truncate_eta use_legacy_barotropic_halos vel_micom_lap vel_micom_lap_diag verbose_truncate	True 4320 10.0 100.0 100.0 True 0.5 2 10 True False False 4320 8.0 0.2 0.2 True False True False False True False	True 5 1 4320 10.0 100.0 100.0 True 0.5 2 10 True False False 4320 8.0 0.2 0.2 True False True False False True False False True False
&mpp_io_nml &ocean_adv_vel_diag_nml &ocean_advection_velocity_nml &ocean_albedo_nml &ocean_barotropic_nml	neutral deflate_level shuffle diag_step large_cfl_value max_cfl_value verbose_cfl max_advection_velocity ocean_albedo_option barotropic_halo barotropic_time_stepping_a barotropic_time_stepping_a barotropic_time_stepping_b debug_this_module diag_step eta_max frac_crit_cell_height pred_corr_gamma smooth_eta_t_biharmonic smooth_eta_t_biharmonic smooth_eta_t_laplacian smooth_pbot_t_laplacian smooth_pbot_t_laplacian truncate_eta use_legacy_barotropic_halos vel_micom_bih vel_micom_lap_diag verbose_truncate zero_tendency	True 4320 10.0 100.0 100.0 True 0.5 2 10 True False False 4320 8.0 0.2 0.2 True False False True False False False False O.01 0.05 0.2 True False	True 5 1 4320 10.0 100.0 100.0 True 0.5 2 10 True False False 4320 8.0 0.2 0.2 True False False False O.01 0.05 0.2 True False
&mpp_io_nml &ocean_adv_vel_diag_nml &ocean_advection_velocity_nml &ocean_albedo_nml	neutral deflate_level shuffle diag_step large_cfl_value max_cfl_value verbose_cfl max_advection_velocity ocean_albedo_option barotropic_time_stepping_a barotropic_time_stepping_b debug_this_module diag_step eta_max frac_crit_cell_height pred_corr_gamma smooth_eta_diag_laplacian smooth_eta_t_biharmonic smooth_eta_t_laplacian smooth_pbot_t_laplacian smooth_pbot_t_laplacian truncate_eta use_legacy_barotropic_halos vel_micom_lap vel_micom_lap vel_micom_lap_diag verbose_truncate zero_tendency bmf_implicit	True 4320 10.0 100.0 True 0.5 2 10 True False False False False True	True 5 1 4320 10.0 100.0 100.0 True 0.5 2 10 True False False 4320 8.0 0.2 0.2 True False True False False True False
&mpp_io_nml &ocean_adv_vel_diag_nml &ocean_advection_velocity_nml &ocean_albedo_nml &ocean_barotropic_nml	neutral deflate_level shuffle diag_step large_cfl_value max_cfl_value verbose_cfl max_advection_velocity ocean_albedo_option barotropic_time_stepping_a barotropic_time_stepping_b debug_this_module diag_step eta_max frac_crit_cell_height pred_corr_gamma smooth_eta_t_diag_laplacian smooth_eta_t_laplacian smooth_eta_t_laplacian smooth_pbot_t_laplacian smooth_pbot_t_laplacian truncate_eta use_legacy_barotropic_halos vel_micom_lap vel_micom_lap_diag verbose_truncate zero_tendency bmf_implicit cdbot	True 4320 10.0 100.0 True 0.5 2 10 True False False False True False O.01 0.05 0.2 True False True False True	True 5 1 4320 10.0 100.0 100.0 True 0.5 2 10 True False False 4320 8.0 0.2 0.2 True False True False False True False O.01 0.05 0.2 True False
&mpp_io_nml &ocean_adv_vel_diag_nml &ocean_advection_velocity_nml &ocean_albedo_nml &ocean_barotropic_nml	neutral deflate_level shuffle diag_step large_cfl_value max_cfl_value verbose_cfl max_advection_velocity ocean_albedo_option barotropic_time_stepping_a barotropic_time_stepping_b debug_this_module diag_step eta_max frac_crit_cell_height pred_corr_gamma smooth_eta_diag_laplacian smooth_eta_t_laplacian smooth_eta_t_laplacian smooth_pbot_t_laplacian smooth_pbot_t_laplacian truncate_eta use_legacy_barotropic_halos vel_micom_lap vel_micom_lap vel_micom_lap_diag verbose_truncate zero_tendency bmf_implicit cdbot cdbot_hi	True 4320 10.0 100.0 True 0.5 2 10 True False False False True False O.01 0.05 0.2 True False True False True False True False True False	True 5 1 4320 10.0 100.0 100.0 True 0.5 2 10 True False False 4320 8.0 0.2 0.2 True False True False False True False O.01 0.05 0.2 True False True False O.01 0.05 0.2 True False True False
&mpp_io_nml &ocean_adv_vel_diag_nml &ocean_advection_velocity_nml &ocean_albedo_nml &ocean_barotropic_nml	neutral deflate_level shuffle diag_step large_cfl_value max_cfl_value verbose_cfl max_advection_velocity ocean_albedo_option barotropic_time_stepping_a barotropic_time_stepping_b debug_this_module diag_step eta_max frac_crit_cell_height pred_corr_gamma smooth_eta_diag_laplacian smooth_eta_t_biharmonic smooth_eta_t_biharmonic smooth_pbot_t_biharmonic smooth_pbot_t_laplacian truncate_eta use_legacy_barotropic_halos vel_micom_lap vel_micom_lap vel_micom_lap vel_micom_lap diag verbose_truncate zero_tendency bmf_implicit cdbot_roughness_length cdbot_roughness_length	True 4320 10.0 100.0 100.0 True 0.5 2 10 True False 4320 8.0 0.2 0.2 True False True False False True True False True True True True True True True Tru	True 5 1 4320 10.0 100.0 100.0 True 0.5 2 10 True False False 4320 8.0 0.2 0.2 True False True True False True O.001
&mpp_io_nml &ocean_adv_vel_diag_nml &ocean_advection_velocity_nml &ocean_albedo_nml &ocean_barotropic_nml	neutral deflate_level shuffle diag_step large_cfl_value max_cfl_value verbose_cfl max_advection_velocity ocean_albedo_option barotropic_time_stepping_a barotropic_time_stepping_b debug_this_module diag_step eta_max frac_crit_cell_height pred_corr_gamma smooth_eta_diag_laplacian smooth_eta_t_biharmonic smooth_eta_t_biharmonic smooth_pbot_t_biharmonic smooth_pbot_t_laplacian truncate_eta use_legacy_barotropic_halos vel_micom_lap vel_micom_lap vel_micom_lap_diag verbose_truncate zero_tendency bmf_implicit cdbot_fi cdbot_roughness_length cdbot_roughness_length cdbot_roughness_uamp uresidual	True 4320 10.0 100.0 100.0 True 0.5 2 10 True False 4320 8.0 0.2 0.2 True False True False False True O.05	True 5 1 4320 10.0 100.0 100.0 True 0.5 2 10 True False False 4320 8.0 0.2 0.2 True False True O.01
&mpp_io_nml &ocean_adv_vel_diag_nml &ocean_albedo_nml &ocean_barotropic_nml &ocean_barotropic_nml	neutral deflate_level shuffle diag_step large_cfl_value max_cfl_value verbose_cfl max_advection_velocity ocean_albedo_option barotropic_time_stepping_b barotropic_time_stepping_b debug_this_module diag_step eta_max frac_crit_cell_height pred_corr_gamma smooth_eta_diag_laplacian smooth_eta_t_biharmonic smooth_bot_t_biharmonic smooth_pbot_t_biharmonic smooth_pbot_t_laplacian truncate_eta use_legacy_barotropic_halos vel_micom_lap vel_micom_lap vel_micom_lap diag verbose_truncate zero_tendency bmf_implicit cdbot_roughness_length cdbot_roughness_length cdbot_roughness_uamp uresidual use_geothermal_heating	True 4320 10.0 100.0 100.0 True 0.5 2 10 True False False 4320 8.0 0.2 0.2 True False True False False False True False False True False True False False True False False True False False O.01 0.05 0.2 True False True False True False False True False	True 5 1 4320 10.0 100.0 100.0 True 0.5 2 10 True False False 4320 8.0 0.2 0.2 True False True False False True False False True False False O.01 0.05 0.2 True False True False True False False False O.01 0.05 0.2 True False True False True False True False True False True False True O.001
&mpp_io_nml &ocean_adv_vel_diag_nml &ocean_advection_velocity_nml &ocean_barotropic_nml &ocean_barotropic_nml &ocean_barotropic_nml	neutral deflate_level shuffle diag_step large_cfl_value max_cfl_value verbose_cfl max_advection_velocity ocean_albedo_option barotropic_time_stepping_a barotropic_time_stepping_b debug_this_module diag_step eta_max frac_crit_cell_height pred_corr_gamma smooth_eta_diag_laplacian smooth_eta_t_biharmonic smooth_eta_t_biharmonic smooth_pbot_t_biharmonic smooth_pbot_t_laplacian smooth_pbot_t_laplacian smooth_pbot_t_daplacian smooth_pbot	True 4320 10.0 100.0 100.0 True 0.5 2 10 True False False 4320 8.0 0.2 0.2 True False True False False False True False False True False True False False True False False True False False O.01 0.05 0.2 True False True False True False True O.001 0.007 False True 0.005 False True 0.05 False	True 5 1 4320 10.0 100.0 100.0 True 0.5 2 10 True False False 4320 8.0 0.2 0.2 True False True O.05
&mpp_io_nml &ocean_adv_vel_diag_nml &ocean_advection_velocity_nml &ocean_barotropic_nml &ocean_barotropic_nml	neutral deflate_level shuffle diag_step large_cfl_value max_cfl_value verbose_cfl max_advection_velocity ocean_albedo_option barotropic_time_stepping_b barotropic_time_stepping_b debug_this_module diag_step eta_max frac_crit_cell_height pred_corr_gamma smooth_eta_diag_laplacian smooth_eta_t_biharmonic smooth_bot_t_biharmonic smooth_pbot_t_biharmonic smooth_pbot_t_laplacian truncate_eta use_legacy_barotropic_halos vel_micom_lap vel_micom_lap vel_micom_lap diag verbose_truncate zero_tendency bmf_implicit cdbot_roughness_length cdbot_roughness_length cdbot_roughness_uamp uresidual use_geothermal_heating	True 4320 10.0 100.0 100.0 True 0.5 2 10 True False False 4320 8.0 0.2 0.2 True False True False False False True False False True False True False False True False False True False False O.01 0.05 0.2 True False True False True False False True False	True 5 1 4320 10.0 100.0 100.0 True 0.5 2 10 True False False 4320 8.0 0.2 0.2 True False True False False True False False True False True False False True 0.001 0.007 False True 0.05 False

Group (continued)	Variable	original/ kiss_acces- som2 025deg jra55_ryf input.nml	new_acces- som2 025deg jra55_ryf input.nml
&ocean_bihcst_friction_nml	use_this_module	False	False
&ocean_bihgen_friction_nml	bottom_5point	False	False
	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	False	False
	k_smag_aniso	0.0	0.0
	k_smag_iso	2.0	2.0
	ncar_boundary_scaling	True	True
	ncar_boundary_scaling_read	True	True
	ncar_rescale_power	2×10^{-8}	2×10^{-8}
	ncar_vconst_4	2 × 10 °	2 × 10 °
	ncar_vconst_5 use_this_module		
	vel_micom_aniso	True 0.0	True 0.0
	vel_micom_bottom	0.0	0.0
	vel_micom_iso	0.0	0.0
	visc_crit_scale	1.0	1.0
&ocean_convect_nml	convect full scalar	True	1.0
Goddin Leon Total IIII	convect_full_vector	False	
	use_this_module	False	False
&ocean_coriolis_nml	acor	0.5	0.5
	use_this_module	True	True
&ocean_density_nml	eos_linear	False	False
a contraction of the contraction	eos_preteos10	True	True
	layer_nk	80	80
	neutralrho_max	1038.0	1030.0
	neutralrho_min	1028.0	1020.0
	potrho_max	1038.0	1038.0
	potrho_min	1028.0	1028.0
&ocean_domains_nml	max_tracers	5	5
&ocean_form_drag_nml	use_this_module	False	False
&ocean_frazil_nml	debug_this_module	False	False
	frazil_only_in_surface	False	False
	freezing_temp_preteos10	True	True
	freezing_temp_simple	False	False
	use_this_module	True	True
&ocean_grids_nml	debug_this_module	False	False
&ocean_increment_eta_nml	use_this_module	False	False
&ocean_increment_tracer_nml	use_this_module	False	False
&ocean_increment_velocity_nml	use_this_module	False	False
&ocean_lap_friction_nml	lap_friction_scheme	'general'	'general'
&ocean_lap_tracer_nml	use_this_module	False	False
&ocean_lapcst_friction_nml	use_this_module	False	False
&ocean_lapgen_friction_nml	k_smag_iso	2.0	
	use_this_module	False	False
&ocean_mixdownslope_nml	debug_this_module	False	
	use_this_module	False	False
&ocean_model_nml	baroclinic_split	1	1
	barotropic_split	80	80
	cmip_units	True	True
	debug	False	False
	dt_ocean	1200	1200
	io_layout	6,5	6,5
	layout	48, 40	48, 40
	surface_height_split	1 '*1'	26
	time_tendency	'twolevel'	'twolevel'
Passan momentum source ned	vertical_coordinate	'zstar'	'zstar'
&ocean_momentum_source_nml	rayleigh_damp_exp_from_bottom	False	False
	use_rayleigh_damp_table	True	True
8 ocean polycies pml	use_this_module	True	True
&ocean_nphysics_nml	debug_this_module	False False	False False
	use_nphysicsa use_nphysicsb	False	False
		False	False
	use_nphysicsc use_this_module	False	False
&ocean_nphysics_util_nml		100.0	100.0
A Ocean Liphnysics_dutt_tillit	agm	True	True
	agm_closure		
	agm_closure_baroclinic	True	True
	agm_closure_buoy_freq	0.004	0.004 50 000.0
	agm_closure_length	50 000.0	
	agm_closure_length_bczone	False	False
	agm_closure_length_fixed	False	False

Group (continued)	Variable	original/ kiss_acces- som2 025deg jra55_ryf input.nml	new_acces- som2 025deg jra55_ryf input.nml
	agm_closure_length_rossby	False	False
	agm_closure_lower_depth agm_closure_max	2000.0 600.0	2000.0 600.0
	agm_closure_min	100.0	100.0
	agm_closure_scaling	0.07	0.07
	agm_closure_upper_depth	100.0	100.0
	aredi	600.0	600.0
	aredi_equal_agm drhodz_mom4p1	False False	False False
	drhodz_moth_horz	False	False
	drhodz_smooth_vert	False	False
	rossby_radius_max	100 000.0	100 000.0
	rossby_radius_min	15 000.0	15 000.0
	smax swidth	0.002 0.002	
	tracer_mix_micom	False	False
	vel_micom	0.0	0.0
&ocean_nphysicsa_nml	use_this_module	False	False
&ocean_nphysicsb_nml	use_this_module	False	False
Rocean_nphysicsc_nml	use_this_module	False	False
&ocean_operators_nml	use_legacy_div_ud	False	False
kocean_overexchange_nml	debug_this_module overexch_npts	False 4	False
	overexch_weight_far	False	False
	overflow_umax	5.0	5.0
	use_this_module	False	False
&ocean_overflow_nml	debug_this_module	False	
kocean_overflow_ofp_nml	use_this_module debug_this_module	False False	False
&ocean_overnow_orp_nint	debug_tilis_illodute diaq_step	4320	
	do_entrainment_para_ofp	False	
	do_mass_ofp	True	
	frac_exchange_src	1.0	
	<mark>max_vol_trans_ofp</mark> use_this_module	10 000 000.0 False	Ealco
&ocean_polar_filter_nml	use_this_module	False	False False
&ocean_pressure_nml	zero_pressure_force	False	False
&ocean_rivermix_nml	debug_this_module	False	False
	river_diffuse_salt	False	True
	river_diffuse_temp	False	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 calvingspread	True False	True 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
		0.0	0.0 False
	max_ice_thickness	Laica	raisi
	read_restore_mask	False False	
	read_restore_mask restore_mask_gfdl	False False 0.0	False
	read_restore_mask restore_mask_gfdl runoff_salinity salt_correction_scale	False	Falso 0.0
	read_restore_mask restore_mask_gfdl runoff_salinity salt_correction_scale salt_restore_as_salt_flux	False 0.0 0.0 True	Falso 0.0 0.0 Truo
	read_restore_mask restore_mask_gfdl runoff_salinity salt_correction_scale salt_restore_as_salt_flux salt_restore_tscale	False 0.0 0.0 True 60.0	Falso 0.0 0.0 Truo 60.0
	read_restore_mask restore_mask_gfdl runoff_salinity salt_correction_scale salt_restore_as_salt_flux salt_restore_tscale salt_restore_under_ice	False 0.0 0.0 True 60.0 True	Falso O.0 O.0 True 60.0 True
	read_restore_mask restore_mask_gfdl runoff_salinity salt_correction_scale salt_restore_as_salt_flux salt_restore_tscale salt_restore_under_ice temp_restore_tscale	False 0.0 0.0 True 60.0 True —10.0	False 0.0 0.0 True 60.0 True — 10.0
	read_restore_mask restore_mask_gfdl runoff_salinity salt_correction_scale salt_restore_as_salt_flux salt_restore_tscale salt_restore_under_ice temp_restore_tscale use_full_patm_for_sea_level	False 0.0 0.0 True 60.0 True	False 0.0 0.0 True 60.0 True — 10.0 False
	read_restore_mask restore_mask_gfdl runoff_salinity salt_correction_scale salt_restore_as_salt_flux salt_restore_tscale salt_restore_under_ice temp_restore_tscale	False 0.0 0.0 True 60.0 True —10.0 False	False 0.0 0.0 True 60.0 True —10.0 False True
	read_restore_mask restore_mask_gfdl runoff_salinity salt_correction_scale salt_restore_as_salt_flux salt_restore_tscale salt_restore_under_ice temp_restore_tscale use_full_patm_for_sea_level use_waterflux zero_heat_fluxes zero_net_salt_correction	False 0.0 0.0 True 60.0 True —10.0 False True False False False	False 0.0 True 60.0 True — 10.0 False True False False
	read_restore_mask restore_mask_gfdl runoff_salinity salt_correction_scale salt_restore_as_salt_flux salt_restore_tscale salt_restore_under_ice temp_restore_tscale use_full_patm_for_sea_level use_waterflux zero_heat_fluxes zero_net_salt_correction zero_net_salt_restore	False 0.0 0.0 True 60.0 True —10.0 False True False False True	False 0.0 0.0 True 60.0 True — 10.0 False True False False True
	read_restore_mask restore_mask_gfdl runoff_salinity salt_correction_scale salt_restore_as_salt_flux salt_restore_tscale salt_restore_under_ice temp_restore_tscale use_full_patm_for_sea_level use_waterflux zero_heat_fluxes zero_net_salt_correction zero_net_salt_restore zero_net_water_correction	False 0.0 0.0 True 60.0 True — 10.0 False True False False True False False	False 0.0 0.0 True 60.0 True —10.0 False True False True False
	read_restore_mask restore_mask_gfdl runoff_salinity salt_correction_scale salt_restore_as_salt_flux salt_restore_tscale salt_restore_under_ice temp_restore_tscale use_full_patm_for_sea_level use_waterflux zero_heat_fluxes zero_net_salt_correction zero_net_salt_restore zero_net_water_correction zero_net_water_correction	False 0.0 0.0 True 60.0 True —10.0 False True False False True False True False True	False 0.0 0.0 True 60.0 True —10.0 False False False True False
	read_restore_mask restore_mask_gfdl runoff_salinity salt_correction_scale salt_restore_as_salt_flux salt_restore_tscale salt_restore_under_ice temp_restore_tscale use_full_patm_for_sea_level use_waterflux zero_heat_fluxes zero_net_salt_correction zero_net_salt_restore zero_net_water_correction	False 0.0 0.0 True 60.0 True — 10.0 False True False False True False False	False 0.0 0.0 True 60.0 True -10.0 False True False True False True False True
	read_restore_mask restore_mask_gfdl runoff_salinity salt_correction_scale salt_restore_as_salt_flux salt_restore_tscale salt_restore_under_ice temp_restore_tscale use_full_patm_for_sea_level use_waterflux zero_heat_fluxes zero_net_salt_correction zero_net_salt_restore zero_net_water_correction zero_net_water_correction zero_net_water_couple_restore zero_net_water_coupler	False 0.0 0.0 True 60.0 True —10.0 False True False False True False True False True False True	False 0.0 0.0 True 60.0 True -10.0 False True False True False True False True False True False

Group (continued)	Variable	original/ kiss_acces- som2 025deg jra55_ryf input.nml	new_acces- som2 025deg jra55_ryf input.nml
&ocean_shortwave_csiro_nml	debug_this_module	False	
	read_depth	True	. .
	use_this_module zmax_pen	False 7000	False
&ocean_shortwave_gfdl_nml	debug_this_module	False	False
a decarization that to a gradual mile	enforce_sw_frac	True	True
	optics_manizza	True	True
	optics_morel_antoine	False	False
	read_chl use_this_module	True	True
	use_tnis_modute zmax_pen	True 300.0	True 300.0
&ocean_shortwave_jerlov_nml	use_this_module	False	False
&ocean_shortwave_nml	use_shortwave_csiro	False	False
	use_shortwave_gfdl	True	True
	use_shortwave_jerlov	False	False
O cione toront and	use_this_module	True	True
&ocean_sigma_transport_nml	sigma_advection_on sigma_advection_sgs_only	False 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 use_this_module	True False	False
	vel_micom	0.05	ruisc
&ocean_solo_nml	calendar	'NOLEAP'	'NOLEAP'
	date_init	1, 1, 1, 0, 0, 0	1, 1, 1, 0, 0, 0
	days	31 1200	31 1200
	dt_cpld hours	1200	1200
	minutes	0	0
	months	0	0
	seconds	0	0
0	years	0	0
&ocean_sponges_eta_nml &ocean_sponges_tracer_nml	use_this_module damp_coeff_3d	False False	False
&ocean_sponges_cracer_mint	use_this_module	False	False
&ocean_sponges_velocity_nml	use_this_module	False	False
&ocean_submesoscale_nml	coefficient_ce	0.05	0.05
	debug_this_module	False	False
	front_length_const	5000.0	5000.0
	front_length_deform_radius limit_psi	True True	True True
	limit_psi_velocity_scale	0.5	0.5
	min_kblt	4	4
	smooth_advect_transport	True	True
	smooth_advect_transport_num	4 Ealco	4 Falso
	smooth_hblt smooth_psi	False True	False True
	smooth_psi_num	3	3
	submeso_advect_flux	False	False
	submeso_advect_limit	True	True
	submeso_advect_upwind	True	True
	submeso_advect_zero_bdy submeso_diffusion	True False	True False
	submeso_diffusion_biharmonic	True	True
	submeso_diffusion_scale	10.0	10.0
	submeso_skew_flux	True	True
	use_hblt_equal_mld	True	True
	use_psi_legacy use_this_module	False	False
&ocean_tempsalt_nml	use_tnis_module debug_this_module	True False	True False
a occurate in particular.	pottemp_2nd_iteration	True	True
	pottemp_equal_contemp	True	True
	s_max	70.0	70.0
	s_max_limit	42.0	42.0

Second Process of Second Pro	Group (continued)	Variable	original/ kiss_acces- som2 025deg jra55_ryf input.nml	new_acces- som2 025deg jra55_ryf input.nml
Part				
Schemath (American Samuel) Step (Sep (Sep (Sep (Sep (Sep (Sep (Sep (S				
Part				temp'
Part	&ocean_thickness_nml	debug_this_module		
		debug_this_module_detail		
Coronal transcribed (minds) Office (minds) Office (minds) Coronal (minds)				False
Koncean transcruedvert.medi thickneers.deed Faster F				
Scores Intercardent, mile debug his mode False False Scores Intercarding mile Bild bill storm of the part o				'energetic'
Scoreal Jancer, ding, amil feed by displaying and by displayin	&ocean tracer advect nml			
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read_wave_dissipation False False		read_tide_speed		
reading_roughness_amp True True		read_wave_dissipation		
		reading_roughness_amp	True	True

Group (continued)	Variable	original/ kiss_acces- som2 025deg jra55_ryf input.nml	new_acces- som2 025deg jra55_ryf input.nml
	reading_roughness_length	False	False
	roughness_scale	12 000.0	12 000.0
	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
	use_wave_dissipation	True	True
	wave_energy_flux_max	0.1	0.1
&ocean_xlandinsert_nml	use_this_module	False	False
&ocean_xlandmix_nml	use_this_module	False	False
&surface_flux_nml	ncar_ocean_flux	True	
	raoult_sat_vap	True	
&xgrid_nml	interp_method	'second	'second
		order'	order'
	make_exchange_reproduce	False	False
	nsubset	16	16

$2.3 \quad accessom2_01deg_jra55_ryf$

Group	Variable	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new_acces- som2 01deg jra55_ryf 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	600
	fixmeltt	False	False
	frazil_factor	1.0	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	
	threading_read	'multi'	'multi'
	threading_write	'multi'	'multi'
&fms_nml	clock_grain	'LOOP'	'COMPONENT
	domains_stack_size	115200	115200
	print_memory_usage	False	
&generic_tracer_nml	do_generic_cfc	False	
	do_generic_topaz	False	
	do_generic_tracer	False	
&mom_oasis3_interface_nml	fields_in	'u_flux',	'u_flux',
		'v_flux',	'v_flux',
		'lprec', 'fprec',	'lprec', 'fprec',
		'salt_flx',	'salt_flx',
		'mh_flux',	'mh_flux',
		'sw_flux',	'sw_flux',
		'q_flux',	'q_flux',
		't_flux',	't_flux',
		'lw_flux',	'lw_flux',
		'runof', 'p',	runof', 'p',
		'aice',	'aice',
		'wfimelt',	'wfimelt',
		'wfiform'	'wfiform'

Group (continued)	Variable	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new_acces- som2 01deg jra55_ryf input.nml
	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 num_fields_out	15	15
	num_πelds_out send_after_ocean_update	7 True	7 True
	send_before_ocean_update	False	False
&monin_obukhov_nml	neutral	True	True
&mpp_io_nml	deflate_level shuffle	5 1	5 1
&ocean_adv_vel_diag_nml	diag_step	576	576
	large_cfl_value	10.0	10.0
	max_cfl_value verbose_cfl	100.0 True	100.0 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
	barotropic_time_stepping_a barotropic_time_stepping_b	True False	True False
	debug_this_module	False	False
	diag_step	576	576
	eta_max	8.0	8.0
	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 vel_micom_lap	0.01 0.05	0.01 0.05
	vel_micom_tap vel_micom_lap_diaq	0.05	0.05
	verbose_truncate	True	True
	zero_tendency	False	False
&ocean_bbc_nml	bmf_implicit cdbot	1rue 0.001	0.001
	cdbot_hi	0.001	0.001
	cdbot_roughness_length	False	False
	cdbot_roughness_uamp	True	True
	uresidual use_geothermal_heating	0.05 False	0.05 False
&ocean_bih_friction_nml	bih_friction_scheme	'general'	'general'
&ocean_bih_tracer_nml	tracer_mix_micom	True	-
	use_this_module	False	False
&ocean_bihcst_friction_nml	vel_micom use_this_module	0.001 False	False
&ocean_bihgen_friction_nml	bottom_5point	False	False
	eq_lat_micom	0.0	0.0
	eq_vel_micom_aniso eq_vel_micom_iso	0.0 0.0	0.0 0.0
	eq_vet_micom_iso equatorial_zonal	False	False
	k_smag_aniso	0.0	0.0
	k_smag_iso	2.0	2.0
	ncar_boundary_scaling ncar_boundary_scaling_read	True True	True True
	ncar_rescale_power	2	2
			2×10^{-8}
	ncar_vconst_4	$2 imes 10^{-8}$	
	ncar_vconst_4 ncar_vconst_5	5	5
	ncar_vconst_4 ncar_vconst_5 use_this_module	5 True	5 True
	ncar_vconst.4 ncar_vconst.5 use_this_module vel_micom_aniso	5 True 0.0	5 True 0.0
	ncar_vconst_4 ncar_vconst_5 use_this_module	5 True 0.0 0.0 0.0	5 True
	ncar_vconst_4 ncar_vconst_5 use_this_module vel_micom_aniso vel_micom_bottom vel_micom_iso visc_crit_scale	5 True 0.0 0.0 0.0 1.0	5 True 0.0 0.0
&ocean_convect_nml	ncar_vconst_4 ncar_vconst_5 use_this_module vel_micom_aniso vel_micom_bottom vel_micom_iso visc_crit_scale convect_full_scalar	5 True 0.0 0.0 0.0 1.0 True	5 True 0.0 0.0 0.0
&ocean_convect_nml	ncar_vconst_4 ncar_vconst_5 use_this_module vel_micom_aniso vel_micom_bottom vel_micom_iso visc_crit_scale	5 True 0.0 0.0 0.0 1.0	5 True 0.0 0.0 0.0

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Injert of the content of the conte	ean_density_nml			False
		•		True
Beautifle man 1038.0 2021.0 2021.0 2022.0 202		•		80 1030.0
				1030.0
December				1038.0
Socean domains amil max.tracers Socean formal use, this, module Fabre fabre fabre fabre fabre freezing, tenny, surface fabre		·		1028.0
Social Intelligence False	ean_domains_nml	·		5
frazil nnyl n surface freezing, stemp, stemples 50 True freezing, stemp, stemple 50 True freezing, stemp, stemple 50 True freezing, stemp, stemple 50 Easter 50 Secona, stemple 50 Secon	ean_form_drag_nml	use_this_module	False	False
freezing, temp, partees 10 freezing, temp, partees 10 freezing, temp, partee 15 freezing, temp, partee 15 greezing, temp, partee 15 greezing, partee 15 greezing, temp, partees 10 gree	ean_frazil_nml		False	False
freeing, temp, simple use, this, module false Gotean, increment, tea, and debug, this, module Gotean, increment, tea, and use, this, module false Gotean, lapper, friction, and to general Gotean, lapper, friction, and use, this, module false Gotean, module, and false false facean, module, and false fal				False
Description				True
				False
Accean increment, tax jumil use, this, module False Accean increment, taxade and use, this, module of processing and the processi	and add a soul			True
Kozen increment, tracer uml use, this, module False Kozen increment, tracer, uml use, this, module False Kozen in Increment, vedering, uml use, this, module False Kozen, Indiport, Triction, uml use, this, module False Kozen, Lapper, Triction mint use, this, module False Kozen, Lapper, Triction, mint debug this, module False Kozen, Lapper, Triction, mint debug this, module False Kozen, Lapper, Triction, mint debug this, module False Kozen, Loper, Triction, mint debug this, module False Kozen, model, mint barrotropic spit 1 Barrotropic spit 1 August 8 debug this, module False 8 6 6 6 7 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8				False
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Socean_model_nml				False
barotropic.split 80 cmlp.units debug False d.coean 150 io.layout 10,15 layout 80,75 surface_height_split 1 time_tendency vollevel* vertical_coordinate 'zstar' Socean_momentum_source_nml rayleigh_damp_cabp from_bottom False use_rayleigh_damp_table True use_trayleigh_damp_table True use_trayleigh_damp_table True use_trayleigh_damp_table True use_nphysics and debug_this_module False use_nphysics False use_nphysics False use_nphysics False use_nphysics False use_nphysics True agm_closure_buoy_freq agm_closure_branctinic True agm_closure_branctinic True agm_closure_branctinic True agm_closure_branctinic True agm_closure_length_fred agm_closure_length_brzone agm_closure_length_fred agm_closure_uper_depth agm_closure_u	ean_model_nml			1
timp_units debug False dt.ocean 150 debug False dt.ocean 150 io.layout 10,15 layout 11,15 layout			80	80
dt.ocean 150 10,15 10,				True
10.13yout				False
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& cocean_momentum_source_nml vertical_coordinate 'zstar' & cocean_momentum_source_nml rayleigh_damp_exp_from_bottom False use_rayleigh_damp_table True & cocean_nphysics_undle debug_this_module False use_nphysicsa False use_nphysics False agm_closure_lough_closure 50000 agm_closure_length_fixed False agm_closure_length_fixed False agm_closure_length_fixed False agm_closure_length_fixed False				1
&ocean_momentum_source_nml rayleigh_damp_exp_from_bottom use_rayleigh_damp_table use_this_module use_this_module use_this_module use_this_module use_this_module use_nphysics and use_nphysics are use_nphysics and use_nphysics and use_this_module use_this_module and use_nphysics and use_nphysics are use_this_module and use_nphysics and use_this_module and use_nphysics and use_this_module and use_nphysics_this_module and use_nphysics_this_module and_closure_baroclinic and_nclosure_baroclinic and_nclosure_baroclinic and_nclosure_baroclinic and_nclosure_baroclinic and_nclosure_length for use_npm_closure_length for use_npm_closure_length for use_npm_closure_length for use_npm_closure_length for use_npm_closure_length and_nclosure_length for use_npm_closure_length and_nclosure_length for use_npm_closure_length for use_npm_closure_length and_nclosure_length and_nclosure_length for use_npm_closure_length for use_npm_closure_length and_nclosure_length and_nclosure_length and_nclosure_length for use_npm_closure_length and_nclosure_length and_nclosure_leng		•		'twolevel' 'zstar'
use_rayleigh_damp_table True use_this_module False use_nphysicsa False use_nphysics False use_nphysics False use_nphysics False use_this_module False use_nphysics False use_this_module False agm_closure_baroclinic True agm_closure_boy_freq 0.004 agm_closure_length_folser agm_closure_length 50 000.0 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_nower_depth 2000.0 agm_closure_max agm_closure_max fo00.0 agm_closure_max fo00.0 agm_closure_uper_depth 100.0 aredi_equal_agm_false drhodz_smooth_porz false drhodz_smooth_porz False drhodz_smooth_porz False drhodz_smooth_vert false rossby_radius_max 100 0000.0 rossby_radius_max 100 0000.0 rossby_radius_max 15 000.0	ean momentum source nml			False
kocean_nphysics_nml use_this_module True kocean_nphysics_nml debug_this_module False use_nphysics False use_nphysics False use_nphysics_c False use_nphysics_c False use_unphysics_c False use_this_module False kocean_nphysics_util_nml agm_closure agm_closure True agm_closure_buoy_freq 0,000 agm_closure_buoy_freq 0,000 agm_closure_length_brzone False agm_closure_length_fixed False agm_closure_length_rossby False agm_closure_length_rossby False agm_closure_length_rossby False agm_closure_length_rossby False agm_closure_length_rossby False agm_closure_length_rossby False agm_closure_length_nossby False agm_closure_length_rossby False agm_closure_length_nossby False agm_closure_length_rossby False agm_closure_length_nossby False agm_closure_length_rossby false agm_closure_length_nossby agm_closure_length_rossby	can_momentum_source_mmt			True
Rocean_nphysics.nml debug.this.module use_nphysicsa False use_nphysicsb False use_nphysicsc use_nphysicsc use_nphysicsc use_nphysicsc use_nphysicsc use_nphysicsc use_nphysicsc ralse use_nphysicsc use_nphysicsc use_nphysicsc use_nphysicsc use_nphysicsc use_nphysicsc ralse use_nphysicsc use_nphysics_nphy				True
use_nphysics False use_nphysics False use_nphysics False use_nphysics False use_nphysics False use_nphysics_c False use_nphysics_c False use_nphysics_c False use_nphysics_c False use_nphysics_c False use_nphysics_c False use_nph_nodule False use_nph_nodule False agm_closure_baroclinic True agm_closure_baroclinic True agm_closure_buoy_freq 0.004 agm_closure_buoy_freq 0.004 agm_closure_length_bczone False agm_closure_length_bczone False agm_closure_length_fixed False agm_closure_length_fixed False agm_closure_length_fixed False agm_closure_length_fixed agm_closure_min 100.0 agm_closure_min 100.0 agm_closure_scaling 0.07 agm_closure_scaling 0.07 agm_closure_uper_depth 100.0 ared_i_equal_agm False ared_i_equal_agm ared_i	ean_nphysics_nml			False
use_nphysics_ use_this_module False use_this_module False socean_nphysics_util_nml agmclosure	1,			False
kocean_nphysics_util_nml agm 100.0 kocean_nphysics_util_nml agm 100.0 agm_closure_lampt_closure True agm_closure_buoy_freq 0.004 agm_closure_length_brzone False agm_closure_length_fixed		use_nphysicsb	False	False
Rocean_nphysics_util_nml agm_closure agm_closure True agm_closure_baroclinic True True agm_closure_baroclinic True 1 agm_closure_baroclinic True 0.004 agm_closure_buoy_freq 0.004 0.004 agm_closure_length 50 000.0 5 agm_closure_length_bczone False 6 agm_closure_length_rossby False 6 agm_closure_lower_depth 2000.0 2 agm_closure_unax 600.0 6 agm_closure_scaling 0.07 2 agm_closure_upper_depth 100.0 2 aredi_equal_agm False 6 drhodz_mom4p1 False 6 drhodz_smooth_horz False 6 drhodz_smooth_vert False 6 drhodz_smooth_smax 100 000.0 1 rossby_radius_min 15 000.0 15 000.0 smax 0.002 1			False	False
agm_closure True agm_closure baroclinic True agm_closure_baroclinic True agm_closure_buoy_freq 0.004 agm_closure_length 50 000.00 agm_closure_length bzone False agm_closure_length_fixed False agm_closure_length_rossby False agm_closure_length_rossby False agm_closure_length_rossby False agm_closure_length 2000.00 agm_closure_min 100.00 agm_closure_min 100.00 agm_closure_min 100.00 agm_closure_depth 100.00 aredi aredi 600.00 aredi aredi 600.00 aredi aredi 600.00 aredi aredi aredi 600.00 aredi aredi 600.00 aredi aredi 600.00 aredi aredi aredi 600.00 aredi aredi 600.00 aredi aredi aredi 600.00 aredi aredi 600.00 aredi aredi 600.00 aredi aredi aredi 600.00		use_this_module		False
agm_closure_baroclinic agm_closure_buoy_freq 0.004 agm_closure_length	ean_nphysics_util_nml			100.0
agm_closure_buoy_freq 0.004 agm_closure_length 50 000.0 agm_closure_length_bczone False agm_closure_length_fixed False agm_closure_length_rossby False agm_closure_depth 2000.0 agm_closure_max 600.0 agm_closure_min 100.0 agm_closure_scaling 0.07 agm_closure_upper_depth 100.0 aredi_equal_agm False drhodz_mom4p1 False drhodz_mom4p1 False drhodz_smooth_vert False drhodz_smooth_vert False rossby_radius_max 100 000.0 rossby_radius_min 15 000.0 smax 0.002				True
agm_closure_length_bczone False agm_closure_length_bczone False agm_closure_length_fixed False agm_closure_length_frossby False agm_closure_length_rossby False agm_closure_lower_depth 2000.0 agm_closure_max 600.0 agm_closure_min 100.0 agm_closure_scaling 0.07 agm_closure_upper_depth 100.0 aredi 600.0 aredi_equal_agm False drhodz_month_horz False drhodz_smooth_horz False drhodz_smooth_vert False drhodz_smooth_vert False rossby_radius_max 100 000.0 rossby_radius_max 100 000.0 rossby_radius_max 100 000.0 rossby_radius_min 15 000.0 smax 0.002				True
agm_closure_length_bczone False agm_closure_length_fixed False agm_closure_length_rossby False agm_closure_lower_depth 2000.0 agm_closure_max 600.0 agm_closure_min 100.0 agm_closure_scaling 0.07 agm_closure_scaling 0.07 agm_closure_upper_depth 100.0 aredi 600.0 aredi 600.0 aredi_equal_agm False drhodz_mom4p1 False drhodz_smooth_horz False drhodz_smooth_horz False forssby_radius_max 100 000.0 rossby_radius_min 15 000.0 smax 0.002				0.004
agm_closure_length_fixed agm_closure_length_rossby False agm_closure_lower_depth 2000.0 agm_closure_max 600.0 agm_closure_min 100.0 agm_closure_scaling 0.07 agm_closure_upper_depth 100.0 aredi 600.0 aredi 600.0 aredi equal_agm False drhodz_mom4p1 False drhodz_smooth_horz false drhodz_smooth_vert False drhodz_smooth_vert False frossby_radius_max 100 000.0 rossby_radius_min 15 000.0 smax 0.002				50 000.0 False
agm_closure_length_rossby False agm_closure_lower_depth 2000.0 agm_closure_max 600.0 agm_closure_min 100.0 agm_closure_scaling 0.07 agm_closure_upper_depth 100.0 aredi_equal_agm False drhodz_mom4p1 False drhodz_smooth_horz False drhodz_smooth_vert False rossby_radius_max 100 000.0 rossby_radius_min 15 000.0 smax 0.002				False
agm_closure_lower_depth 2000.0 agm_closure_max 600.0 agm_closure_min 100.0 agm_closure_scaling 0.07 agm_closure_upper_depth 100.0 aredi_equal_agm False drhodz_mom4p1 False drhodz_smooth_horz False drhodz_smooth_vert False rossby_radius_max 100 000.0 rossby_radius_min 15 000.0 smax 0.002				False
agm_closure_max 600.0 agm_closure_min 100.0 agm_closure_scaling 0.07 agm_closure_upper_depth 100.0 aredi 600.0 aredi_equal_agm False drhodz_smooth_horz False drhodz_smooth_vert False rossby_radius_max 100 000.0 rossby_radius_min 15 000.0 smax 0.002				2000.0
agm_closure_min 100.0 agm_closure_scaling 0.07 agm_closure_upper_depth 100.0 aredi 600.0 aredi_equal_agm False drhodz_mom4p1 False drhodz_smooth_horz False drhodz_smooth_vert False rossby_radius_max 100 000.0 rossby_radius_min 15 000.0 smax 0.002				600.0
agm_closure_scaling 0.07 agm_closure_upper_depth 100.0 aredi 600.0 aredi_equal_agm False drhodz_mom4p1 False drhodz_smooth_horz False drhodz_smooth_vert False rossby_radius_max 100 000.0 rossby_radius_min 15 000.0 smax 0.002				100.0
agm_closure_upper_depth 100.0 aredi 600.0 aredi_equal_agm False drhodz_mom4p1 False drhodz_smooth_horz False drhodz_smooth_vert False rossby_radius_max 100 000.0 rossby_radius_min 15 000.0 smax 0.002				0.07
aredi_equal_agm False drhodz_mom4p1 False drhodz_smooth_horz False drhodz_smooth_vert False rossby_radius_max 100 000.0 rossby_radius_min 15 000.0 smax 0.002		agm_closure_upper_depth		100.0
drhodz_mom4p1 False drhodz_smooth_horz False drhodz_smooth_vert False rossby_radius_max 100 000.0 rossby_radius_min 15 000.0 smax 0.002				600.0
drhodz_smooth_horz False drhodz_smooth_vert False rossby_radius_max 100 000.0 rossby_radius_min 15 000.0 smax 0.002				False
drhodz_smooth_vert False rossby_radius_max 100 000.0 rossby_radius_min 15 000.0 smax 0.002				False
rossby_radius_max 100 000.0 rossby_radius_min 15 000.0 smax 0.002				False
rossby_radius_min 15 000.0 smax 0.002				False 100 000.0
smax 0.002				15 000.0
				0.000 د ت
tracer_mix_micom False				False
vel_micom 0.0				0.0
Rocean_nphysicsa_nml use_this_module False	ean_nphysicsa_nml			False
&ocean_nphysicsb_nml use_this_module False				False
kocean_nphysicsc_nml use_this_module False				False
kocean_operators_nml use_legacy_div_ud False				False

Content overflow mail False Fals	Group (continued)	Variable	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new_acces- som2 01deg jra55_ryf input.nml
		overexch_npts	4 Falso	4 False
Scient process Scient process False Fa				
Section one flow of purity False			False	False
Stocent (Control of Control of	&ocean_overflow_nml			F-1
Begand 1970	&ocean overflow of pnml			False
Command Comm	Wording-Overheit-Organitie			
The contemps of the contemp of the				
		·		
Access prize filter and Use, Biss, module False False Coccons pressure filter Participated Partic				
	•			
Process				
Price of this sont hickness 0.0 0.0 0.0	& OCEAN LITTER MINISTER METAL			
Mexical State				True
obsession in thickness 400 400 400 400 400 400 400 500				
Second streets Seco		•		
December December	&ocean_riverspread_nml			
Social Social September True True True Captings September True True Captings				
ang_sfx_velocity True True Calvimpgread False Fals				
Calvingspread False False False Gobbivise, exact.sum False False False False Gobbivise, exact.sum False False False False Gobbivise, exact.sum False	WOCEAN_SUC_INIT			
do. flux.correction		calvingspread		
Iland.moder.Laft.luxes				
max. delta. salinity, restore 0.5 0.				
maxice thickness 00 00 read.nestore.mask False F				
restore_mask_gful False		max_ice_thickness	0.0	
Salt_restore_as_salt_flux				
Salt_restore_tscale G0.0 G0.0 G0.0 Go.0				
Salt_restore_under_ice				
Region		use_full_patm_for_sea_level	False	False
Raise Rais				
&ocean_shortwave_csiro_nml use_this_module debug_this_module enforce_sw_frac False True True True optics_manizza True True True optics_monizza True True True use_this_module True True use_this_module optics_monizza True True True use_this_module True True use_this_module Use_this_this_this_this_this_this_this_this		zero_surface_stress	False	False
&ocean_shortwave_gfdl_nml debug_this_module enforce_sw_frac enforce_sw_frac optics_manizza False True True optics_manizza True True True optics_morel_antoine False in False enforce_sw_frac optics_morel_antoine in False in Fals				
Benforce_sw_frac optics_manizza True optics_manizza True optics_manizza True optics_manizza True optics_manizza True optics_morel_antoine False False				
Optics_manizza True True Optics_morel_antoine False False read_chi True True use_this_module True True use_this_module True True use_this_module True True use_this_module False False decean_shortwave_jerlov_nml use_this_module False False decean_shortwave_shortwave_csiro False False use_shortwave_gfd True True use_shortwave_jerlov False False use_shortwave_jerlov False False use_this_module True True decean_sigma_transport_nml sigma_advection_on False sigma_advection_on False sigma_advection_on False sigma_advection_on True sigma_diffusivity_ratio 1 × 10 -6 sigma_just_in_bottom_cell True sigma_just_in_bottom_cell True sigma_umax 0.01 sigma_umax 0	&ocean_snot wave_grat_nint			
True True Use_this_module True Use_this_module True True Use_this_module True Tr				
use_this_module zmax_pen True zmax_pen 300.0 300.0 &ocean_shortwave_jerlov_nml use_this_module use_shortwave_csiro ise_shortwave_gfdl False ise_shortwave_gfdl True				
kocean_shortwave_jerlov_nml use_this_module False False &ocean_shortwave_nml use_shortwave_csiro False False use_shortwave_jerlov False False use_shortwave_jerlov False False use_this_module True True &ocean_sigma_transport_nml sigma_advection_on False sigma_advection_sgs_only False sigma_diffusion_on True sigma_diffusion_ty_ratio 1 × 10^-6 sigma_just_in_bottom_cell True sigma_umax 0.01 smooth_sigma_thickness True				
&ocean_shortwave_jerlov_nml use_this_module False False &ocean_shortwave_nml use_shortwave_cjerlo False False use_shortwave_jerlov False False False use_this_module True True True True &ocean_sigma_transport_nml sigma_advection_on sigma_diffusion_on rue False				
use_shortwave_gfdl True True use_shortwave_jerlov False False use_this_module True True &ocean_sigma_transport_nml sigma_advection_on sigma_advection_sgs_only sigma_advection_sgs_only sigma_advection_sgs_only sigma_diffusion_on rue True sigma_diffusivity_ratio 1 × 10^-6 sigma_just_in_bottom_cell sigma_umax sigma_umax sigma_umax sigma_umax sigma_umax sigma_umax sigma_umax sigma_umax sigma_undax sigma_thickness sigma_thickness sigma_thickness sigma_umax sigma_thickness sig	&ocean_shortwave_jerlov_nml	use_this_module		
use_shortwave_jerlov use_this_module False use_this_module False True &ocean_sigma_transport_nml sigma_advection_on sigma_advection_sgs_only False False sigma_diffusion_on sigma_diffusion_on sigma_diffusivity_ratio True sigma_just_in_bottom_cell sigma_umax sigma_umax smooth_sigma_thickness True	&ocean_shortwave_nml			
use_this_module True True &ocean_sigma_transport_nml sigma_advection_on sigma_advection_sgs_only sigma_advection_sgs_only sigma_diffusion_on true False sigma_diffusivity_ratio 1 × 10 ⁻⁶ sigma_just_in_bottom_cell sigma_umax sigma_umax sigma_umax smooth_sigma_thickness 0.01				
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 True		use_this_module		
sigma_diffusion_on True sigma_diffusivity_ratio 1 × 10 ⁻⁶ sigma_just_in_bottom_cell True sigma_umax 0.01 smooth_sigma_thickness True	&ocean_sigma_transport_nml			
$\begin{array}{cccccccccccccccccccccccccccccccccccc$				
\$igma_just_in_bottom_cellTrue\$igma_umax0.01\$mooth_sigma_thicknessTrue				
smooth_sigma_thickness		sigma_just_in_bottom_cell	True	
		smooth_sigma_thickness smooth_sigma_velocity	True True	

Group (continued)	Variable	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new_acces- som2 01deg jra55_ryf input.nml
	smooth_velmicom thickness_sigma_layer	0.2 100.0	
	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'
&ocean_soto_nnt	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 months	0	0
	seconds	0	0
	years	0	0
&ocean_sponges_eta_nml	use_this_module	False	False
&ocean_sponges_tracer_nml	damp_coeff_3d	False	
	use_this_module	False	False
&ocean_sponges_velocity_nml	use_this_module	False	False
&ocean_submesoscale_nml	coefficient_ce debug_this_module	0.05 False	0.05 False
	front_length_const	5000.0	5000.0
	front_length_deform_radius	True	True
	limit_psi	True	True
	limit_psi_velocity_scale	0.5	0.5
	min_kblt smooth_advect_transport	4 True	4 Truo
	smooth_advect_transport_num	True	True 4
	smooth_hblt	False	False
	smooth_psi	True	True
	smooth_psi_num	3	3
	submeso_advect_flux	False	False
	submeso_advect_limit submeso_advect_upwind	True True	True True
	submeso_advect_zero_bdy	True	True
	submeso_diffusion	False	False
	submeso_diffusion_biharmonic	True	True
	submeso_diffusion_scale	10.0	10.0
	submeso_skew_flux use_hblt_equal_mld	True True	True True
	use_psi_legacy	False	False
	use_this_module	True	True
&ocean_tempsalt_nml	debug_this_module	True	False
	pottemp_2nd_iteration	True	True
	pottemp_equal_contemp	True	True
	s_max s_max_limit	70.0 42.0	70.0 42.0
	s_min	0.0	0.0
	s_min_limit	2.0	2.0
	t_max	55.0	55.0
	t_max_limit	32.0	32.0
	t_min t_min_limit	-20.0 -5.0	-20.0 -5.0
	t_min_umit temperature_variable	- 5.0 'potential	-5.0 'potential
	comperator estatiable	temp'	temp'
&ocean_thickness_nml	debug_this_module	False	False
	debug_this_module_detail	False	False
	rescale_mass_to_get_ht_mod	False	False
	thickness_dzt_min	2.0 10.0	
	thickness dat min init		
	thickness_dzt_min_init thickness_method		'eneraetic'
&ocean_tracer_advect_nml	thickness_dzt_min_init thickness_method debug_this_module	'energetic' False	'energetic' False
	thickness_method	'energetic' False False	False False
&ocean_tracer_advect_nml &ocean_tracer_diag_nml	thickness_method debug_this_module read_basin_mask diag_step	'energetic' False False 576	False False 576
	thickness_method debug_this_module read_basin_mask diag_step do_bitwise_exact_sum	'energetic' False False 576 False	False False 576 False
&ocean_tracer_diag_nml	thickness_method debug_this_module read_basin_mask diag_step do_bitwise_exact_sum tracer_conserve_days	'energetic' False False 576 False 30.0	False False 576 False 30.0
	thickness_method debug_this_module read_basin_mask diag_step do_bitwise_exact_sum tracer_conserve_days age_tracer_max_init	'energetic' False False 576 False 30.0	False False 576 False 30.0
&ocean_tracer_diag_nml	thickness_method debug_this_module read_basin_mask diag_step do_bitwise_exact_sum tracer_conserve_days age_tracer_max_init debug_this_module	'energetic' False False 576 False 30.0	False False 576 False 30.0
&ocean_tracer_diag_nml	thickness_method debug_this_module read_basin_mask diag_step do_bitwise_exact_sum tracer_conserve_days age_tracer_max_init	'energetic' False False 576 False 30.0 0.0 False	False False 576 False 30.0 0.0 False

Group (continued)	Variable	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new_acces- som2 01deg jra55_ryf input.nml
	remap_depth_to_s_init	False	False
	use_tempsalt_check_range	True	True
	zero_tendency	False	False
	zero_tracer_source	False	False
&ocean_velocity_diag_nml	debug_this_module	False	False
	diag_step	576 5760	576 5760
	energy_diag_step large_cfl_value	10.0	10.0
	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	False	False
	zero_tendency_explicit_a	False	False
	zero_tendency_explicit_b	False	False
& occasa work Iran jow ami	zero_tendency_implicit	False	False
&ocean_vert_kpp_iow_nml	use_this_module diff_cbt_iw	False 0.0	False 0.0
&ocean_vert_kpp_mom4p1_nml	diff_cbt_iw double_diffusion	0.0 True	0.0 True
	kbl_standard_method	False	False
	ricr	0.3	0.3
	smooth_blmc	False	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	1.0	1.0
	bryan_lewis_diffusivity	False	False
	bryan_lewis_lat_depend	False	False
	hwf_diffusivity	False	False
	hwf_min_diffusivity	2×10^{-6}	2×10^{-6}
	hwf_n0_2omega	20.0	20.0
	use_diff_cbt_table vert_diff_back_via_max	False True	False True
	vert_mix_scheme	'kpp	'kpp
	Verezmikuseneme	mom4p1'	mom4p1'
&ocean_vert_tidal_nml	background_diffusivity	0.0	0.0
	background_viscosity	0.0001	0.0001
	decay_scale	500.0	500.0
	drag_dissipation_use_cdbot	True	True
	drhodz_min	$1 imes 10^{-10}$	1×10^{-10}
	fixed_wave_dissipation	False	False
	max_wave_diffusivity	0.01	0.01
	mixing_efficiency_n2depend	True	True
	read_roughness	True	True
	read_tide_speed	True False	True False
	read_wave_dissipation reading_roughness_amp	True	False True
	reading_roughness_length	False	False
	roughness_scale	12 000.0	12 000.0
	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
	use_wave_dissipation	True	True
Passan ylandinsert aml	wave_energy_flux_max	0.1 Falso	0.1
&ocean_xlandinsert_nml &ocean_xlandmix_nml	use_this_module use_this_module	False False	False False
&ocean_xtandmix_nmt &sat_vapor_pres_nml	use_tnis_module show_all_bad_values	True	Larse
&surface_flux_nml	ncar_ocean_flux	True	
Courace_ntuA_nnt	raoult_sat_vap	True	
&xgrid_nml	do_alltoall	True	True
Sing received.	do_alltoallv	True	True
	interp_method	'second	'second
		order'	order'
	make_exchange_reproduce	False	False
	nsubset	16	16
		False	

3 Old and new ACCESS-OM2 configs (differences highlighted)

Group	Variable	original/ hogg_acces- som2 1deg jra55_ryf input.nml	new_acces- som2 1deg jra55_ryf input.nml	original/ kiss_acces- som2 025deg jra55_ryf input.nml	new_acces- som2 025deg jra55_ryf input.nml	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new_acces- som2 01deg jra55_ryf input.nml
&auscom_ice_nml	aice_cutoff	0.15	0.15	0.15	0.15	0.15	0.15
	chk_i2o_fields	False	False	False	False	False	False
	chk_o2i_fields do_ice_once	False False	False False	False False	False False	False False	False False
	dt_cpl	3600	3600	1200	1800	150	600
	fixmeltt	False	False	False	False	False	False
	frazil_factor	1.0	1.0	1.0	1.0	1.0	1.0
	iceform_adj_salt	False	False	False	False	False	False
	icemlt_factor	1.0	1.0	1.0	1.0	1.0	1.0
	kmxice	5	5	5	5	5	5
	pop_icediag	True	True	True	True	True	True
	<mark>redsea_gulfbay_sfix</mark> sign_stflx	True 1.0	True 1.0	1.0	1.0	1.0	1.0
	tmelt	-0.216	-0.216	-0.216	-0.216	-0.216	-0.216
	use_ioaice	True	True	True	True	True	True
&bg_diff_lat_dependence_nml	bg_diff_eq	1×10^{-6}					
3 1 11 112 1	lat_low_bgdiff	20.0					
&diag_manager_nml	debug_diag_manager		True	True	True		True
	issue_oor_warnings	False	True	True	True	False	True
	max_axes					300	
	max_files					1000	
	max_input_fields max_num_axis_sets					700 40	
	max_output_fields					700	
&fms_io_nml	checksum_required					False	
W.11021011111	fileset_write	'single'	'single'	'single'	'multi'	'multi'	'multi'
	max_files_r	J	3	J		700	
	max_files_w					700	
	threading_read	'multi'	'multi'	'multi'	'multi'	'multi'	'multi'
	threading_write	'single'	'single'	'single'	'multi'	'multi'	'multi'
&fms_nml	clock_grain domains_stack_size	'LOOP'	'COMPONENT' 115200	'LOOP'	'COMPONENT' 115200	'LOOP' 115200	'COMPONENT' 115200
	print_memory_usage		113200		113200	False	113200
&generic_tracer_nml	do_generic_cfc					False	
	do_generic_topaz					False	
	do_generic_tracer					False	
&mom_oasis3_interface_nml	fields_in	'u_flux',	'u_flux',	'u_flux',	'u_flux',	'u_flux',	'u_flux',
		'v_flux',	'v_flux',	'v_flux',	'v_flux',	'v_flux',	'v_flux',
		'lprec', 'fprec', 'salt_flx',	'lprec', 'fprec', 'salt_flx',	'lprec', 'fprec', 'salt_flx',	'lprec', 'fprec', 'salt_flx',	'lprec', 'fprec', 'salt_flx'.	'lprec', 'fprec', 'salt_flx',
		'mh_flux',	'mh_flux',	'mh_flux',	'mh_flux',	'mh_flux',	'mh_flux',
		'sw_flux',	'sw_flux',	'sw_flux',	'sw_flux',	'sw_flux',	'sw_flux',
		'q_flux',	'q_flux',	'q_flux',	'q_flux',	'q_flux',	'q_flux',
		't_flux',	't_flux',	't_flux',	't_flux',	't_flux',	't_flux',
		'lw_flux',	'lw_flux',	'lw_flux',	'lw_flux',	'lw_flux',	'lw_flux',
		'runof', 'p',	'runof', 'p',	'runof', 'p',	'runof', 'p',	'runof', 'p',	'runof', 'p',
		'aice', 'wfimelt',	'aice', 'wfimelt',	'aice', 'wfimelt'	'aice', 'wfimelt'	'aice', 'wfimelt',	'aice', 'wfimelt'
		wnmett, 'wfiform'	wiimeit, 'wfiform'	'wfimelt', 'wfiform'	'wfimelt', 'wfiform'	wnmett, 'wfiform'	'wfimelt', 'wfiform'
		***************************************			't_surf',	't_surf',	't_surf',
	fields out	't_surf'.	't_surf'.	L_SUIT.			,
	fields_out	't_surf', 's_surf',	't_surf', 's_surf',	't_surf', 's_surf',	's_surf',	's_surf',	's_surf',
	fields_out	's_surf', 'u_surf',	't_surf', 's_surf', 'u_surf',	's_surf', 'u_surf',	's_surf', 'u_surf',	'u_surf',	's_surf', 'u_surf',
	fields_out	's_surf', 'u_surf', 'v_surf',	's_surf', 'u_surf', 'v_surf',	's_surf', 'u_surf', 'v_surf',	's_surf', 'u_surf', 'v_surf',	'u_surf', 'v_surf',	'u_surf', 'v_surf',
	fields_out	's_surf', 'u_surf', 'v_surf', 'dssldx',	's_surf', 'u_surf', 'v_surf', 'dssldx',	's_surf', 'u_surf', 'v_surf', 'dssldx',	's_surf', 'u_surf', 'v_surf', 'dssldx',	'u_surf', 'v_surf', 'dssldx',	'u_surf', 'v_surf', 'dssldx',
	fields_out	's_surf', 'u_surf', 'v_surf', 'dssldx', 'dssldy',	's_surf', 'u_surf', 'v_surf', 'dssldx', 'dssldy',	's_surf', 'u_surf', 'v_surf', 'dssldx', 'dssldy',	's_surf', 'u_surf', 'v_surf', 'dssldx', 'dssldy',	'u_surf', 'v_surf', 'dssldx', 'dssldy',	'u_surf', 'v_surf', 'dssldx', 'dssldy',
		's_surf', 'u_surf', 'v_surf', 'dssldx', 'dssldy', 'frazil'	's_surf', 'u_surf', 'v_surf', 'dssldx', 'dssldy', 'frazil'	's_surf', 'u_surf', 'v_surf', 'dssldx', 'dssldy', 'frazil'	's_surf', 'u_surf', 'v_surf', 'dssldx', 'dssldy', 'frazil'	'u_surf', 'v_surf', 'dssldx', 'dssldy', 'frazil'	'u_surf', 'v_surf', 'dssldx', 'dssldy', 'frazil'
	num_fields_in	's_surf, 'u_surf, 'v_surf, 'dssldx', 'dssldy', 'frazil'	's_surf, 'u_surf, 'v_surf, 'dssldx', 'dssldy', 'frazil'	's_surf', 'u_surf', 'v_surf', 'dssldx', 'dssldy', 'frazil'	's_surf, 'u_surf, 'v_surf, 'dssldx', 'dssldy', 'frazil'	'u_surf', 'v_surf', 'dssldx', 'dssldy', 'frazil' 15	'u_surf, 'v_surf, 'dssldx', 'dssldy', 'frazil' 15
	num_fields_in num_fields_out	's_surf, 'u_surf, 'v_surf, 'dssldx', 'dssldy', 'frazil' 15 7	's_surf', 'u_surf', 'v_surf', 'dssldx', 'dssldy', 'frazil' 15 7	's_surf, 'u_surf, 'v_surf, 'dssldx', 'dssldy', 'frazil' 15 7	's_surf, 'u_surf, 'v_surf, 'dssldx', 'dssldy', 'frazil' 15 7	'u_surf', 'v_surf', 'dssldx', 'dssldy', 'frazil' 15 7	'u_surf', 'v_surf', 'dssldx', 'dssldy', 'frazil' 15 7
	num_fields_in	's_surf, 'u_surf, 'v_surf, 'dssldx', 'dssldy', 'frazil'	's_surf, 'u_surf, 'v_surf, 'dssldx', 'dssldy', 'frazil'	's_surf', 'u_surf', 'v_surf', 'dssldx', 'dssldy', 'frazil'	's_surf, 'u_surf, 'v_surf, 'dssldx', 'dssldy', 'frazil'	'u_surf', 'v_surf', 'dssldx', 'dssldy', 'frazil' 15	'u_surf, 'v_surf, 'dssldx', 'dssldy', 'frazil' 15
&monin_obukhov_nml	num_fields_in num_fields_out send_after_ocean_update	's_surf, 'u_surf, 'v_surf, 'dssldx', 'dssldy', 'frazil' 15 7 True	's_surf', 'u_surf', 'v_surf', 'dssldx', 'dssldy', 'frazil' 15 7	's_surf', 'u_surf', 'v_surf', 'dssldx', 'dssldy', 'frazil' 15 7 True	's_surf, 'u_surf, 'v_surf, 'dssldx', 'dssldy', 'frazil' 15 7 True	'u_surf', 'v_surf', 'dssldx', 'dssldy', 'frazil' 15 7 True	'u_surf', 'v_surf', 'dssldx', 'dssldy', 'frazil' 15 7
&monin_obukhov_nml &mpp_io_nml	num_fields_in num_fields_out send_after_ocean_update send_before_ocean_update	's_surf, 'u_surf, 'v_surf, 'dssldx', 'dssldy', 'frazil' 15 7 True	's_surf', 'u_surf', 'v_surf', 'dssldx', 'dssldy', 'frazil' 15 7 True False True 5	's_surf, 'u_surf, 'v_surf, 'dssldx', 'dssldy', 'frazil' 15 7 True False	's_surf, 'u_surf, 'v_surf, 'dssldx', 'dssldy', 'frazil' 15 7 True False	'u_surf', 'v_surf', 'dssldx', 'dssldy', 'frazil' 15 7 True False	'u_surf', 'v_surf', 'dssldx', 'dssldy', 'frazil' 15 7 True False
&mpp_io_nml	num_fields_in num_fields_out send_after_ocean_update send_before_ocean_update neutral deflate_level shuffle	's_surf, 'u_surf, 'v_surf, 'dssldx', 'dssldy', 'frazil' 15 7 True False	's_surf', 'u_surf', 'v_surf', 'dssldx', 'dssldy', 'frazil' 15 7 True False True 5	's_surf, 'u_surf, 'v_surf, 'v_surf, 'dssldx', 'dssldy', 'frazil' 15 7 True False True	's_surf, 'u_surf, 'v_surf, 'dssldx', 'dssldy', 'frazil' 15 7 True False True 5	'u_surf, 'v_surf, 'dssldx', 'dssldy', 'frazil' 15 7 True False True 5	'u_surf', 'v_surf', 'dssldx', 'dssldy', 'frazil' 15 7 True False True 5
	num_fields_in num_fields_out send_after_ocean_update send_before_ocean_update neutral deflate_level shuffle diag_step	's_surf, 'u_surf, 'v_surf, 'dssldx', 'dssldy', 'frazil' 15 7 True False	's_surf', 'u_surf', 'v_surf', 'dssldx', 'dssldy', 'frazil' 15 7 True False True 5 1 4320	's_surf, 'u_surf, 'v_surf, 'v_surf, 'dssldx', 'dssldy', 'frazil' 15 7 True False True	's_surf, 'u_surf, 'v_surf, 'dssldx', 'dssldy', 'frazil' 15 7 True False True 5 1 4320	'u_surf', 'v_surf', 'dssldx', 'dssldy', 'frazil' 15 7 True False True 5 1	'u_surf', 'v_surf', 'dssldx', 'dssldy, 'frazil' 15 7 True False True 5 1
&mpp_io_nml	num_fields_in num_fields_out send_after_ocean_update send_before_ocean_update neutral deflate_level shuffle diag_step large_cfl_value	's_surf, 'u_surf, 'v_surf, 'dssldx', 'dssldy', 'frazil' 15 7 True False 4320 10.0	's_surf', 'u_surf', 'v_surf', 'dssldx', 'dssldy', 'frazil' 15 7 True False True 5 1 4320 10.0	's_surf', 'u_surf', 'v_surf', 'dssldx', 'dssldy', 'frazil' 15 7 True False True	's_surf, 'u_surf, 'v_surf, 'dssldx', 'dssldy', 'frazil' 15 7 True False True 5 1 4320 100	'u_surf', 'v_surf', 'dssldx', 'dssldy', 'frazil' 15 7 True False True 5 1 576 100	'u_surf', 'v_surf', 'dssldx', 'dssldy', 'frazil' 15 7 True False True 5 1 576 10.0
&mpp_io_nml	num_fields_in num_fields_out send_after_ocean_update send_before_ocean_update neutral deflate_level shuffle diag_step large_cfl_value max_cfl_value	's_surf, 'u_surf, 'v_surf, 'dssldx', 'dssldy', 'frazil' 15 7 True False 4320 10.0 100.0	's_surf', 'u_surf', 'v_surf', 'dssldx', 'dssldy', 'frazil' 15 7 True False True 5 1 4320 1000	's_surf, 'u_surf, 'v_surf, 'v_surf, 'dssldx', 'dssldy', 'frazil' 15 7 True False True 4320 10.0 100.0	's_surf, 'u_surf, 'v_surf, 'v_surf, 'dssldx', 'dssldy', 'frazil' 15 7 True False True 5 1 4320 1000	'u_surf', 'v_surf', 'dssldx', 'dssldy', 'frazil' 15 7 True False True 5 1 576 1000	'u_surf', 'v_surf', 'dssldx', 'dssldy, 'frazil' 15 7 True False True 5 1 576 10.0 100.0
&mpp_io_nml	num_fields_in num_fields_out send_after_ocean_update send_before_ocean_update neutral deflate_level shuffle diag_step large_cfl_value	's_surf, 'u_surf, 'v_surf, 'dssldx', 'dssldy', 'frazil' 15 7 True False 4320 10.0	's_surf', 'u_surf', 'v_surf', 'dssldx', 'dssldy', 'frazil' 15 7 True False True 5 1 4320 10.0	's_surf', 'u_surf', 'v_surf', 'dssldx', 'dssldy', 'frazil' 15 7 True False True	's_surf, 'u_surf, 'v_surf, 'dssldx', 'dssldy', 'frazil' 15 7 True False True 5 1 4320 100	'u_surf', 'v_surf', 'dssldx', 'dssldy', 'frazil' 15 7 True False True 5 1 576 100	'u_surf', 'v_surf', 'dssldx', 'dssldy', 'frazil' 15 7 True False True 5 1 576 10.0

Group (continued)	Variable	original/ hogg_acces- som2 1deg jra55_ryf input.nml	new_acces- som2 1deg jra55_ryf input.nml	original/ kiss_acces- som2 025deg jra55_ryf input.nml	new_acces- som2 025deg jra55_ryf input.nml	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new_acces- som2 01deg jra55_ryf input.nml
&ocean_barotropic_nml	barotropic_halo	10	10	10	10	10	10
Gottania Graphe Inni	barotropic_time_stepping_a	True	True	True	True	True	True
	barotropic_time_stepping_b	False	False	False	False	False	False
	debug_this_module	False	False	False	False	False	False
	diag_step	4320 8.0	4320 8.0	4320 8.0	4320 8.0	576 8.0	576 8.0
	eta_max frac_crit_cell_height	0.2	0.2	0.2	0.2	0.2	0.2
	pred_corr_gamma	0.2	0.2	0.2	0.2	0.2	0.2
	smooth_eta_diag_laplacian	True	True	True	True	True	True
	smooth_eta_t_biharmonic	False	False	False	False	False	False
	smooth_eta_t_laplacian	True	True	True	True	True	True
	smooth_pbot_t_biharmonic	False	False	False	False	False	False
	smooth_pbot_t_laplacian truncate_eta	True False	True False	True False	True False	True False	True False
	use_legacy_barotropic_halos	False	False	False	False	False	False
	vel_micom_bih	0.01	0.01	0.01	0.01	0.01	0.01
	vel_micom_lap	0.05	0.05	0.05	0.05	0.05	0.05
	vel_micom_lap_diag	0.2	0.2	0.2	0.2	0.5	0.2
	verbose_truncate	True	True	True	True	True	True
	zero_tendency		False	False	False	False	False
&ocean_bbc_nml	bmf_implicit		True	True	True	True	True
	cdbot	0.001	0.001	0.001	0.001	0.001	0.001
	cdbot_hi	Falsa	0.007	0.007	0.007	0.007	0.007
	cdbot_law_of_wall cdbot_roughness_length	False	False	False	False	False	False
	cdbot_roughness_uamp		True	True	True	True	True
	uresidual		0.05	0.05	0.05	0.05	0.05
	use_geothermal_heating	False	False	False	False	False	False
&ocean_bbc_ofam_nml	read_tide_speed	False					
	uresidual2_max	1.0					
kocean_bih_friction_nml	bih_friction_scheme	'general'	'general'	'general'	'general'	'general'	'general'
&ocean_bih_tracer_nml	tracer_mix_micom			True		True	
	use_this_module	False	False	False	False	False	False
O bibt-frietien med	vel_micom	F-1	F-1	0.001	F-1	0.001	F-1
&ocean_bihcen_friction_nml	use_this_module bottom_5point	False True	False False	False False	False False	False False	False False
&ocean_bihgen_friction_nml	eg_lat_micom	0.0	0.0	0.0	0.0	0.0	0.0
	eq_vel_micom_aniso	0.0	0.0	0.0	0.0	0.0	0.0
	eq_vel_micom_iso	0.0	0.0	0.0	0.0	0.0	0.0
	equatorial_zonal	False	False	False	False	False	False
	k_smag_aniso	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
	ncar_boundary_scaling	True	True	True	True	True	True
	ncar_boundary_scaling_read	2	True	True	True	True	True
	ncar_rescale_power	2×10^{-8}	2×10^{-8}	2×10^{-8}	2×10^{-8}	2×10^{-8}	2×10^{-8}
	ncar_vconst_4 ncar_vconst_5	2 × 10 °	2 × 10 °	2 × 10 °	2 × 10 °	2 × 10 °	2 × 10 ·
	use_this_module	True	True	True	True	True	True
	vel_micom_aniso	0.0	0.0	0.0	0.0	0.0	0.0
	vel_micom_bottom	0.01	0.0	0.0	0.0	0.0	0.0
	vel_micom_iso	0.04	0.0	0.0	0.0	0.0	0.0
	visc_crit_scale	0.25	1.0	1.0	1.0	1.0	1.0
&ocean_convect_nml	convect_full_scalar	False		True		True	
	convect_full_vector	True		False		False	
	use_this_module	False	False	False	False	False	False
&ocean_coriolis_nml	acor	0.5	0.5	0.5	0.5	0.5	0.5
		True	True	True	True	True False	True False
&ocean density pml	use_this_module	Ealco	Laica				
&ocean_density_nml	eos_linear	False True	False True	False True	False True		
&ocean_density_nml	eos_linear eos_preteos10	True	True	True	True	True	True
&ocean_density_nml	eos_linear				True 80		True 80
&ocean_density_nml	eos_linear eos_preteos10 layer_nk	True 80	True 80	True 80	True	True 80	True
&ocean_density_nml	eos_linear eos_preteos10 layer_nk neutralrho_max	True 80 1030.0	True 80 1030.0 1020.0 1038.0	True 80 1038.0	True 80 1030.0 1020.0 1038.0	True 80 1038.0 1028.0 1038.0	True 80 1030.0 1020.0 1038.0
	eos_linear eos_preteos10 layer_nk neutralrho_max neutralrho_min potrho_max potrho_min	True 80 1030.0 1020.0 1038.0 1028.0	True 80 1030.0 1020.0	True 80 1038.0 1028.0	True 80 1030.0 1020.0	True 80 1038.0 1028.0	True 80 1030.0 1020.0 1038.0 1028.0
&ocean_domains_nml	eos_linear eos_preteos10 layer_nk neutralrho_max neutralrho_min potrho_max potrho_min max_tracers	True 80 1030.0 1020.0 1038.0 1028.0	True 80 1030.0 1020.0 1038.0	True 80 1038.0 1028.0 1038.0	True 80 1030.0 1020.0 1038.0	True 80 1038.0 1028.0 1038.0	True 80 1030.0 1020.0 1038.0
	eos_linear eos_preteos10 layer_nk neutralrho_max neutralrho_min potrho_max potrho_min max_tracers cprime_aiki	True 80 1030.0 1020.0 1038.0 1028.0 10	True 80 1030.0 1020.0 1038.0 1028.0 5	True 80 1038.0 1028.0 1038.0 1028.0 5	True 80 10300 10200 10380 10280	True 80 1038.0 1028.0 1038.0 1028.0 5	True 80 1030.0 1020.0 1038.0 1028.0
&ocean_domains_nml &ocean_form_drag_nml	eos_linear eos_preteos10 layer_nk neutralrho_max neutralrho_min potrho_max potrho_min max_tracers cprime_aiki use_this_module	True 80 1030.0 1020.0 1038.0 1028.0	True 80 1030.0 1020.0 1038.0 1028.0 5	True 80 1038.0 1028.0 1038.0 1028.0 5	True 80 1030.0 1020.0 1038.0 1028.0 5	True 80 1038.0 1028.0 1038.0 1028.0 5	True 80 1030.0 1020.0 1038.0 1028.0 5
&ocean_domains_nml	eos_linear eos_preteos10 layer_nk neutralrho_max neutralrho_min potrho_min max_tracers cprime_aiki use_this_module	True 80 1030.0 1020.0 1038.0 1028.0 10	True 80 1030.0 1020.0 1038.0 1028.0 5 False False	True 80 1038.0 1028.0 1038.0 1028.0 5 False	True 80 1030.0 1020.0 1038.0 1028.0 5 False False	True 80 1038.0 1028.0 1038.0 1028.0 5 False False	True 80 1030.0 1020.0 1038.0 1028.0 5
&ocean_domains_nml &ocean_form_drag_nml	eos_linear eos_preteos10 layer_nk neutralrho_max neutralrho_min potrho_min max_tracers cprime_aiki use_this_module frazil_only_in_surface	True 80 1030.0 1020.0 1038.0 1028.0 10	True 80 1030.0 1020.0 1038.0 1028.0 5 False False False	True 80 1038.0 1028.0 1038.0 1028.0 5 False False False	True 80 1030.0 1020.0 1038.0 1028.0 5 False False False	True 80 1038.0 1028.0 1038.0 1028.0 5 False False False	True 80 1030.0 1020.0 1038.0 1028.0 5 False False False
&ocean_domains_nml &ocean_form_drag_nml	eos_linear eos_preteos10 layer_nk neutralrho_max neutralrho_min potrho_min max_tracers cprime_aiki use_this_module frazil_only_in_surface freezing_temp_preteos10	True 80 1030.0 1020.0 1038.0 1028.0 10 0.6 False	True 80 1030.0 1020.0 1028.0 5 False False True	True 80 1038.0 1028.0 1038.0 1028.0 5 False False False True	True 80 1030.0 1020.0 1038.0 1028.0 5 False False False True	True 80 1038.0 1028.0 1038.0 1028.0 5 False False False True	True 80 1030.0 1020.0 1038.0 1028.0 5 False False False True
&ocean_domains_nml &ocean_form_drag_nml	eos_linear eos_preteos10 layer_nk neutralrho_max neutralrho_min potrho_min max_tracers cprime_aiki use_this_module frazil_only_in_surface	True 80 1030.0 1020.0 1038.0 1028.0 10	True 80 1030.0 1020.0 1038.0 1028.0 5 False False False	True 80 1038.0 1028.0 1038.0 1028.0 5 False False False	True 80 1030.0 1020.0 1038.0 1028.0 5 False False False	True 80 1038.0 1028.0 1038.0 1028.0 5 False False False	True 80 1030.0 1020.0 1038.0 1028.0 5 False False False

Group (continued)	Variable	original/ hogg_acces- som2 1deg jra55_ryf input.nml	new_acces- som2 1deg jra55_ryf input.nml	original/ kiss_acces- som2 025deg jra55_ryf input.nml	new_acces- som2 025deg jra55_ryf input.nml	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new_acces- som2 01deg jra55_ryf input.nml
	read_rho0_profile	False					
&ocean_increment_eta_nml	days_to_increment	0					
	fraction_increment secs_to_increment	1.0 1800					
	use_this_module	False	False	False	False	False	False
&ocean_increment_tracer_nml	days_to_increment	0	1 4130	1 4130	1 4130		1 4130
	fraction_increment	1.0					
	secs_to_increment	1800					
9	use_this_module	False	False	False	False	False	False
&ocean_increment_velocity_nml	days_to_increment fraction_increment	0 1.0					
	secs_to_increment	1800					
	use_this_module	False	False	False	False	False	False
&ocean_lap_friction_nml	lap_friction_scheme	'general'	'general'	'general'	'general'	'general'	'general'
&ocean_lap_tracer_nml	use_this_module	False	False	False	False	False	False
&ocean_lapcst_friction_nml	use_this_module bottom_5point	False True	False True	False	False	False	False
&ocean_lapgen_friction_nml	k_smag_aniso	0.0	0.0				
	k_smaq_iso	0.0	0.0	2.0		2.0	
	ncar_only_equatorial	True					
	restrict_polar_visc	True	True				
	restrict_polar_visc_lat	60.0	60.0				
	restrict_polar_visc_ratio	0.35	0.35	False	False	Falsa	False
	use_this_module vconst_1	True 8 000 000.0	True	False	False	False	False
	vconst_2	0.0					
	vconst_3	0.8					
	vconst_4	5×10^{-9}					
	vconst_5	3					
	vconst_6	300 000 000.0					
	vconst_7	100.0	0.1				
	vel_micom_iso viscosity_ncar	0.1 True	0.1 False				
	viscosity_ncar_2000	False	i alse				
	viscosity_ncar_2007	True					
	viscosity_scale_by_rossby	True	True				
	viscosity_scale_by_rossby_power	4.0	4.0				
&ocean_mixdownslope_nml	debug_this_module	False	False	False		False	
	mixdownslope_mask_gfdl mixdownslope_npts	False 4	False 4				
	read_mixdownslope_mask	False	False				
	use_this_module	True	True	False	False	False	False
&ocean_model_nml	baroclinic_split	1	1	1	1	1	1
	barotropic_split	80	80	80	80	80	80
	cmip_units	True	True	True	True		True
	debug	False	False	False	False	False	False
	dt_ocean	3600 4, 3	3600 4, 3	1200 6, 5	1200 6, 5	150 10, 15	150 10, 15
	io_layout layout	16, 15	16, 15	48, 40	48, 40	80,75	80,75
	surface_height_split	10, 15	10,13	10, 10	10, 10	1	1
	time_tendency	'twolevel'	'twolevel'	'twolevel'	'twolevel'	'twolevel'	'twolevel'
	vertical_coordinate	'zstar'	'zstar'	'zstar'	'zstar'	'zstar'	'zstar'
&ocean_momentum_source_nml	rayleigh_damp_exp_from_bottom	_	False	False	False	False	False
	use_rayleigh_damp_table	True	True	True	True	True	True
Passan nahysiss aml	use_this_module	True	True	True False	True	True	True
&ocean_nphysics_nml	debug_this_module use_nphysicsa	False False	False False	False	False False	False False	False False
	use_nphysicsb	False	False	False	False	False	False
	use_nphysicsc	True	True	False	False	False	False
	use_this_module	True	True	False	False	False	False
&ocean_nphysics_util_nml	agm	600.0	600.0	100.0	100.0	100.0	100.0
	agm_closure	True	True	True	True	True	True
	agm_closure_baroclinic agm_closure_buoy_freq	True 0.004	True 0.004	True 0.004	True 0.004	True 0.004	True 0.004
	agm_closure_buoy_freq agm_closure_eady_ave_mixed	True	True	0.004	0.004	0.004	0.004
	agm_closure_eady_cap	True	True				
	agm_closure_eady_smooth_horz	True	True				
	agm_closure_eady_smooth_vert	True	True				
	agm_closure_eden_gamma	0.0	0.0				
	agm_closure_eden_greatbatch	False	False				
	<pre>agm_closure_grid_scaling agm_closure_length</pre>	True 50 000.0	True 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
	agin_closure_lengtin_bcz0ffe	i alsc	ו מנאכ	ו מנאכ	ו מנטכ	1 0130	i alse

Group (continued)	Variable	original/ hogg_acces- som2 1deg jra55_ryf input.nml	new_acces- som2 1deg jra55_ryf input.nml	original/ kiss_acces- som2 025deg jra55_ryf input.nml	new_acces- som2 025deg jra55_ryf input.nml	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new_acces- som2 01deg jra55_ryf input.nml
	agm_closure_length_fixed	False	False	False	False	False	False
	agm_closure_length_rossby	False	False	False	False	False	False
	agm_closure_lower_depth	2000.0	2000.0	2000.0	2000.0	2000.0	2000.0
	agm_closure_max	600.0	600.0	600.0	600.0	600.0	600.0
	<pre>agm_closure_min agm_closure_scaling</pre>	50.0 0.07	50.0 0.07	100.0 0.07	100.0 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
	agm_damping_time	45.0	45.0	100.0	100.0	100.0	100.0
	agm_smooth_space	False	False				
	agm_smooth_time	False	False				
	aredi	600.0	600.0	600.0	600.0	600.0	600.0
	aredi_equal_agm	False	False	False	False	False	False
	drhodz_mom4p1	True	True	False	False	False	False
	drhodz_smooth_horz drhodz_smooth_vert	False False	False False	False False	False False	False False	False False
	nphysics_util_zero_init	True	True	i alse	i atse	raise	i alse
	rossby_radius_max	100 000.0	100 000.0	100 000.0	100 000.0	100 000.0	100 000.0
	rossby_radius_min smax	15 000.0	15 000.0	15 000.0 0.002	15 000.0	15 000.0 0.002	15 000.0
	swidth			0.002		0.002	
	tracer_mix_micom	False	False	False	False	False	False
2 acces multiplicate and	vel_micom	0.0	0.0	0.0	0.0	0.0	0.0
&ocean_nphysicsa_nml	use_this_module	False	False	False	False	False	False
&ocean_nphysicsb_nml	use_this_module	False	False	False	False	False	False
&ocean_nphysicsc_nml	bv_freq_smooth_vert bvp_bc_mode	True 2	True 2				
	bvp_min_speed	0.1	0.1				
	bvp_speed	0.0	0.0				
	debug_this_module	False	False				
	do_gm_skewsion	True	True				
	do_neutral_diffusion	True	True				
	epsln_bv_freq	$1 imes 10^{-12}$	1×10^{-12}				
	gm_skewsion_bvproblem	True	True				
	gm_skewsion_modes	False	False				
	neutral_eddy_depth neutral_physics_limit	True True	True True				
	number_bc_modes	2	2				
	regularize_psi	False	False				
	smax_psi	0.01	0.01				
	smooth_psi	True	True				
	tmask_neutral_on	True	True				
	turb_blayer_min	50.0	50.0				
	use_this_module	True	True	False	False	False	False
&ocean_operators_nml	use_legacy_div_ud	F-1	False	False	False	False	False
&ocean_overexchange_nml	debug_this_module overexch_check_extrema	False False	False	False	False	False	False
	overexch_npts	4	4	4	4	4	4
	overexch_weight_far	False	False	False	False	False	False
	overflow_umax	5.0	5.0	5.0	5.0	5.0	5.0
	use_this_module	False	False	False	False	False	False
&ocean_overflow_nml	debug_this_module	False		False		False	
	use_this_module	False	False	False	False	False	False
&ocean_overflow_ofp_nml	debug_this_module			False		False	
	diag_step			4320		5760	
	do_entrainment_para_ofp			False		False	
	do_mass_ofp frac_exchange_src			True 1.0		True 1.0	
	max_vol_trans_ofp			10 000 000.0		10 000 000.0	
	use_this_module		False	False	False	False	False
&ocean_polar_filter_nml	use_this_module	False	False	False	False	False	False
&ocean_pressure_nml	zero_pressure_force		False	False	False	False	False
&ocean_rivermix_nml	debug_this_module	False	False	False	False	False	False
	river_diffuse_salt	False	True	False	True	True	True
	river_diffuse_temp	False	True	False	True	True	True
	river_diffusion_thickness	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
	river_insertion_thickness	40.0	40.0 Truo	40.0 Truo	40.0 Truo	40.0 Truo	40.0
&ocean_riverspread_nml	use_this_module debug_this_module	True	True	True	True	True False	True
COCCOUNTINGERS PROCEEDINGS	debug_tnis_module use_this_module	True	False	False	False	True	False
&ocean_rough_nml	rough_scheme	iiuc	'beljaars'	'beljaars'	'beljaars'	'beljaars'	'beljaars'
	avg_sfc_temp_salt_eta						
&ocean_sbc_nml	avo sto temp sait eta	True	True	True	True	True	True

Group (continued)	Variable	original/ hogg_acces- som2 1deg jra55_ryf input.nml	new_acces- som2 1deg jra55_ryf input.nml	original/ kiss_acces- som2 025deg jra55_ryf input.nml	new_acces- som2 025deg jra55_ryf input.nml	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new_acces- som2 01deg jra55_ryf input.nml
	calvingspread	<u> </u>	False	False	False	False	False
	do_bitwise_exact_sum		False	False	False	False	False
	do_flux_correction		False	False	False	False	False
	land_model_heat_fluxes	0.5	False	False	False	False	False
	max_delta_salinity_restore	0.5	0.5	0.5	0.5	0.5	0.5
	max_ice_thickness read_restore_mask	8.0 False	0.0 False	0.0 False	0.0 False	0.0 False	0.0 False
	restore_mask_gfdl	False	False	False	False	False	False
	runoff_salinity	0.0	0.0	0.0	0.0	0.0	0.0
	salt_correction_scale	0.0	0.0	0.0	0.0	0.0	0.0
	salt_restore_as_salt_flux	True	True	True	True	True	True
	salt_restore_tscale	15.0	60.0	60.0	60.0	60.0	60.0
	salt_restore_under_ice	True	True	True	True	True	True
	temp_restore_tscale	-1.0	-10.0	-10.0	-10.0	-10.0	-10.0
	use_full_patm_for_sea_level		False	False	False	False	False
	use_waterflux	True	True	True	True	True	True
	waterflux_tavq	False					
	zero_heat_fluxes	False	False	False	False	False	False
	zero_net_salt_correction		False	False	False	False	False
	zero_net_salt_restore	True	True	True	True	True	True
	zero_net_water_correction		False	False	False	False	False
	zero_net_water_couple_restore	True	True	True	True	True	True
	zero_net_water_coupler	True	True	True	True	True	True
	zero_net_water_restore	True	True	True	True	True	True
	zero_surface_stress	False	False	False	False	False	False
	zero_water_fluxes	False	False	False	False	False	False
&ocean_sbc_ofam_nml	restore_mask_ofam	False					
	river_temp_ofam	False					
&ocean_shortwave_csiro_nml	debug_this_module			False			
	read_depth	True		True			
	use_this_module	True	False	False	False	False	False
	zmax_pen	7000		7000			
&ocean_shortwave_gfdl_nml	debug_this_module	False	False	False	False	False	False
	enforce_sw_frac	True	True	True	True	True	True
	optics_manizza	True	True	True	True	True	True
	optics_morel_antoine		False	False	False	False	False
	read_chl	False	True	True	True	True	True
	sw_pen_fixed_depths	False	Truce	True	Truc	Tuus	Terro
	use_this_module	False	True 300.0	True 300.0	True 300.0	True	True
9 ocean chertusye jerley pml	zmax_pen use_this_module	200.0 False	False	False	False	300.0 False	300.0 False
&ocean_shortwave_jerlov_nml	use_this_modute use_shortwave_csiro	True	False	False			False
&ocean_shortwave_nml	use_shortwave_qfdl	False	True	True	False True	False True	True
	use_shortwave_jerlov	False	False	False	False	False	False
	use_this_module	True	True	True	True	True	True
8 ocean sigma transport pml	sigma_advection_on	False	iiue	False	iiue	False	iiue
&ocean_sigma_transport_nml	sigma_advection_sqs_only	False		False		False	
	sigma_diffusion_on	True		True		True	
	sigma_diffusivity_ratio	1×10^{-6}		1×10^{-6}		1×10^{-6}	
	sigma_just_in_bottom_cell	True		True		True	
	sigma_just_in_bottom_cctt	0.01		0.01		0.01	
	smooth_sigma_thickness	True		True		True	
	smooth_sigma_velocity	True		True		True	
	smooth_velmicom	0.2		0.2		0.2	
	thickness_sigma_layer	100.0		100.0		100.0	
	thickness_sigma_max	100.0		100.0		100.0	
	thickness_sigma_min	100.0		100.0		100.0	
	tmask_sigma_on	False		False		False	
	tracer_mix_micom	True		True		True	
	use_this_module	True	False	False	False	False	False
	vel_micom	0.05		0.05		0.05	
&ocean_solo_nml	calendar	'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
	days	1460	1460	31	31	30	30
	debug_this_module	False					
	dt_cpld	3600	3600	1200	1200	150	600
	hours	0	0	0	0	0	0
	minutes	0	0	0	0	0	0
	months	0	0	0	0	0	0
	seconds	0	0	0	0	0	0
	Seconds	U	•				
	years	0	0	0	0	0	0

Group (continued)	Variable	original/ hogg_acces- som2 1deg jra55_ryf input.nml	new_acces- som2 1deg jra55_ryf input.nml	original/ kiss_acces- som2 025deg jra55_ryf input.nml	new_acces- som2 025deg jra55_ryf input.nml	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new_acces- som2 01deg jra55_ryf input.nml
	use_this_module	False	False	False	False	False	False
&ocean_sponges_velocity_nml	use_this_module	False	False	False	False	False	False
&ocean_submesoscale_nml	coefficient_ce	Falsa	0.05	0.05	0.05	0.05	0.05
	debug_this_module front_length_const	False 5000.0	False 5000.0	False 5000.0	False 5000.0	False 5000.0	False 5000.0
	front_length_deform_radius	True	True	True	True	True	True
	limit_psi	True	True	True	True	True	True
	limit_psi_velocity_scale	0.5	0.5	0.5	0.5	0.5	0.5
	min_kblt	4	4	4	4	4	4
	smooth_advect_transport		True	True	True	True	True
	smooth_advect_transport_num		4	4	4	4	4
	smooth_hblt	False	False	False	False	False	False
	smooth_psi		True	True	True	True	True
	smooth_psi_num submeso_advect_flux		3 False	3 False	3 False	<u>З</u>	3 False
	submeso_advect_tiux submeso_advect_limit		False True	False True	False True	False True	False True
	submeso_advect_unit		True	True	True	True	True
	submeso_advect_upwind		True	True	True	True	True
	submeso_diffusion		False	False	False	False	False
	submeso_diffusion_biharmonic		True	True	True	True	True
	submeso_diffusion_scale		10.0	10.0	10.0	10.0	10.0
	submeso_limit_flux	True					
	submeso_skew_flux		True	True	True	True	True
	use_hblt_equal_mld	True	True	True	True	True	True
	use_psi_legacy		False	False	False	False	False
	use_this_module	True	True	True	True	True	True
&ocean_tempsalt_nml	debug_this_module	False	False	False	False	True	False
	pottemp_2nd_iteration	True	True	True	True	True	True
	pottemp_equal_contemp	FF 0	True	True	True	True	True
	S_max	55.0	70.0	70.0 42.0	70.0	70.0	70.0
	s_max_limit s_min	42.0 —1.0	42.0 0.0	42.0 0.0	42.0 0.0	42.0 0.0	42.0 0.0
	s_min_limit	-1.0 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
	t_max_limit	32.0	32.0	32.0	32.0	32.0	32.0
	t_min	-5.0	-20.0	-20.0	-20.0	-20.0	-20.0
	t_min_limit	-2.0	-5.0	-5.0	-5.0	-5.0	-5.0
	temperature_variable	'conservative	'potential	'potential	'potential	'potential	'potential
		temp'	temp'	temp'	temp'	temp'	temp'
&ocean_thickness_nml	debug_this_module	False	False	False	False	False	False
	debug_this_module_detail	False	False	False	False	False	False
	initialize_zero_eta	False					
	read_rescale_rho0_mask	False				<u>.</u> .	
	rescale_mass_to_get_ht_mod	7.0	False	False	False	False	False
	rescale_rho0_basin_label	7.0					
	rescale_rho0_mask_gfdl						
	roccala rha() valua	False					
	rescale_rho0_value	0.75		20		20	
	thickness_dzt_min	0.75 1.0		2.0		2.0	
	thickness_dzt_min thickness_dzt_min_init	0.75 1.0 2.0	'energetic'	10.0	'eneraetic'	10.0	'energetic'
&ocean_topog_nml	thickness_dzt_min	0.75 1.0	'energetic'		'energetic'		'energetic'
&ocean_topog_nml &ocean_tracer_advect_nml	thickness_dzt_min thickness_dzt_min_init thickness_method min_thickness	0.75 1.0 2.0 'energetic' 25.0	'energetic'	10.0	'energetic'	10.0	'energetic'
	thickness_dzt_min thickness_dzt_min_init thickness_method	0.75 1.0 2.0 'energetic'	'energetic'	10.0	'energetic'	10.0	'energetic'
	thickness_dzt_min thickness_dzt_min_init thickness_method min_thickness advect_sweby_all	0.75 1.0 2.0 'energetic' 25.0 True	'energetic' False	10.0	'energetic'	10.0	'energetic' False
&ocean_tracer_advect_nml	thickness_dzt_min thickness_dzt_min_init thickness_method min_thickness advect_sweby_all async_domain_update	0.75 1.0 2.0 'energetic' 25.0 True True False	False False	10.0 'energetic' False False	False False	10.0 'energetic' False False	False False
	thickness_dzt_min thickness_dzt_min_init thickness_method min_thickness advect_sweby_all async_domain_update debug_this_module	0.75 1.0 2.0 'energetic' 25.0 True True	False False 4320	10.0 'energetic' False False 4320	False False 4320	10.0 'energetic' False False 576	False
&ocean_tracer_advect_nml	thickness_dzt_min thickness_dzt_min_init thickness_method min_thickness advect_sweby_all async_domain_update debug_this_module read_basin_mask diag_step do_bitwise_exact_sum	0.75 1.0 2.0 'energetic' 25.0 True True False 4320 False	False False 4320 False	False False 4320 False	False False 4320 False	10.0 'energetic' False False 576 False	False False 576 False
&ocean_tracer_advect_nml &ocean_tracer_diag_nml	thickness_dzt_min thickness_dzt_min_init thickness_method min_thickness advect_sweby_all async_domain_update debug_this_module read_basin_mask diag_step do_bitwise_exact_sum tracer_conserve_days	0.75 1.0 2.0 'energetic' 25.0 True True False 4320 False 1.0	False False 4320 False 30.0	False False False 4320 False 30.0	False False 4320 False 30.0	False False False 576 False 30.0	False False 576 False 30.0
&ocean_tracer_advect_nml	thickness_dzt_min thickness_dzt_min.init thickness_method min_thickness advect_sweby_all async_domain_update debug_this_module read_basin_mask diag_step do_bitwise_exact_sum tracer_conserve_days age_tracer_max_init	0.75 1.0 2.0 'energetic' 25.0 True True False 4320 False 1.0 0.0	False False 4320 False 30.0	False False False 4320 False 30.0	False False 4320 False 30.0	False False 576 False 30.0	False False 576 False 30.0
&ocean_tracer_advect_nml &ocean_tracer_diag_nml	thickness_dzt_min thickness_dzt_min_init thickness_method min_thickness advect_sweby_all async_domain_update debug_this_module read_basin_mask diag_step do_bitwise_exact_sum tracer_conserve_days age_tracer_max_init debug_this_module	0.75 1.0 2.0 'energetic' 25.0 True True False 4320 False 1.0 0.0 False	False False 4320 False 30.0 0.0 False	False False False 4320 False 30.0 0.0 False	False False 4320 False 30.0 0.0 False	False False 576 False 30.0 0.0 False	False False 576 False 30.0 0.0 False
&ocean_tracer_advect_nml &ocean_tracer_diag_nml	thickness_dzt_min thickness_dzt_min_init thickness_method min_thickness advect_sweby_all async_domain_update debug_this_module read_basin_mask diag_step do_bitwise_exact_sum tracer_conserve_days age_tracer_max_init debug_this_module	0.75 1.0 2.0 'energetic' 25.0 True True False 4320 False 1.0 0.0 False True	False False 4320 False 30.0 0.0 False True	False False False 4320 False 30.0 0.0 False True	False False 4320 False 30.0 0.0 False True	False False False 576 False 30.0 0.0 False True	False False 576 False 30.0 0.0 False True
&ocean_tracer_advect_nml &ocean_tracer_diag_nml	thickness_dzt_min thickness_dzt_min_init thickness_method min_thickness advect_sweby_all async_domain_update debug_this_module read_basin_mask diag_step do_bitwise_exact_sum tracer_conserve_days age_tracer_max_init debug_this_module frazil_heating_after_vphysics frazil_heating_before_vphysics	0.75 1.0 2.0 'energetic' 25.0 True True False 4320 False 1.0 0.0 False True False	False False 4320 False 30.0 0.0 False True False	False False 4320 False 30.0 0.0 False True False	False False 4320 False 30.0 0.0 False True False	False False False 30.0 0.0 False True False	False False 576 False 30.0 0.0 False True False
&ocean_tracer_advect_nml &ocean_tracer_diag_nml	thickness_dzt_min thickness_dzt_min_init thickness_method min_thickness advect_sweby_all async_domain_update debug_this_module read_basin_mask diag_step do_bitwise_exact_sum tracer_conserve_days age_tracer_max_init debug_this_module frazil_heating_after_vphysics frazil_heating_before_vphysics limit_age_tracer	0.75 1.0 2.0 'energetic' 25.0 True True False 4320 False 1.0 0.0 False True False True False True	False False 4320 False 30.0 0.0 False True False True	False False False 4320 False 30.0 0.0 False True False True	False False 4320 False 30.0 0.0 False True False True	False False False 576 False 30.0 0.0 False True False True	False False 576 False 30.0 0.0 False True False True
&ocean_tracer_advect_nml &ocean_tracer_diag_nml	thickness_dzt_min thickness_dzt_min_init thickness_method min_thickness advect_sweby_all async_domain_update debug_this_module read_basin_mask diag_step do_bitwise_exact_sum tracer_conserve_days age_tracer_max_init debug_this_module frazil_heating_after_vphysics frazil_heating_before_vphysics limit_age_tracer remap_depth_to_s_init	0.75 1.0 2.0 'energetic' 25.0 True True False 4320 False 1.0 0.0 False True False True False True False	False False 4320 False 30.0 0.0 False True False True False False	False False False False False False False False False True False False False	False False 4320 False 30.0 0.0 False True False True False False	False False False 576 False 30.0 0.0 False True False True False	False False 576 False 30.0 0.0 False True False True False False
&ocean_tracer_advect_nml &ocean_tracer_diag_nml	thickness_dzt_min thickness_dzt_min_init thickness_method min_thickness advect_sweby_all async_domain_update debug_this_module read_basin_mask diag_step do_bitwise_exact_sum tracer_conserve_days age_tracer_max_init debug_this_module frazil_heating_after_vphysics frazil_heating_before_vphysics limit_age_tracer remap_depth_to_s_init use_tempsalt_check_range	0.75 1.0 2.0 'energetic' 25.0 True True False 4320 False 1.0 0.0 False True	False False 4320 False 30.0 0.0 False True False True False True False	False False False 4320 False 30.0 0.0 False True False True False True False True False True	False False 4320 False 30.0 0.0 False True False True False True False True	False False 576 False 30.0 0.0 False True False True False True False True False True	False False 576 False 30.0 0.0 False True False True False True False True
&ocean_tracer_advect_nml &ocean_tracer_diag_nml	thickness_dzt_min thickness_dzt_min_init thickness_method min_thickness advect_sweby_all async_domain_update debug_this_module read_basin_mask diag_step do_bitwise_exact_sum tracer_conserve_days age_tracer_max_init debug_this_module frazil_heating_after_vphysics frazil_heating_before_vphysics limit_age_tracer remap_depth_to_s_init use_tempsalt_check_range zero_tendency	0.75 1.0 2.0 'energetic' 25.0 True True False 4320 False 1.0 0.0 False True False	False False 4320 False 30.0 0.0 False True False True False True False True False	False False 4320 False 30.0 0.0 False True False True False True False True False True False	False False 4320 False 30.0 0.0 False True False True False True False True False	False False 576 False 30.0 0.0 False True False True False True False True False	False False 576 False 30.0 0.0 False True False True False True False True False
&ocean_tracer_advect_nml &ocean_tracer_diag_nml &ocean_tracer_nml	thickness_dzt_min thickness_dzt_min_init thickness_method min_thickness advect_sweby_all async_domain_update debug_this_module read_basin_mask diag_step do_bitwise_exact_sum tracer_conserve_days age_tracer_max_init debug_this_module frazil_heating_after_vphysics frazil_heating_before_vphysics limit_age_tracer remap_depth_to_s_init use_tempsalt_check_range zero_tracer_source	0.75 1.0 2.0 'energetic' 25.0 True True False 4320 False 1.0 0.0 False True False True False True False True False True False False True False False False False False False False False False	False False 4320 False 30.0 0.0 False True False True False True False True False False False False	False False 4320 False 30.0 0.0 False True False True False True False False False False False False False	False False 4320 False 30.0 0.0 False True False True False True False False False False False False	False False 576 False 30.0 0.0 False True False True False True False False False False False False	False False 576 False 30.0 0.0 False True False True False True False False False False False False
&ocean_tracer_advect_nml &ocean_tracer_diag_nml	thickness_dzt_min thickness_dzt_min_init thickness_method min_thickness advect_sweby_all async_domain_update debug_this_module read_basin_mask diag_step do_bitwise_exact_sum tracer_conserve_days age_tracer_max_init debug_this_module frazil_heating_after_vphysics frazil_heating_before_vphysics limit_age_tracer remap_depth_to_s_init use_tempsalt_check_range zero_tendency zero_tracer_source debug_this_module	0.75 1.0 2.0 'energetic' 25.0 True True False 4320 False 1.0 0.0 False True False True False True False True False	False False 4320 False 30.0 0.0 False True False True False True False False False False False False False	False False 4320 False 30.0 0.0 False True False True False True False False False False False False False False False	False False 4320 False 30.0 0.0 False True False True False True False False False False False False False	False False 576 False 30.0 0.0 False True False True False True False False False False False False False	False False 576 False 30.0 0.0 False True False True False True False False False False False False
&ocean_tracer_advect_nml &ocean_tracer_diag_nml &ocean_tracer_nml	thickness_dzt_min thickness_dzt_min_init thickness_method min_thickness advect_sweby_all async_domain_update debug_this_module read_basin_mask diag_step do_bitwise_exact_sum tracer_conserve_days age_tracer_max_init debug_this_module frazil_heating_after_vphysics frazil_heating_before_vphysics limit_age_tracer remap_depth_to_s_init use_tempsalt_check_range zero_tendency zero_tracer_source debug_this_module diag_step	0.75 1.0 2.0 'energetic' 25.0 True True False 4320 False 1.0 0.0 False True False True False True False False False True False False True False False True False False True False False False False False False False False	False False 4320 False 30.0 0.0 False True False True False True False	False False 4320 False 30.0 0.0 False True False True False True False	False False 4320 False 30.0 0.0 False True False True False True False	False False False 576 False 30.0 0.0 False True False True False True False	False False 576 False 30.0 0.0 False True False True False False False False False False False False False
&ocean_tracer_advect_nml &ocean_tracer_diag_nml &ocean_tracer_nml	thickness_dzt_min thickness_dzt_min_init thickness_method min_thickness advect_sweby_all async_domain_update debug_this_module read_basin_mask diag_step do_bitwise_exact_sum tracer_conserve_days age_tracer_max_init debug_this_module frazil_heating_after_vphysics frazil_heating_after_vphysics limit_age_tracer remap_depth_to_s_init use_tempsalt_check_range zero_tendency zero_tracer_source debug_this_module diag_step energy_diag_step	0.75 1.0 2.0 'energetic' 25.0 True True False 4320 False 1.0 0.0 False True False True False True False True False	False False 4320 False 30.0 0.0 False True False True False True False	False False 4320 False 30.0 0.0 False True False True False True False False False False False False False False False	False False 4320 False 30.0 0.0 False True False True False True False False False False False False False	False False 576 False 30.0 0.0 False True False True False True False False False False False False False	False False 576 False 30.0 0.0 False True False True False True False False False False False False
&ocean_tracer_advect_nml &ocean_tracer_diag_nml &ocean_tracer_nml	thickness_dzt_min thickness_dzt_min_init thickness_method min_thickness advect_sweby_all async_domain_update debug_this_module read_basin_mask diag_step do_bitwise_exact_sum tracer_conserve_days age_tracer_max_init debug_this_module frazil_heating_after_vphysics frazil_heating_before_vphysics limit_age_tracer remap_depth_to_s_init use_tempsalt_check_range zero_tendency zero_tracer_source debug_this_module diag_step	0.75 1.0 2.0 'energetic' 25.0 True True False 4320 False 1.0 0.0 False True False True False True False False False True False	False False 4320 False 30.0 0.0 False True False True False True False	False False 4320 False 30.0 0.0 False True False True False False True False	False False 4320 False 30.0 0.0 False True False True False True False	False False 576 False 30.0 0.0 False True False True False True False	False False 576 False 30.0 0.0 False True False True False

Group (continued)	Variable	original/ hogg_acces- som2 1deg jra55_ryf input.nml	new_acces- som2 1deg jra55_ryf input.nml	original/ kiss_acces- som2 025deg jra55_ryf input.nml	new_acces- som2 025deg jra55_ryf input.nml	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new_acces- som2 01deg jra55_ryf input.nml
	max_cgint	1.0	1.0	1.5	1.0	1.0	1.0
	truncate_velocity	True	False	False	False	False	False
	truncate_velocity_value	2.0	2.0	2.0 True	2.0 True	2.0	2.0 True
	truncate_verbose zero_tendency	True False	True False	True False	True False	True False	True False
	zero_tendency_explicit_a	Tube	False	False	False	False	False
	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
&ocean_vert_kpp_mom4p0_nml	use_this_module	False	0.0	0.0	0.0	0.0	0.0
&ocean_vert_kpp_mom4p1_nml	diff_cbt_iw diff_con_limit	0.0 0.1	0.0	0.0	0.0	0.0	0.0
	double_diffusion	True	True	True	True	True	True
	kbl_standard_method	False	False	False	False	False	False
	ricr	0.3	0.3	0.3	0.3	0.3	0.3
	smooth_blmc	False	False	False	False	False	False
	smooth_ri_kmax_eq_kmu	True	True	True	True	True	True
	use_this_module	True	True	True	True	True	True
	visc_cbu_iw visc_con_limit	0.0 0.1	0.0	0.0	0.0	0.0	0.0
&ocean_vert_mix_nml	afkph_00	0.1					
COCCUTE TO LETTING THE	afkph_90	0.75					
	aidif	1.0	1.0	1.0	1.0	1.0	1.0
	bryan_lewis_diffusivity	False	False	False	False	False	False
	bryan_lewis_lat_depend	True	False	False	False	False	False
	bryan_lewis_lat_transition	35.0					
	dfkph_00	1.15					
	dfkph_90 hwf_diffusivity	0.95	False	False	False	False	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
	linear_taper_diff_cbt_table	False	2010	20.0	20.0	20.0	20.0
	sfkph_00	4.5×10^{-5}					
	sfkph_90	4.5×10^{-5}					
	use_diff_cbt_table	False	False	False	False	False	False
	vert_diff_back_via_max	True	True	True	True	True	True
	vert_mix_scheme zfkph_00	'kpp mom4p1' 250 000.0	'kpp mom4p1'	'kpp mom4p1'	'kpp mom4p1'	'kpp mom4p1'	'kpp mom4p1'
	zfkph_90	250 000.0					
&ocean_vert_tidal_nml	$background_diffusivity$	5×10^{-6}	0.0	0.0	0.0	0.0	0.0
	background_viscosity	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
	decay_scale	300.0	500.0	500.0	500.0	500.0	500.0
	drag_dissipation_use_cdbot drhodz_min	1×10^{-12}	True $1 imes 10^{-10}$	True $1 imes 10^{-10}$	True $1 imes 10^{-10}$	True $1 imes 10^{-10}$	True 1×10^{-10}
	fixed_wave_dissipation	False	False	False	False	False	False
	max_drag_diffusivity	0.01	Tutse	ratse	ruse	raise	Tuisc
	max_wave_diffusivity	0.01	0.01	0.01	0.01	0.01	0.01
	mixing_efficiency_n2depend	True	True	True	True	True	True
	read_roughness	True	True	True	True	True	True
	read_tide_speed	True	True	True	True	True	True
	read_wave_dissipation	False	False	False	False	False	False
	reading_roughness_amp reading_roughness_length	True False	True False	True False	True False	True False	True False
	roughness_scale	20 000.0	12 000.0	12 000.0	12 000.0	12 000.0	12 000.0
	shelf_depth_cutoff	160.0	-1000.0 -1000.0	-1000.0 -1000.0	-1000.0 -1000.0	-1000.0 -1000.0	-1000.0 -1000.0
	tide_speed_data_on_t_grid	True	True	True	True	True	True
	use_drag_dissipation	True	True	True	True	True	True
	use_legacy_methods		False	False	False	False	False
	use_this_module	True	True	True	True	True	True
	use_wave_dissipation wave_energy_flux_max	True 0.1	True 0.1	True 0.1	True 0.1	True 0.1	True 0.1
	wave_energy_nux_max use_this_module	False	False	False	False	False	False
Kncean xlandinserf nml		True	ו מנטכ	ו מנאכ	ו מנאכ	ו מנטכ	i alse
&ocean_xlandinsert_nml	verbose_init			False	False	False	False
&ocean_xlandinsert_nml &ocean_xlandmix_nml	verbose_init use_this_module	False	False	i alse	i utsc		
&ocean_xlandinsert_nml &ocean_xlandmix_nml	use_this_module verbose_init	True	False	i alse	ruisc	. 4.50	
&ocean_xlandmix_nml	use_this_module verbose_init xlandmix_kmt		False	1 8136	ruise		
&ocean_xlandmix_nml &sat_vapor_pres_nml	use_this_module verbose_init xlandmix_kmt show_all_bad_values	True	False		Tuisc	True	
&ocean_xlandmix_nml	use_this_module verbose_init xlandmix_kmt show_all_bad_values ncar_ocean_flux	True	False	True	Tutse	True True	
&ocean_xlandmix_nml &sat_vapor_pres_nml	use_this_module verbose_init xlandmix_kmt show_all_bad_values	True	False		Tuisc	True	True

Group (continued) Variable	original/ hogg_acces- som2 1deg jra55_ryf input.nml	new_acces- som2 1deg jra55_ryf input.nml	original/ kiss_acces- som2 025deg jra55_ryf input.nml	new_acces- som2 025deg jra55_ryf input.nml	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new_acces- som2 01deg jra55_ryf input.nml
interp_method	'second	'second	'second	'second	'second	'second
	order'	order'	order'	order'	order'	order'
make_exchange_reproduce	False	False	False	False	False	False
nsubset		16	16	16	16	16
xgrid_log					False	

4 All variables in all 9 configs (differences highlighted)

Group	Variable	original/ GFDL ESM2M input- cut.nml	original/ MOM_SIS TOPAZ input.nml	original/ fabio momsis1 input.nml	original/ paul_mom- sis025_in- put.nml	original/ fanghua mom- sis01v5KDS75 WOA13_in- put.nml	original/ russ- accessom- mom4p1- input.nml	new_acces- som2 1deg jra55_ryf input.nml	new_acces- som2 025deg jra55_ryf input.nml	new_acces- som2 01deg jra55_ryf input.nml
&auscom_ice_nml	aice_cutoff					•	0.15	0.15	0.15	0.15
	chk_i2o_fields						False	False	False	False
	chk_o2i_fields						False	False	False	False
	do_ice_once dt_cpl						False 3600	False 3600	False 1800	False 600
	fixmeltt						False	False	False	False
	frazil_factor						1.0	1.0	1.0	1.0
	iceform_adj_salt						False	False	False	False
	icemlt_factor						1.0	1.0	1.0	1.0
	kmxice						_ 5	_ 5	_ 5	_ 5
	pop_icediag						True	True True	True	True
i e	edsea_gulfbay_sfix sign_stflx						1.0	1.0	1.0	1.0
	tmelt						-0.216	-0.216	-0.216	-0.216
	use_ioaice						True	True	True	True
&bg_diff_lat_depende bg_diff_eq	nce_nml						1×10^{-6}			
0 1	lat_low_bgdiff			•			20.0			
&coupler_nml	atmos_npes	0	0	0	0	0				
	atmos_nthreads calendar	4 'NOLEAP'	'NOLEAP'	'noleap'	'noleap'	'noleap'				
	check_stocks	NULEAP 0	NULEAP 0	Поцеар	поцеар	110teap 0				
	concurrent	True	False	False	False	False				
	current_date	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	2	0	365	1				
	do_atmos	True	False	False	False	False				
	do_flux	True	T	Т	Т	T				
	do_ice do_land	True True	True False	True False	True False	True False				
	do_ccean	True	True	True	True	True				
	dt_atmos	1800	7200	3600	1800	1800				
	dt_cpld	7200	7200	3600	1800	1800				
	months	12	0	12	0	0				
	ocean_npes	_96	_ 0	_ 0	_ 0	0				
0.1: :	use_lag_fluxes	True	True	True	True	True				
&diag_integral_nml	file_name	'diag integral.out'	'diag integral.out'	'diag integral.out'	'diag integral.out'	'diag integral.out'				
	output_interval	1.0	1.0	—1.0	— 1.0	—1.0				
	time_units	'days'	'days'	'days'	'days'	'days'				
&diag_manager_nml debug_diag_manager		•		•	•	•		True	True	True
	sue_oor_warnings	False	False	False	False	False	False	True	True	True
	max_axes	200	100	300	300	300				
	max_files	50	400	1000	1000	1000				
	max_input_fields	800 200	699 100	700 40	700 40	700 40				
	ax_num_axis_sets max_output_fields	1300	699	700	700	700				
				, 00	, 00	700				
	not_average_fields									
		False False	False False							
mix_snapsh &flux_exchange_nml div	not_average_fields debug_stocks vert_stocks_report	False False True	False False True							
mix_snapsh &flux_exchange_nml div	not_average_fields debug_stocks vert_stocks_report rea_weighted_flux	False False True False	False False	True	True	True				
mix_snapsi &flux_exchange_nml div do_ai	not_average_fields debug_stocks vert_stocks_report rea_weighted_flux nblocks	False False True	False False True	True	True					
mix_snapsi &flux_exchange_nml div do_ai	not_average_fields debug_stocks vert_stocks_report rea_weighted_flux nblocks hecksum_required	False False True False	False False True False			False	'single'	'cinala'	'mul+i'	'mul+i'
mix_snapsi &flux_exchange_nml div do_ai	not_average_fields	False False True False 4	False False True False 'single'	'multi'	'multi'	False 'multi'	'single'	'single'	'multi'	'multi'
mix_snapsi &flux_exchange_nml div do_ai	not_average_fields debug_stocks vert_stocks_report rea_weighted_flux nblocks hecksum_required	False False True False	False False True False 'single' 200	'multi' 700		False 'multi' 700	'single'	'single'	'multi'	'multi'
mix_snapsi &flux_exchange_nml div do_ai	not_average_fields debug_stocks vert_stocks_report rea_weighted_flux nblocks hecksum_required fileset_write max_files_r	False False True False 4	False False True False 'single'	'multi'	'multi' 700	False 'multi'	'single' 'multi'	'single' 'multi'	'multi'	'multi'
mix_snapst &flux_exchange_nml div do_al &fms_io_nml d	not_average_fields debug_stocks vert_stocks_report rea_weighted_flux nblocks hecksum_required fileset_write max_files_r max_files_w	False False True False 4 300 300 'multi'	False False True False 'single' 200 200 'multi' 'single'	'multi' 700 700 'multi' 'multi'	'multi' 700 700 'multi' 'multi'	False 'multi' 700 700 'multi' 'multi'	'multi' 'single'	'multi' 'single'	'multi' 'multi'	'multi' 'multi'
mix_snapst &flux_exchange_nml div do_al &fms_io_nml div dfms_nml	debug_stocks debug_stocks vert_stocks_report rea_weighted_flux nblocks hecksum_required fileset_write max_files_r max_files_w threading_read threading_write clock_grain	False False True False 4 300 300 'multi'	False False True False 'single' 200 200 'multi' 'single' 'LOOP'	'multi' 700 700 'multi' 'multi' 'LOOP'	'multi' 700 700 'multi' 'multi' 'LOOP'	False 'multi' 700 700 'multi' 'multi' 'LOOP'	'multi'	'multi' 'single' 'COMPONENT'	'multi' 'multi' 'COMPONENT'	'multi' 'multi' 'COMPONENT'
mix_snapst &flux_exchange_nml dis do_al &fms_io_nml dis &fms_nml dis do_al	debug_stocks debug_stocks vert_stocks_report rea_weighted_flux nblocks hecksum_required fileset_write max_files_r max_files_w threading_read threading_write clock_grain omains_stack_size	False False True False 4 300 300 'multi'	False False True False 'single' 200 200 'multi' 'single'	'multi' 700 700 'multi' 'multi' 'LOOP' 115200	'multi' 700 700 'multi' 'multi' 'LOOP' 115200	False 'multi' 700 700 'multi' 'multi' 'LOOP' 115200	'multi' 'single'	'multi' 'single'	'multi' 'multi'	'multi' 'multi'
mix_snapst &flux_exchange_nml dis do_al &fms_io_nml dis &fms_nml dis do_al	not_average_fields debug_stocks vert_stocks_report rea_weighted_flux nblocks hecksum_required fileset_write max_files_r max_files_w threading_read threading_write clock_grain omains_stack_size nt_memory_usage	False False True False 4 300 300 'multi' 'COMPONENT' 5000000	False False True False 'single' 200 200 'multi' 'single' 'LOOP' 8000000	'multi' 700 700 'multi' 'multi' 'LOOP'	'multi' 700 700 'multi' 'multi' 'LOOP'	False 'multi' 700 700 'multi' 'multi' 'LOOP'	'multi' 'single'	'multi' 'single' 'COMPONENT'	'multi' 'multi' 'COMPONENT'	'multi' 'multi' 'COMPONENT'
mix_snapsi &flux_exchange_nml din do_al &fms_io_nml din do_al	not_average_fields debug_stocks vert_stocks_report rea_weighted_flux nblocks hecksum_required fileset_write max_files_r max_files_w threading_read threading_write clock_grain omains_stack_size nt_memory_usage stack_size	False False True False 4 300 300 300 multi' 'COMPONENT' 5000000	False False True False 'single' 200 200 'multi' 'single' 'LOOP' 8000000	'multi' 700 700 'multi' 'multi' 'LOOP' 115200 False	'multi' 700 700 'multi' 'multi' 'LOOP' 115200 False	False 'multi' 700 700 'multi' 'multi' 'LOOP' 115200 False	'multi' 'single'	'multi' 'single' 'COMPONENT'	'multi' 'multi' 'COMPONENT'	'multi' 'multi' 'COMPONENT'
mix_snapsi &flux_exchange_nml div do_al &fms_io_nml div do_al &fms_io_nml div &fms_nml div pri	not_average_fields debug_stocks vert_stocks_report rea_weighted_flux nblocks hecksum_required fileset_write max_files_r max_files_w threading_read threading_write clock_grain omains_stack_size nt_memory_usage stack_size do_generic_cfc	False False True False 4 300 300 'multi' 'COMPONENT' 5000000	False False True False 'single' 200 200 'multi' 'single' 'LOOP' 8000000	'multi' 700 700 'multi' 'multi' 'LOOP' 115200	'multi' 700 700 'multi' 'multi' 'LOOP' 115200	False 'multi' 700 700 'multi' 'multi' 'LOOP' 115200 False	'multi' 'single'	'multi' 'single' 'COMPONENT'	'multi' 'multi' 'COMPONENT'	'multi' 'multi' 'COMPONENT'
mix_snapsi &flux_exchange_nml div do_ai &fms_io_nml div do_ai &fms_io_nml div addiv addi	not_average_fields debug_stocks vert_stocks_report rea_weighted_flux nblocks hecksum_required fileset_write max_files_r max_files_w threading_read threading_write clock_grain omains_stack_size nt_memory_usage stack_size	False False True False 4 300 300 300 multi' 'COMPONENT' 5000000 0 False	False False True False 'single' 200 200 'multi' 'single' 'LOOP' 8000000 0 False	'multi' 700 700 'multi' 'multi' 'LOOP' 115200 False	'multi' 700 700 'multi' 'multi' 'multi' 'LOOP' 115200 False	False 'multi' 700 700 'multi' 'multi' 'LOOP' 115200 False	'multi' 'single'	'multi' 'single' 'COMPONENT'	'multi' 'multi' 'COMPONENT'	'multi' 'multi' 'COMPONENT'
mix_snapsi &flux_exchange_nml div do_ai &fms_io_nml & &fms_nml di pri &generic_tracer_nml &ice_albedo_nml	debug_stocks vert_stocks_report rea_weighted_flux nblocks hecksum_required fileset_write max_files_r max_files_w threading_read threading_write clock_grain omains_stack_size nt_memory_usage stack_size do_generic_topaz do_generic_tracer t_range	False False True False 4 300 300 300 multi' COMPONENT' 5000000 0 False True True 10.0	False False True False 'single' 200 200 'multi' 'single' 'LOOP' 8000000 0 False True True 10.0	'multi' 700 700 'multi' 'multi' 'LOOP' 115200 False False False	'multi' 700 700 'multi' 'multi' 'hulti' 'LOOP' 115200 False False False	False 'multi' 700 700 'multi' 'multi' 'LOOP' 115200 False False False	'multi' 'single'	'multi' 'single' 'COMPONENT'	'multi' 'multi' 'COMPONENT'	'multi' 'multi' 'COMPONENT'
mix_snapsi &flux_exchange_nml div do_ai &fms_io_nml & &fms_nml di pri &generic_tracer_nml	debug_stocks debug_stocks deta_stocks do_generic_topaz do_generic_tracer t_range add_diurnal_sw	False False True False 4 300 300 300 'multi' 'COMPONENT' 5000000 0 False True True 10.0 False	False False True False 'single' 200 200 'multi' 'single' 'LOOP' 8000000 0 False True True 10.0 True	'multi' 700 700 'multi' 'multi' 'LOOP' 115200 False False False False	'multi' 700 700 'multi' 'multi' 'LOOP' 115200 False False False False	False 'multi' 700 700 'multi' 'multi' 'LOOP' 115200 False False False False	'multi' 'single'	'multi' 'single' 'COMPONENT'	'multi' 'multi' 'COMPONENT'	'multi' 'multi' 'COMPONENT'
mix_snapsi &flux_exchange_nml div do_ai &fms_io_nml & &fms_nml di pri &generic_tracer_nml &ice_albedo_nml	debug_stocks vert_stocks_report rea_weighted_flux nblocks hecksum_required fileset_write max_files_r max_files_w threading_read threading_write clock_grain omains_stack_size nt_memory_usage stack_size do_generic_topaz do_generic_tracer t_range	False False True False 4 300 300 300 multi' COMPONENT' 5000000 0 False True True 10.0	False False True False 'single' 200 200 'multi' 'single' 'LOOP' 8000000 0 False True True 10.0	'multi' 700 700 'multi' 'multi' 'LOOP' 115200 False False False	'multi' 700 700 'multi' 'multi' 'hulti' 'LOOP' 115200 False False False	False 'multi' 700 700 'multi' 'multi' 'LOOP' 115200 False False False	'multi' 'single'	'multi' 'single' 'COMPONENT'	'multi' 'multi' 'COMPONENT'	'multi' 'multi' 'COMPONENT'

Group (continued)	Variable	original/ GFDL ESM2M input- cut.nml	original/ MOM_SIS TOPAZ input.nml	original/ fabio momsis1 input.nml	original/ paul_mom- sis025_in- put.nml	original/ fanghua mom- sis01v5KDS75 WOA13_in- put.nml	original/ russ- accessom- mom4p1- input.nml	new_acces- som2 1deg jra55_ryf input.nml	new_acces- som2 025deg jra55_ryf input.nml	new_acces- som2 01deg jra55_ryf input.nml
	cm2_bugs	False	False	Falsa	Falsa	•				
	do_icebergs h_lo_lim	True $1 imes 10^{-10}$	False $1 imes 10^{-10}$	False	False	False				
	heat_rough_ice	1 / 10	0.0005	0.0005	0.0005	0.0005				
	ice_bulk_salin	0.005	0.005	0.005	0.005	0.005				
	io_layout	1, 2		10 12	64, 30	8,9				
	layout mom_rough_ice	15, 2		10, 12 0.0005	64, 30 0.0005	40, 45 0.0005				
	nsteps_adv	1	1	1	1	6				
	nsteps_dyn	72	108	72	72	144				
	num_part spec_ice	6 False	6 False	6 False	6 False	6 False				
	t_range_melt	1.0	10.0	1.0	1.0	1.0				
	wd_turn	0.0	0.0	0.0	0.0	0.0				
	_weight_to_ocean		0.0	False	False	False				
pergy_bit	_erosion_fraction debug		0.0 False	0.0 False	0.0 False	0.0 False				
make_c	alving_reproduce	True	Tutsc	rubc	Tube	raise				
	parallel_reprod		True	True	True	True				
	really_debug		False	False	False	False				
	sicn_shift speed_limit	0.5	0.1	0.1	0.1	0.1				
time	_average_weight	False								
	traj_sample_hrs	0	0	0	0	0				
use_c	operator_splitting	Tura	True	True	True	True				
	use_roundoff_fix verbose	True True	False	False	False	False				
	verbose_hrs	120	2400	2400	2400	2400				
&mom_oasis3_interfac	e_nml fields_in						'u_flux',	'u_flux',	'u_flux',	'u_flux',
							'v_flux',	'v_flux',	'v_flux',	'v_flux',
							'lprec', 'fprec', 'salt_flx',	'lprec', 'fprec', 'salt_flx',	'lprec', 'fprec', 'salt_flx',	'lprec', 'fprec', 'salt_flx',
							'mh_flux',	'mh_flux',	'mh_flux',	'mh_flux',
							'sw_flux',	'sw_flux',	'sw_flux',	'sw_flux',
							'q_flux',	'q_flux',	'q_flux',	'q_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',
							'aice',	'aice',	'aice',	'aice',
							'wfimelt',	'wfimelt',	'wfimelt',	'wfimelt',
	fields_out						'wfiform' 't_surf',	'wfiform' 't_surf',	'wfiform' 't_surf',	'wfiform' 't_surf',
	neta320ac						's_surf',	's_surf',	's_surf',	's_surf',
							'u_surf',	'u_surf',	'u_surf',	'u_surf',
							'v_surf',	'v_surf',	'v_surf',	'v_surf',
							'dssldx', 'dssldy',	'dssldx', 'dssldy',	'dssldx', 'dssldy',	'dssldx', 'dssldy',
							'frazil'	'frazil'	'frazil'	'frazil'
	num_fields_in						15	15	15	15
cond aff	num_fields_out ter_ocean_update						7 True	7 Truo	7 Truo	7 True
	re_ocean_update						False	True False	True False	False
&monin_obukhov_nml	neutral		True	True	True	True	1 4.50	True	True	True
	rich_crit	10.0								
	stable_option	2								
&mpp_io_nml	zeta_trans deflate_level	0.5				5		5	5	5
a.npp=io=iiiit	shuffle					1		1	1	1
&ocean_adv_vel_diag_		1200	12	4320	4320	43200	120	4320	4320	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 True	100.0 True	100.0 True	100.0 False	100.0 True	100.0 True	100.0 True
&ocean_advection_velo		0.5	0.5	0.5	0.5	0.2	0.5	0.5	0.5	0.5
max_advection_velocity	•									
&ocean_albedo_nml		5	2	2	2	2		2	2	2
ocean_albedo_option &ocean_barotropic_nm	harotronic halo			10	10	10		10	10	10
&ocean_barotropic_nm	otropic_leap_froq		False	10	10	10	False	10	10	10
	otropic_teap_nog otropic_pred_corr		True				True			
barotropic	_time_stepping_a	True		True	True	True		True	True	True
	_time_stepping_b	False	7	False	False	False	-	False	False	False
barotropic_time_st barotropic_time_st			True False				True False			
parotropic_time_St	chhind-inoinaht		raise				Lqrze			

Group (continued) Variable	original/ GFDL ESM2M input- cut.nml	original/ MOM_SIS TOPAZ input.nml	original/ fabio momsis1 input.nml	original/ paul_mom- sis025_in- put.nml	original/ fanghua mom- sis01v5KDS75 WOA13_in- put.nml	original/ russ- accessom- mom4p1- input.nml	new_acces- som2 1deg jra55_ryf input.nml	new_acces- som2 025deg jra55_ryf input.nml	new_acces- som2 01deg jra55_ryf input.nml
debug_this_module	False	False	False	False	False	False	False	False	False
diag_step do_bitwise_exact_sum	1200 True	12	4320	4320	43200	120	4320	4320	576
eta_max	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
frac_crit_cell_height	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
pred_corr_gamma smooth_eta_diag_laplacian	0.2 True	0.2 True	0.2 True	0.2 True	0.2 True	0.2 True	0.2 True	0.2 True	0.2 True
smooth_eta_t_biharmonic	True	True	True	True	False	True	False	False	False
smooth_eta_t_laplacian	False	False	False	False	True	False	True	True	True
smooth_pbot_t_biharmonic	True	True	True	True	False	True	False	False	False
smooth_pbot_t_laplacian truncate_eta	False False	False False	False False	False False	True False	False False	True False	True False	True False
use_legacy_barotropic_halos	rauc	raisc	False	False	False	raisc	False	False	False
vel_micom_bih	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
vel_micom_lap	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
<mark>vel_micom_lap_diag</mark> verbose_truncate	1.0 True	1.0 True	0.5 True	0.5 True	0.5 True	0.2 True	0.2 True	0.2 True	0.2 True
zero_tendency	False	False	False	False	False	False	False	False	False
&ocean_bbc_nml bmf_implicit			True	True	True		True	True	True
cdbot	0.002	0.002	0.001	0.001	0.001	0.001	0.001	0.001	0.001
cdbot_hi cdbot_law_of_wall			0.007	0.007	0.007	False	0.007	0.007	0.007
cdbot_roughness_length			False	False	False	Lqrzg	False	False	False
cdbot_roughness_uamp			True	True	True		True	True	True
uresidual	0.05	0.05	0.05	0.05	0.05		0.05	0.05	0.05
use_geothermal_heating	True	True	False	False	False	False	False	False	False
&ocean_bbc_ofam_nml read_tide_speed uresidual2_max						False 1.0			
&ocean_bih_friction_nml bih_friction scheme	'general'	'general'	'general'	'general'	'general'	'general'	'general'	'general'	'general'
&ocean_bih_tracer_nml tracer_mix_micom			True	True	True				
use_this_module	False	False	False	False	False	False	False	False	False
vel_micom			0.001	0.001	0.001	F 1			F 1
&ocean_bihcst_friction_nml use_this module	False	False	False	False	False	False	False	False	False
&ocean_bihgen_friction_nml bottom_5point	True	True	False	False	False	True	False	False	False
eq_lat_micom	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
eq_vel_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
eq_vel_micom_iso equatorial_zonal	False	False	False	False	False	False	False	False	0.0 False
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
ncar_boundary_scaling	True	True	True	True	True	True	True	True	True
ncar_boundary_scaling_read ncar_rescale_power	2	2	False 2	True 2	True 2	2	True 2	True 2	True 2
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	5	5	5	5	5	5	5	5	5
use_this_module	True	True	True	True	True	True	True	True	True
vel_micom_aniso <mark>vel_micom_bottom</mark>	0.0 0.01	0.0 0.01	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.01	0.0 0.0	0.0 0.0	0.0 0.0
vel_micom_iso	0.01	0.01	0.0	0.0	0.0	0.04	0.0	0.0	0.0
visc_crit_scale	0.25	0.25	1.0	1.0	1.0	0.25	1.0	1.0	1.0
&ocean_convect_nml convect_full_scalar			True	True	True	False			
convect_full_vector	F-I	Γe!	False	False	False	True	F-1	Falsa	F-I
use_this_module &ocean_coriolis_nml acor	False 0.5	False 0.5	False 0.5	False 0.5	False 0.5	False 0.5	False 0.5	False 0.5	False 0.5
use_this_module	True	True	True	True	True	True	True	True	True
&ocean_density_nml eos_linear	False	,,,,,,	False	False	False		False	False	False
eos_preteos10	True		True	True	True		True	True	True
layer_nk	80	80 False	80	80	80	80 Falso	80	80	80
linear_eos neutralrho_max	1030.0	False 1030.0	1038.0	1038.0	1038.0	False 1030.0	1030.0	1030.0	1030.0
neutralrho_min	1030.0	1020.0	1038.0	1038.0	1028.0	1030.0	1030.0	1030.0	1020.0
potrho_max	1038.0	1038.0	1038.0	1038.0	1038.0	1038.0	1038.0	1038.0	1038.0
potrho_min teos10_eos	1028.0	1028.0	1028.0	1028.0	1028.0	1028.0 False	1028.0	1028.0	1028.0
&ocean_domains_nml max_tracers						20	5	5	5
&ocean_drifters_nml use_this_module &ocean_form_drag_nml cprime_aiki	False	False	F. I	FI	F-1	0.6	F '	F. 1	F.
use_this_module	False	False	False	False	False	False	False	False	False

&ocean_frazil_nnll debug_this_module False False False False False frazil_only_in_surface True True True True True True False freezing_temp_accurate False True True True True freezing_temp_preteos10 True True True True True False False freezing_temp_simple True True True True True True False False use_this_module True True True True False False False &ocean_grids_nml debug_this_module True True False False False True False	False False True False True False	False False True False True False
freezing_temp_accurate False True freezing_temp_preteos10 True	True False True	True False True
freezing_temp_preteos10 True True True True True True False False use_this_module True True True True True True True Tru	False True	False True
freezing_temp_simple True True True True True False False use_this_module True True True True True True True Tru	False True	False True
use_this_module True True True True True True True	True	True
	Tutse	raisc
do_bitwise_exact_sum True		
read_rhoO_profile False False False		
&ocean_increment_eta_nml 0 days_to_increment		
fraction_increment 1.0 secs_to_increment 3600		
use_this_module False False False False False False False	False	False
&ocean_increment_tracer_nml 0	raisc	rusc
days_to_increment fraction_increment 1.0		
secs_to_increment 3600		
use_this_module False False False False False False False	False	False
&ocean_increment_velocity_nml 0 days_to_increment fraction_increment 1.0		
secs_to_increment 3600		
use_this_module False False False False False False False	False	False
&ocean_lap_friction_nml lap_friction 'general' 'general' 'general' 'general' 'general' 'general' 'general' 'scheme	'general'	'general'
&ocean_lap_tracer_nml use_this False Fal	False	False
&ocean_lapcst_friction_nml use_this False Fals	False	False
&ocean_lapgen_friction_nml True True True bottom_5point 00 00 00 00 00 00 00		
k_smag_aniso 0.0 <t< td=""><td></td><td></td></t<>		
ncar_only_equatorial True		
restrict_polar_visc True True True True		
restrict_polar_visc_lat 60.0 60.0 60.0 60.0		
restrict_polar_visc_ratio 0.35 0.35 0.35		
use_this_module True True False False False True True	False	False
vconst_1 8 000 000.0 vconst_2 0.0		
vconst_3 0.8		
vconst_4 5×10^{-9}		
vconst_5 3		
vconst_6 300 000 000.0		
vconst_7 100.0		
vel_micom_iso		
viscosity_ncar False False False False		
viscosity_ncar_2000 False viscosity_ncar_2007 True		
viscosity_scale_by_rossby True True True True True		
viscosity_scale_by_rossby_power 4.0 4.0 4.0 4.0 4.0		
&ocean_mixdownslope_nml False False False False False False False		
debug_this_module debug_this_m		
mixdownslope_mask_gfdl True True False False		
mixdownslope_npts 4 4 4		
read_mixdownslope_mask True True False False False False True True False False True True	False	False
&ocean_model_nml baroclinic_split 1 1 1 1 1 1 1 1 1	1 raise	1
barotropic_split 80 80 80 80 60 80 80	80	80
cmip_units False True True	True	True
debug False False False False False False	False	False
dt_ocean 7200 7200 3600 1800 150 3600 3600	1200	150
impose_init_from_restart True False io_layout 1, 4 64, 30 8, 9 4, 3	6,5	10, 15
layout 12,8 6,4 10,12 64,30 40,45 12,10 16,15	48, 40	80, 75
surface_height_split 1 1 1 1 1 1 1 1 1	10, 10	1
time_tendency 'twolevel' 'twolevel' 'twolevel' 'twolevel' 'twolevel' 'twolevel' 'twolevel' 'twolevel'	'twolevel'	'twolevel'
vertical_coordinate 'zstar' 'zstar' 'zstar' 'zstar' 'zstar' 'zstar' 'zstar'	'zstar'	'zstar'
&ocean_momentum_source_nml False False False False	False	False
rayleigh_damp_exp_from_bottom	Terra	Terra
<mark>use_rayleigh_damp_table</mark> True True True True True True True True	True True	True True

Group (continued) Variable	original/ GFDL ESM2M input- cut.nml	original/ MOM_SIS TOPAZ input.nml	original/ fabio momsis1 input.nml	original/ paul_mom- sis025_in- put.nml	original/ fanghua mom- sis01v5KDS75 WOA13_in- put.nml	original/ russ- accessom- mom4p1- input.nml	new_acces- som2 1deg jra55_ryf input.nml	new_acces- som2 025deg jra55_ryf input.nml	new_acces- som2 01deg jra55_ryf input.nml
&ocean_nphysics_nml debug_this module	False	False	False	False	False	False	False	False	False
use_nphysicsa	False	False	False	False	False	False	False	False	False
use_nphysicsb	False	True	False	False	False	False	False	False	False
use_nphysicsc	True	False	False	False	False	True	True	False	False
&ocean_nphysics_util_nml agm	True 800.0	True 800.0	False 100.0	False 100.0	False 100.0	True 600.0	True 600.0	False 100.0	False 100.0
&ocean_nphysics_util_nml agm agm_closure	True	True	True	True	True	True	True	True	True
agm_closure_baroclinic	True	True	True	True	True	True	True	True	True
agm_closure_buoy_freq	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004
agm_closure_eady_ave_mixed	True	True				True	True		
agm_closure_eady_cap	True	True				True	True		
agm_closure_eady_smooth_horz	True True	True True				True True	True True		
agm_closure_eady_smooth_vert agm_closure_eden_gamma	0.0	0.0				0.0	0.0		
agm_closure_eden_greatbatch	False	False				False	False		
agm_closure_grid_scaling	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	50 000.0
agm_closure_length_bczone	False	False	False	False	False	False	False	False	False
agm_closure_length_fixed	False	False	False	False	False	False	False	False	False
agm_closure_length_rossby agm_closure_lower_depth	False	False	False	False 2000.0	False 2000.0	False	False	False 2000.0	False 2000.0
agm_closure_lower_depth agm_closure_max	2000.0 800.0	2000.0 800.0	2000.0 600.0	600.0	600.0	2000.0 600.0	2000.0 600.0	600.0	600.0
agm_closure_min	100.0	100.0	100.0	100.0	100.0	50.0	50.0	100.0	100.0
agm_closure_scaling	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	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		
agm_smooth_space	False	False				False	False		
agm_smooth_time	False	False	(00.0	(00.0	(000	False	False	(00.0	(00.0
aredi	600.0	600.0 False	600.0 False	600.0 False	600.0 False	600.0 False	600.0 False	600.0 False	600.0 False
aredi_equal_agm drhodz_mom4p1	False True	True	False	False	False	True	True	False	False
drhodz_smooth_horz	False	False	False	False	False	False	False	False	False
drhodz_smooth_vert	False	False	False	False	False	False	False	False	False
nphysics_util_zero_init	True	True				True	True		
rossby_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	100 000.0
rossby_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	15 000.0
smax swidth	0.005 0.002	0.005 0.002	0.002 0.002	0.002 0.002	0.002 0.002				
tracer_mix_micom	False	False	False	False	False	False	False	False	False
vel_micom	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
&ocean_nphysicsa_nml debug_this_module	False	False							
neutral_linear_gm_taper	True	True							
neutral_physics_limit	True	True							
neutral_physics_simple	False	False							
neutral_sine_taper tmask_neutral_on	True True	True True							
use_this_module	False	False	False	False	False	False	False	False	False
&ocean_nphysicsb_nml debua_this_module	False	False	Tube	ruse	ruse	raise	i disc	1430	Tuise
nblayer_smooth	True	True							
neutral_physics_limit	True	True							
surf_turb_thick_min	50.0	50.0							
surf_turb_thick_min_k	5 False	5 True	Γalsa	Falsa	False	False	Falsa	Falsa	Falsa
<u>use_this_module</u> &ocean_nphysicsc_nml	False True	True	False	False	False	False True	False True	False	False
bv_freq_smooth_vert									
bvp_bc_mode bvp_min_speed	2 0.1					2 0.1	2 0.1		
bvp_speed	0.0					0.0	0.0		
debug_this_module	False					False	False		
do_gm_skewsion	True					True	True		
do_neutral_diffusion	True					True	True		
epsln_bv_freq	1×10^{-12}					1×10^{-12}	1×10^{-12}		
gm_skewsion_bvproblem gm_skewsion_modes	True False					True False	True False		
neutral_eddy_depth	True					True	True		
neutral_physics_limit	True					True	True		
number_bc_modes	2					2	2		
regularize_psi	False					False	False		
smax_psi	0.01					0.01	0.01		
smooth_psi	True					True	True		

Group (continued)	Variable	original/ GFDL ESM2M input- cut.nml	original/ MOM_SIS TOPAZ input.nml	original/ fabio momsis1 input.nml	original/ paul_mom- sis025_in- put.nml	original/ fanghua mom- sis01v5KDS75 WOA13_in- put.nml	original/ russ- accessom- mom4p1- input.nml	new_acces- som2 1deg jra55_ryf input.nml	new_acces- som2 025deg jra55_ryf input.nml	new_acces- som2 01deg jra55_ryf input.nml
	nask_neutral_on	True				-	True	True		
	urb_blayer_min se_this_module	50.0 True	False	False	False	False	50.0 True	50.0 True	False	False
&ocean_operators_nml	3c_till3_filodate	True	Tutoc	False	False	False	nuc	False	False	False
use_legacy_div_ud										
&ocean_overexchange_n this_module	_	False	False	False	False	False	False	False	False	False
overexch.	_check_extrema	False 4	False 4	4	4	4	False 4	4	4	4
overe	overexch_npts exch_weight_far	False	False	False	False	False	False	False	False	False
	overflow_umax	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
	se_this_module	False	False	False	False	False	False	False	False	False
&ocean_overflow_nml debug_this_module		False	False	False	False	False	False			
	se_this_module	False	False	False	False	False	False	False	False	False
&ocean_overflow_ofp_nn debug_this_module	nl			False	False	False				
	diag_step			4320	4320	43200				
do_entrain	nment_para_ofp do_mass_ofp			False True	False True	False True				
fra	c_exchange_src			1.0	1.0	1.0				
	x_vol_trans_ofp			10 000 000.0	10 000 000.0	10 000 000.0				
	se_this_module			False	False	False		False	False	False
&ocean_polar_filter_nml module	use_this	False	False	False	False	False	False	False	False	False
&ocean_pressure_nml zero_pressure_force				False	False	False		False	False	False
&ocean_rivermix_nml		40.0	40.0							
calving_insertion_thickne		Falsa	Γalaa	Falsa	Falsa	Falsa	Falsa	Falsa	False	False
discharge_combir	ug_this_module	False False	False True	False	False	False	False	False	False	False
	vise_exact_sum	True	nuc							
riv	ver_diffuse_salt	False	False	False	False	False	False	True	True	True
	er_diffuse_temp	False	False	False	False	False	False	True	True	True
	usion_thickness river_diffusivity	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
	rtion_thickness	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
runoff_inse	rtion_thickness	40.0	40.0							
	se_this_module	True	True	True	True	True	True	True	True	True
&ocean_riverspread_nml debug_this_module				'.false'	'.false'	'.false'				
	se_this_module	False	False	True	True	True	True	False	False	False
&ocean_rough_nml	rough_scheme	'beljaars'	'beljaars'	'beljaars'	'beljaars'	'beljaars'	T	'beljaars'	'beljaars'	'beljaars'
&ocean_sbc_nml avg_sfc	z_temp_salt_eta avg_sfc_velocity	True True	True True	True True	True True	True True	True True	True True	True True	True True
c	calvingspread	False	False	False	False	False	iiuc	False	False	False
	vise_exact_sum			False	False	False		False	False	False
	_flux_correction	True		False	False	False		False	False	False
	_restore_tscale t_concentration	-10.0					0.005			
	del_heat_fluxes	True	False	False	False	False	0.003	False	False	False
max_delta_	salinity_restore			0.5	0.5	0.5	0.5	0.5	0.5	0.5
	x_ice_thickness	8.0	8.0	1.0	1.0	1.0	8.0	0.0	0.0	0.0
	d_restore_mask			False False	False False	False False	False False	False False	False False	False False
res	tore_mask_gfdl runoff_salinity			0.0	0.0	0.0	0.0	0.0	0.0	0.0
	runoffspread	False	False	0.0	0.0		0.0	0.0		0.0
	correction_scale	0.0		0.0	0.0	0.0	_	0.0	0.0	0.0
	ore_as_salt_flux	100	100	True	True	True	True	True	True	True
	t_restore_tscale store_under_ice	-10.0	-10.0	60.0 True	60.0 True	60.0 True	15.0 True	60.0 True	60.0 True	60.0 True
	correction_scale	0.0		nuc	nuc	iluc	iiuc	iiuc	iiuc	nuc
tau_y_c	correction_scale	0.0								
	correction_scale	1.0	400	400	100	400	4.0	400	400	100
	_restore_tscale n_for_sea_level	—10.0 True	—10.0 True	—10.0 False	—10.0 False	—10.0 False	-1.0	—10.0 False	—10.0 False	—10.0 False
use_rutt_patt	use_waterflux	True	True	True	True	True	True	True	True	True
use_waterflux_o		False								
	c_override_evap	False								
	_override_fprec	False	Enlan				Ealaa			
Z	waterflux_tavg ero_heat_fluxes	False	False	False	False	False	False False	False	False	False
zero_net_p	me_eta_restore	False								

Group (continued)	Variable	original/ GFDL ESM2M input- cut.nml	original/ MOM_SIS TOPAZ input.nml	original/ fabio momsis1 input.nml	original/ paul_mom- sis025_in- put.nml	original/ fanghua mom- sis01v5KDS75 WOA13_in- put.nml	original/ russ- accessom- mom4p1- input.nml	new_acces- som2 1deg jra55_ryf input.nml	new_acces- som2 025deg jra55_ryf input.nml	new_acces- som2 01deg jra55_ryf input.nml
zero_net_salt	_correction			False	False	False		False	False	False
zero_net_salt_restore				True	True	True	True	True	True	True
zero_net_water_correction				False	False	False	_	False	False	False
zero_net_water_cou				True True	True True	True True	True True	True True	True True	True
zero_net_wa zero_net_wa				True	True	True	True	True	True	True True
	pme_fluxes			iiuc	iide	False	iiuc	iiuc	nuc	iiuc
	river_fluxes					False				
	noff_fluxes					True				
	face_stress			False	False	False	False	False	False	False
&ocean_sbc_ofam_nml	ater_fluxes			False	False	False	False False	False	False	False
restore_mask_ofam							raisc			
river_	temp_ofam						False			
&ocean_shortwave_csiro_nm	l			True			True			
read_depth	nis_module	False	False	True	False	False	True	False	False	False
use_u	zmax_pen	rdise	raise	7000	raise	raise	7000	raise	raise	raise
&ocean_shortwave_gfdl_nml		False	False	False	False	False	False	False	False	False
this_module										
	rce_sw_frac	True	True	True	True	True	True	True	True	True
•	cs_manizza	True	True	True	True	True	True	True	True	True
	rel_antoine erride_f_vis	False False	False False	False	False	False		False	False	False
UYI	read_chl	False	False	False	True	True	False	True	True	True
sw_pen_fix	xed_depths						False			
use_t	nis_module	True	True	False	True	True	False	True	True	True
9 a sana a banturaya i anlay na	zmax_pen	200.0	200.0	300.0	300.0	300.0	200.0	300.0	300.0	300.0
&ocean_shortwave_jerlov_nn this_module	nl use	False	False	False	False	False	False	False	False	False
&ocean_shortwave_nml use_shortwave_csiro		False	False	True	False	False	True	False	False	False
	twave_gfdl	True False	True False	False False	True False	True False	False False	True False	True False	True False
	vave_jerlov nis_module	True	True	True	True	True	True	True	True	True
&ocean_sigma_transport_nm sigma_advection_on		False	False	False	False	False	False	nuc	nuc	nuc
sigma_advectio	n_sgs_only	False	False	False	False	False	False			
sigma_d	iffusion_on	True	True	True	True	True	True			
sigma_diffu	•	1×10^{-6}	1×10^{-6}	1×10^{-6}	1×10^{-6}	1×10^{-6}	1×10^{-6}			
sigma_just_in_t		True	True	True	True	True	True			
smooth_sigma	igma_umax	0.01 True	0.01 True	0.01 True	0.01 True	0.01 True	0.01 True			
smooth_sign		True	True	True	True	True	True			
	_velmicom	0.2	0.2	0.2	0.2	0.2	0.2			
thickness_s	igma_layer	100.0	100.0	100.0	100.0	100.0	100.0			
thickness_	sigma_max	100.0	100.0	100.0	100.0	100.0	100.0			
	_sigma_min	100.0	100.0	100.0	100.0	100.0	100.0			
	c_sigma_on	False	False	False	False	False	False			
	mix_micom nis_module	True True	True True	True False	True False	True False	True True	False	False	False
usc_ti	vel_micom	0.05	0.05	0.05	0.05	0.05	0.05	raisc	ratsc	raisc
&ocean_solo_nml	calendar						'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
	days						0	1460	31	30
	dt_cpld hours						3600 0	3600 0	1200 0	600
	minutes						0	0	0	0
	months						12	0	0	0
	seconds						0	0	0	0
	years							0	0	0
&ocean_sponges_eta_nml module	use_this	False	False	False	False	False	False	False	False	False
&ocean_sponges_tracer_nml damp_coeff_3d		False	False	False	False	False	False			
	his_module	False	False	False	False	False	False	False	False	False
&ocean_sponges_velocity_nn	nl use	False	False	False	False	False	False	False	False	False
this_module &ocean_submesoscale_nml				0.05	0.05	0.05		0.05	0.05	0.05
coefficient_ce	nic module	Ealaa	Enlan	Ealaa	Falsa	Ealaa	Ealaa	Falsa	Falsa	False
	ngth_const	False 5000.0	False 5000.0	False 5000.0	False 5000.0	False 5000.0	False 5000.0	False 5000.0	False 5000.0	False 5000.0
front_length_def		True	True	True	True	True	True	True	True	True
gguci										

Group (continued) Variable	original/ GFDL ESM2M input- cut.nml	original/ MOM_SIS TOPAZ input.nml	original/ fabio momsis1 input.nml	original/ paul_mom- sis025_in- put.nml	original/ fanghua mom- sis01v5KDS75 WOA13_in- put.nml	original/ russ- accessom- mom4p1- input.nml	new_acces- som2 1deg jra55_ryf input.nml	new_acces- som2 025deg jra55_ryf input.nml	new_acces- som2 01deg jra55_ryf input.nml
limit_psi	True	True	True	True	True	True	True	True	True
limit_psi_velocity_scale	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
smooth_advect_transport			True 4	True 4	True 4		True 4	True 4	True
smooth_advect_transport_num smooth_hblt	False	False	False	False	False	False	False	False	4 False
smooth_psi	ruse	ruse	True	True	True	ruise	True	True	True
smooth_psi_num			3	3	3		3	3	3
submeso_advect_flux			False	False	False		False	False	False
submeso_advect_limit			True	True	True		True	True	True
submeso_advect_upwind submeso_advect_zero_bdy			True True	True True	True True		True True	True True	True True
submeso_diffusion			False	False	False		False	False	False
submeso_diffusion_biharmonic			True	True	True		True	True	True
submeso_diffusion_scale			10.0	10.0	10.0		10.0	10.0	10.0
submeso_limit_flux	True	True	_	_	_	True	_	_	_
submeso_skew_flux	T	T	True	True	True	T	True	True	True
use_hblt_equal_mld use_psi_legacy	True True	True	True False	True False	True False	True	True False	True False	True False
use_psi_legacy use_this_module	True	True	True	True	True	True	True	True	True
&ocean_tempsalt_nml	False	False	False	False	False	Huc	False	False	False
debug_this_module		. 200			. 3.00		. 200	. 4.50	, 4.50
pottemp_2nd_iteration	True	True	True	True	True	True	True	True	True
pottemp_equal_contemp		_	True	True	True		True	True	True
s_max	55.0	55.0	70.0	70.0	70.0	55.0	70.0	70.0	70.0
s_max_limit	42.0 —1.0	42.0 —1.0	42.0 0.0	42.0 0.0	42.0 0.0	42.0 —1.0	42.0 0.0	42.0 0.0	42.0 0.0
s_min s_min_limit	-1.0 5.0	-1.0 5.0	2.0	2.0	2.0	-1.0 0.0	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	-20.0	-20.0	-20.0	-5.0	-20.0	-20.0	-20.0
t_min_limit	-1.9	-1.9	-5.0	-5.0	-5.0	-2.0	-5.0	-5.0	-5.0
temperature_variable	'potential temp'	'potential temp'	'potential temp'	'potential temp'	'potential temp'	'conservative temp'	'potential temp'	'potential temp'	'potential temp'
&ocean_thickness_nml debug_this module	False	False	False	False	False	False False	False	False	False
debug_this_module_detail	False	False	False	False	False	False	False	False	False
initialize_zero_eta	False	False				False			
read_rescale_rho0_mask	True	True				False			
rescale_mass_to_get_ht_mod	70	70	False	False	False	70	False	False	False
rescale_rho0_basin_label rescale_rho0_mask_qfdl	7.0 True	7.0 True				7.0 False			
rescale_rho0_value	0.75	0.75				0.75			
thickness_dzt_min	2.0	2.0	2.0	2.0	2.0	1.0			
thickness_dzt_min_init	2.0	2.0	10.0	10.0	10.0	2.0			
thickness_method &ocean_time_filter_nml	'energetic' False	'energetic' False	'energetic'	'energetic'	'energetic'	'energetic'	'energetic'	'energetic'	'energetic'
use_this_module	5.0	5.0				25.0			
&ocean_topog_nml min_thickness &ocean_tracer_advect_nml	False	False	False	False	False	True			
advect_sweby_all compute_gyre_overturn_diagnose	i alse	Taise	1 alse	i disc	Tabe	True			
debug_this_module do_fast_compute	False	False	False	False	False	False True	False	False	False
limit_with_upwind read_basin_mask	False	False	False	False	False	True	False	False	False
&ocean_tracer_diag_nml diag_step	1200	12	48	48	43200	120	4320	4320	576
do_bitwise_exact_sum	False	False	False	False	False	False	False	False	False
smooth_mld	True	True							
tracer_conserve_days	100.0	100.0	30.0	30.0	30.0	1.0	30.0	30.0	30.0
&ocean_tracer_nml age_tracer_max_init	$1 \times 10^{+40}$	0.0	0.0	0.0	0.0	0.0	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 interpolate_tdiag_to_pbott	False False	False	False	False	False	False	False	False	False
interpolate_tolag_to_pbott	False								
limit_age_tracer	True	True	True	True	True	True	True	True	True
remap_depth_to_s_init	False	False	False	False	False	False	False	False	False
tmask_limit_ts_same use_tempsalt_check_range	True	True			True		True	True	True
zero_tendency	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/ fabio momsis1 input.nml	original/ paul_mom- sis025_in- put.nml	original/ fanghua mom- sis01v5KDS75 WOA13_in- put.nml	original/ russ- accessom- mom4p1- input.nml	new_acces- som2 1deg jra55_ryf input.nml	new_acces- som2 025deg jra55_ryf input.nml	new_acces- som2 01deg jra55_ryf input.nml
&ocean_velocity_diag_nml debug_this module	False	False	False	False	False	False	False	False	False
diaq_step	1200	12	4320	4320	43200	120	4320	4320	576
energy_diag_step	1200	12	4320	4320	43200	120	4320	4320	5760
large_cfl_value	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
max_cfl_value	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
&ocean_velocity_nml adams bashforth_third	True	True	True 1.5	True	True 1.0	True 1.0	True	True	True
max_cgint truncate_velocity	False	False	False	1.5 False	False	False	1.0 False	False	1.0 False
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
zero_tendency	False	False	False	False	False	False	False	False	False
zero_tendency_explicit_a zero_tendency_explicit_b			False False	False False	False False		False False	False False	False False
zero_tendency_explicit_b			False	False	False		False	False	False
&ocean_vert_kpp_iow_nml use_this_module	False	False	False	False	False		False	False	False
&ocean_vert_kpp_mom4p0_nml use_this_module	False	False							
&ocean_vert_kpp_mom4p1_nml diff_cbt_iw	0.0		0.0	0.0	0.0		0.0	0.0	0.0
double_diffusion	True		True	True	True		True	True	True
kbl_standard_method				0.7	False		False	False	False
ricr	0.3 True		0.3 True	0.3 Truo	0.3 False		0.3 Falso	0.3 Falso	0.3 False
smooth_blmc smooth_ri_kmax_eq_kmu	True		irue	True	True		False True	False True	True
use_this_module	True		True	True	True		True	True	True
visc_cbu_iw	0.0		0.0	0.0	0.0		0.0	0.0	0.0
wsfc_combine_runoff_calve	False								
&ocean_vert_kpp_nml diff_cbt_iw		0.0				0.0			
diff_con_limit double_diffusion		True				0.1 True			
kbl_standard_method		nuc				True			
ricr		0.3				0.3			
smooth_blmc		True				True			
use_this_module visc_cbu_iw		True 0.0				True 0.0			
visc_cou_iw visc_con_limit		0.0				0.0			
&ocean_vert_mix_nml afkph_00	0.675	0.675				0.65			
afkph_90	0.725	0.725				0.75			
aidif	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
bryan_lewis_diffusivity bryan_lewis_lat_depend	True True	True True	False False	False False	False False	False True	False False	False False	False False
bryan_lewis_lat_transition	35.0	35.0	1 0130	Taise	i alse	35.0	i alse	i alse	1 0130
dfkph_00	1.15	1.15				1.15			
dfkph_90	1.15	1.15				0.95			
hwf_diffusivity			False	False	False		False	False	False
hwf_min_diffusivity hwf_n0_2omega			2×10^{-6} 20.0	2×10^{-6} 20.0	2×10^{-6} 20.0		2×10^{-6} 20.0	2×10^{-6} 20.0	2×10^{-6} 20.0
linear_taper_diff_cbt_table	False	False	20.0	20.0	20.0	False	20.0	20.0	20.0
quebec_2009_10_bug	False								
sfkph_00	4.5×10^{-5}	4.5×10^{-5}				4.5×10^{-5}			
sfkph_90	4.5×10^{-5}	4.5×10^{-5}	F. 1	F .	F-1	4.5×10^{-5}		F	F .
use_diff_cbt_table vert_diff_back_via_max	False True	False True	False True	False True	False True	False True	False True	False True	False True
vert_mix_scheme	'kpp	'kpp'	'kpp	'kpp	'kpp	'kpp'	'kpp	'kpp	'kpp
	mom4p1'		mom4p1'	mom4p1'	mom4p1'		mom4p1'	mom4p1'	mom4p1'
zfkph_00	250 000 000.0	250 000 000.0				250 000.0			
&ocean_vert_tidal_nml	250 000 000.0	250 000 000.0	0.0	0.0	0.0	$\frac{250000.0}{5\times10^{-6}}$	0.0	0.0	0.0
background_diffusivity background_viscosity	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
decay_scale	300.0	300.0	500.0	500.0	500.0	300.0	500.0	500.0	500.0
drag_dissipation_use_cdbot	500.0	500.0	True	True	True		True	True	True
drhodz_min	1×10^{-12}	1×10^{-12}	1×10^{-10}	1×10^{-10}	$1 imes 10^{-10}$	1×10^{-12}	1×10^{-10}	1×10^{-10}	1×10^{-10}
fixed_wave_dissipation	False	False	False	False	False	False	False	False	False
max_drag_diffusivity	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
max_wave_diffusivity mixing_efficiency_n2depend	0.01 True	0.01 True	0.01 True	0.01 True	0.01 True	0.01 True	0.01 True	0.01 True	0.01 True
read_roughness	True	True	True	True	True	True	True	True	True
read_tide_speed	True	True	True	True	True	True	True	True	True
read_wave_dissipation	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/ fabio momsis1 input.nml	original/ paul_mom- sis025_in- put.nml	original/ fanghua mom- sis01v5KDS75 WOA13_in- put.nml	original/ russ- accessom- mom4p1- input.nml	new_acces- som2 1deg jra55_ryf input.nml	new_acces- som2 025deg jra55_ryf input.nml	new_acces- som2 01deg jra55_ryf input.nml
readi	ng_roughness_amp	True	True	True	True	True	True	True	True	True
reading	_roughness_length	False	False	False	False	False	False	False	False	False
	roughness_scale	30 000.0	30 000.0	12 000.0	12 000.0	12 000.0	20 000.0	12 000.0	12 000.0	12 000.0
	shelf_depth_cutoff	160.0	160.0	-1000.0	-1000.0	-1000.0	160.0	-1000.0	-1000.0	-1000.0
· ·	eed_data_on_t_grid	True	True	True	True	True	True	True	True	True
	se_drag_dissipation	True	True	True	True	True	True	True	True	True
u	se_legacy_methods	True		False	False	False		False	False	False
	use_this_module	True	True	True	True	True	True	True	True	True
us	e_wave_dissipation	True	True	True	True	True	True	True	True	True
	ve_energy_flux_max	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
&ocean_xlandinsert_ use_this_module	nml	True	True	False	False	False	False	False	False	False
	verbose_init	True	True				True			
&ocean_xlandmix_nr	ml use_this_module	True	True	False	False	False	False	False	False	False
	verbose_init	True	True				True			
	xlandmix_kmt	True	True				True			
&redseafix_nml	redsea_gulfbay_sfix			True						
&sat_vapor_pres_nm construct_table_wrt_		True	True							
construct_tal	ble_wrt_liq_and_ice	True	True							
st	now_all_bad_values					True				
&surface_flux_nml	ncar_ocean_flux			True	True	True				
	old_dtaudv	False								
	raoult_sat_vap			True	True	True				
&topography_nml	topog_file	'INPUT/	'INPUT/							
		navy_topog-	navy_topog-							
		ra-	ra-							
		phy.data.nc'	phy.data.nc'							
&xgrid_nml	do_alltoall			True	True	True				True
	do_alltoallv			True	True	True				True
	interp_method	'second order'	'second order'	'second order'	'second order'	'second order'		'second order'	'second order'	'second order'
malia a	vehange reproduce				order False	order False		order False	order False	False
make_e	xchange_reproduce	True	True	False	False 16	False 16		False 16		
	nsubset			16 False	16 False	16 False		16	16	16
	xgrid_log			raise	raise	raise				

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

days do_atmos do_flux do_ice do_land do_ocean dt_atmos dt_cpld months ocean_npes use_lag_fluxes			False False False False 3600 False 1.0 False 1.0 True	False False False False 3600 False 1.0 False 1.0 True	False False False 3600 False 1.0 False	File.00000.ot 0.15 1 0 False False False 1800 False 1.0 False 1.0 345 328 324 331 314 325 198 189 196 180 169 169 5 5 False 2.0	False False False 1800 False 1.0 False 1.0	False False False 150 False 1.0 False 1.0	False False False 600 False 1.0 False
chk_fields_period chk_fields_start_time chk_i2o_fields chk_o2i_fields do_ice_once gt_cpt fixmeltt frazil_factor iceform_adj_salt icemlt_factor ige igs ire1 ire2 ire2 irs1 irs2 ige jgs			False False False 3600 False 1.0 False 1.0	False False False 3600 False 1.0 False 1.0	False False False 3600 False 1.0 False	1 0 False False False False 1800 False 1.0 False 1.0 345 328 324 331 314 325 198 189 196 180 169 5 5 False	False False False 1800 False 1.0 False	False False 150 False 1.0 False	False False 600 False 1.0 False
chk_fields_start_time			False False 3600 False 1.0 False 1.0	False False 3600 False 1.0 False 1.0	False False 3600 False 1.0 False 1.0	0 False False False False 1800 False 1.0 False 1.0 345 328 324 331 314 325 198 189 196 180 169 169 5 False	False False 1800 False 1.0 False 1.0	False False 150 False 1.0 False 1.0	False False 600 False 1.0 False 1.0
chk.i2o_fields chk_o2i_fields do_ice_once dt_cpl fixmettt frazil_factor iceform_adj_salt icemtt_factor ige igs igs ire1 ire2 irs1 ire2 igs jge jgs jgs jre1 jre2 jrs1 jrs2 kmxice ksmax limit_srfstress mstress pop_icediag redsea_gulfbay_sfix sfix_hours sign_stflx ttthkO tmelt use_ioaice &bg_diff_lat_dependence_nml bg_diff_eq lat_low_bgdiff &coupler_nml atmos_npes atmos_nthreads calendar check_stocks concurrent current_date 1 days do_atmos do_flux do_ice do_land do_ocean dt_atmos green_npes use_lag_fluxes			False False 3600 False 1.0 False 1.0	False False 3600 False 1.0 False 1.0	False False 3600 False 1.0 False 1.0	False False False False 1800 False 1.0 False 1.0 345 328 324 331 314 325 198 189 196 180 169 169 5 False	False False 1800 False 1.0 False 1.0	False False 150 False 1.0 False 1.0	False False 600 False 1.0 False 1.0
do_ice_once dt_cpl fixmeltt			False 3600 False 1.0 False 1.0	False 3600 False 1.0 False 1.0	False 3600 False 1.0 False 1.0	False 1800 False 1.0 False 1.0 345 328 324 331 314 325 198 189 196 180 169 5 False	False 1800 False 1.0 False 1.0	False 150 False 1.0 False 1.0	False 600 False 1.0 False 1.0
dt_cpl fixmeltt			3600 False 1.0 False 1.0	3600 False 1.0 False 1.0	3600 False 1.0 False 1.0	1800 False 1.0 False 1.0 345 328 324 331 314 325 198 189 196 180 169 5 False	1800 False 1.0 False 1.0	150 False 1.0 False 1.0	600 False 1.0 False 1.0
fixmeltt frazil_factor iceform_adj_salt icemlt_factor ige igs igs igs ire1 ire2 ire2 irs1 irs2 jge jgs jgs jgs jgs jgs jgs jre1 jre2 jre2 jrs1 jrs2 kmxice ksmax limit_srfstress mstress pop_icediag redsea_gulfbay_sfix sfix_hours sign_stflx tlthk0 tmelt use_ioaice &bg_diff_lat_dependence_nml bg_diff_eq lat_low_bgdiff &coupler_nml atmos_npes atmos_nthreads calendar check_stocks concurrent current_date days do_atmos do_flux do_ice do_land do_ocean dd_land dd_ocean			False 1.0 False 1.0	False 1.0 False 1.0	False 1.0 False 1.0	False 1.0 False 1.0 345 328 324 331 314 325 198 189 196 180 169 5 False	False 1.0 False 1.0	False 1.0 False 1.0	False 1.0 False 1.0
frazil_factor iceform_adj_salt icemlt_factor ige igs igs ire1 ire2 ire2 irs1 irs2 jge jgs			1.0 False 1.0	1.0 False 1.0	1.0 False 1.0	1.0 False 1.0 345 328 324 331 314 325 198 189 196 180 169 5 False	1.0 False 1.0	1.0 False 1.0	1.0 False 1.0
iceform_adj_salt icemlt_factor ige igs igs ire1 ire2 ire2 irs1 irs2 jge jgs jgs jgs jre1 jrs2 jre2 jrs1 jrs2 kmxice ksmax limit_srfstress mstress pop_icediag redsea_gulfbay_sfix sfix_hours sign_stflx tlthk0 tmelt use_ioaice &bg_diff_lat_dependence_nml bg_diff_eq lat_low_bgdiff &coupler_nml atmos_npes atmos_nthreads calendar check_stocks concurrent current_date days do_atmos do_flux do_ice do_land do_ocean dd_land do_ocean			False 1.0	False 1.0	False 1.0	False 1.0 345 328 324 331 314 325 198 189 196 180 169 5 False	False 1.0	False 1.0	False 1.0
icemlt_factor ige igs igs ire1 ire2 ire2 irs1 irs2 jge jgs jgs jgs jre1 jre2 jrs1 jrs2 kmxice ksmax limit_srfstress mstress pop_icediag redsea_gulfbay_sfix sfix_hours sign_stflx tlthk0 tmelt use_ioaice &bg_diff_lat_dependence_nml bg_diff_eq lat_low_bgdiff &coupler_nml atmos_npes atmos_nthreads calendar check_stocks concurrent current_date days do_atmos do_flux do_ice do_land do_ocean idt_atmos do_ccan idt			5	5	1.0	1.0 345 328 324 331 314 325 198 189 196 180 169 5 5	1.0	10	1.0
ige igs igs ire1 ire2 ire1 ire2 irs1 irs2 jge jgs jgs jgs jre1 jre2 jre2 jre1 jre2 kmxice ksmax limit_srfstress mstress pop_icediag redsea_gulfbay_sfix sfix_hours sign_stflx tlthk0 tmelt use_ioaice &bg_diff_lat_dependence_nml bg_diff_eq lat_low_bgdiff &coupler_nml atmos_npes atmos_nthreads calendar check_stocks concurrent current_date lat_outped days do_atmos do_flux do_ice do_land do_ocean dt_atmos dt_cpld months ocean_npes use_lag_fluxes			5	5		345 328 324 331 314 325 198 189 196 180 169 169 5			
igs ire1 ire2 ire1 ire2 irs1 irs2 jge jgs jgs jgs jre1 jre2 jre1 jre2 jre1 jre2 jrs1 jrs2 kmxice ksmax limit_srfstress mstress pop_icediag redsea_gulfbay_sfix sfix_hours sign_stflx tlthk0 tmelt use_ioaice &bg_diff_lat_dependence_nml bg_diff_eq lat_low_bgdiff &coupler_nml atmos_npes atmos_nthreads calendar check_stocks concurrent current_date days do_atmos do_flux do_ice do_land do_ocean dt_atmos dt_cpld months ocean_npes use_lag_fluxes					5	324 331 314 325 198 189 196 180 169 169 5 5	5	5	5
ire2 irs1 irs2 jge jgs jgs jre1 jre2 jre2 jrs1 jrs2 kmxice ksmax kmxice ksmax limit_srfstress mstress pop_icediag redsea_gulfbay_sfix sfix_hours sign_stfix ttthko tmelt use_ioaice &bg_diff_lat_dependence_nml bg_diff_eq lat_low_bgdiff &coupler_nml atmos_npes atmos_nthreads calendar check_stocks concurrent current_date 1 days do_atmos do_flux do_ice do_land do_ocean dt_atmos dt_cpld months ocean_npes use_lag_fluxes					5	331 314 325 198 189 196 180 169 169 5 5	5	5	5
irs1 irs2 ige ige jgs jgs jre1 jre2 jrs1 jrs2 kmxice ksmax limit.srfstress mstress pop_icediag redsea_gulfbay_sfix sfix_hours sign_stflx ttthk0 tmelt use_ioaice &bg_diff_lat_dependence_nml bg_diff_eq lat_low_bgdiff &coupler_nml atmos_npes atmos_nthreads calendar check_stocks concurrent current_date 1 days do_atmos do_flux do_ice do_land do_ocean dt_atmos dt_cpld months ocean_npes use_lag_fluxes					5	314 325 198 189 196 180 169 169 5 5	5	5	5
irs2 jge jgs jre1 jre2 jrs1 jrs2 kmxice ksmax limit_srfstress mstress pop_icediag redsea_gulfbay_sfix sfix_hours sign_stflx ttthkO tmelt use_ioaice &bg_diff_lat_dependence_nml bg_diff_eq lat_low_bgdiff &coupler_nml atmos_npes atmos_nthreads calendar check_stocks concurrent current_date 1 days do_atmos do_flux do_ice do_land do_ocean dt_atmos ft_cpld months ocean_npes use_lag_fluxes					5	325 198 189 196 180 169 169 5 5	5	5	5
ige jgs jre1 jre2 jrs1 jre2 jrs1 jrs2 kmxice ksmax ksmax limit_srfstress mstress pop_icediag redsea_gulfbay_sfix sfix_hours sign_stflx tlthk0 tmelt use_ioaice &bg_diff_lat_dependence_nml bg_diff_eq lat_low_bgdiff &coupler_nml atmos_npes atmos_nthreads calendar check_stocks concurrent current_date 1 days do_atmos do_flux do_ice do_land do_ocean dt_atmos ft_cpld mnonths ocean_npes use_lag_fluxes					5	198 189 196 180 169 169 5 5	5	5	5
jgs jre1 jre2 jrs1 jrs2 jrs1 jrs2 kmxice ksmax kmxice ksmax limit_srfstress mstress pop_icediag redsea_gulfbay_sfix sfix_hours sign_stflx tithk0 tmelt use_ioaice &bg_diff_lat_dependence_nml bg_diff_eq lat_low_bgdiff &coupler_nml atmos_npes atmos_nthreads calendar check_stocks concurrent current_date 1 days do_atmos do_flux do_ice do_land do_ocean dt_atmos ft_cpld months ocean_npes use_lag_fluxes					5	189 196 180 169 169 5 5 False	5	5	5
jre1 jre2 jrs1 jrs2 kmxice ksmax limit_srfstress mstress pop_icediag redsea_gulfbay_sfix sfix_hours sign_stflx tlthk0 tmelt use_ioaice &bg_diff_lat_dependence_nml bg_diff_eq lat_low_bgdiff &coupler_nml atmos_npes atmos_nthreads calendar check_stocks concurrent current_date 1 days do_atmos do_flux do_ice do_land do_ocean dt_atmos dt_cpld months ocean_npes use_lag_fluxes					5	196 180 169 169 5 5 False	5	5	5
jre2 jrs1 jrs2 kmxice ksmax limit_srfstress mstress pop_icediag redsea_gulfbay_sfix sfix_hours sign_stflx tlthk0 tmelt use_ioaice &bg_diff_lat_dependence_nml bg_diff_eq lat_low_bgdiff &coupler_nml atmos_npes calendar check_stocks calendar check_stocks calendar check_stocks concurrent current_date days do_atmos do_flux do_ice do_land do_ocean dt_atmos dt_cpid months ocean_npes use_lag_fluxes					5	180 169 169 5 5 False	5	5	5
kmxice ksmax limit_srfstress mstress pop_icediag redsea_gulfbay_sfix sfix_hours sign_stflx tlthk0 tmelt use_ioaice &bg_diff_lat_dependence_nml bg_diff_eq lat_low_bgdiff &coupler_nml atmos_npes atmos_nthreads calendar check_stocks concurrent current_date days do_atmos do_flux do_ice do_land do_ocean dt_atmos dt_cpld months ocean_npes use_lag_fluxes					5	169 5 5 False	5	5	5
kmxice ksmax limit_srfstress mstress pop_icediag redsea_gulfbay_sfix sfix_hours sign_stflx tlthk0 tmelt use_ioaice &bg_diff_lat_dependence_nml bg_diff_eq lat_low_bgdiff &coupler_nml atmos_npes atmos_nthreads calendar check_stocks concurrent current_date days do_atmos do_flux do_ice do_land dd_o_ocean dt_atmos dt_cpld months ocean_npes use_lag_fluxes					5	5 5 False	5	5	5
ksmax limit_srfstress mstress pop_icediag redsea_gulfbay_sfix sfix_hours sign_stflx tlthk0 tmelt use_ioaice &bg_diff_lat_dependence_nml bg_diff_eq lat_low_bgdiff &coupler_nml atmos_npes atmos_nthreads calendar check_stocks concurrent current_date days do_atmos do_flux do_ice do_land dd_o_ocean dt_atmos dt_cpld months ocean_npes use_lag_fluxes					5	5 False	5	5	5
limit_srfstress mstress pop_icediag redsea_gulfbay_sfix sfix_hours sign_sflx tlthko tmelt use_ioaice &bg_diff_lat_dependence_nml bg_diff_eq lat_low_bgdiff &coupler_nml atmos_npes atmos_nthreads calendar check_stocks concurrent current_date 1 days do_atmos do_flux do_ice do_land do_ocean dt_atmos dt_cpld months ocean_npes use_lag_fluxes			True	True		False			
mstress pop_icediag redsea_gulfbay_sfix sfix_hours sign_stfix ttthk0 ttthk0 ttmelt use_ioaice &bg_diff_lat_dependence_nml bg_diff_eq lat_low_bgdiff &coupler_nml atmos_npes atmos_nthreads calendar check_stocks concurrent current_date 1 days do_atmos do_flux do_ice do_land do_ocean dt_atmos dt_cpld months ocean_npes use_lag_fluxes			True	True					
pop_icediag redsea_gulfbay_sfix sfix_hours sign_stflx ttthk0 tmelt use_ioaice &bg_diff_lat_dependence_nml bg_diff_eq lat_low_bgdiff &coupler_nml atmos_npes atmos_nthreads calendar check_stocks concurrent current_date 1 days do_atmos do_flux do_ice do_land do_ocean dt_atmos dt_cpld months ocean_npes use_lag_fluxes			True	True		2.0			
sfix_hours sign_stflx tlthk0 tmelt use_ioaice &bg_diff_lat_dependence_nml bg_diff_eq lat_low_bgdiff &coupler_nml atmos_npes atmos_nthreads calendar check_stocks concurrent current_date days do_atmos do_flux do_ice do_land do_ocean dt_atmos dt_cpld months ocean_npes use_lag_fluxes					True	True	True	True	True
sign_stflx tlthk0 tmelt use_ioaice &bg_diff_lat_dependence_nml bg_diff_eq lat_low_bgdiff &coupler_nml atmos_npes atmos_nthreads calendar check_stocks concurrent current_date days do_atmos do_flux do_ice do_land do_ocean dt_atmos dt_cpld months ocean_npes use_lag_fluxes				True	True	False			
tithk0 tmelt use_ioaice &bg_diff_lat_dependence_nml bg_diff_eq lat_low_bgdiff &coupler_nml atmos_npes atmos_nthreads calendar check_stocks concurrent current_date days do_atmos do_flux do_ice do_land do_ocean dt_atmos dt_cpld months ocean_npes use_lag_fluxes						12			
tmelt use_ioaice &bg_diff_lat_dependence_nml bg_diff_eq lat_low_bgdiff &coupler_nml atmos_npes atmos_nthreads calendar check_stocks concurrent current_date days do_atmos do_flux do_ice do_land ido_ocean dt_atmos dt_cpld months ocean_npes use_lag_fluxes			1.0	1.0	1.0	1.0	1.0	1.0	1.0
&bg_diff_lat_dependence_nml bg_diff_eq lat_low_bgdiff &coupler_nml atmos_npes atmos_nthreads calendar check_stocks concurrent current_date days do_atmos do_flux do_ice do_land ido_ocean dt_atmos dt_cpld months ocean_npes use_lag_fluxes			-0.216	-0.216	-0.216	10.0 0.216	-0.216	-0.216	-0.216
&bg_diff_lat_dependence_nml bg_diff_eq lat_low_bgdiff &coupler_nml atmos_npes atmos_nthreads calendar check_stocks concurrent current_date days do_atmos do_flux do_ice do_land ido_ocean dt_atmos dt_cpld months ocean_npes use_lag_fluxes			-0.210 True	-0.216 True	-0.216 True	-0.210 True	-0.216 True	-0.210 True	-0.216 True
&coupler_nml atmos_npes atmos_nthreads calendar check_stocks concurrent current_date 1 days do_atmos do_flux do_ice do_land do_ocean dt_atmos dt_cpld months ocean_npes use_lag_fluxes			1 × 10 ⁻⁶	1×10^{-6}					
atmos_nthreads calendar check_stocks concurrent current_date days do_atmos do_flux do_ice do_land do_ocean dt_atmos dt_cpld months ocean_npes use_lag_fluxes			20.0	20.0					
calendar check_stocks concurrent current_date 1 days do_atmos do_flux do_ice do_land do_ocean dt_atmos dt_cpld months ocean_npes use_lag_fluxes	0	0							
check_stocks concurrent current_date 1 days do_atmos do_flux do_ice do_land do_ocean dt_atmos dt_cpld months ocean_npes use_lag_fluxes	4 'NOLEAR'	'NOLEAD'							
concurrent current_date 1 days do_atmos do_flux do_ice do_land do_ocean dt_atmos dt_cpld months ocean_npes use_lag_fluxes	'NOLEAP' 0	'NOLEAP' 0							
current_date days do_atmos do_flux do_ice do_land do_ocean dt_atmos dt_cpld months ocean_npes use_lag_fluxes	True	False							
days do_atmos do_flux do_ice do_land do_ocean dt_atmos dt_cpld months ocean_npes use_lag_fluxes	1, 1, 1, 0, 0, 0	1, 1, 1, 0, 0, 0							
do_flux do_ice do_land do_ocean dt_atmos dt_cpld months ocean_npes use_lag_fluxes	0	2							
do_ice do_land do_ocean dt_atmos dt_cpld months ocean_npes use_lag_fluxes	True	False							
do_land do_ocean dt_atmos dt_cpld months ocean_npes use_lag_fluxes	True	_							
do_ocean dt_atmos dt_cpld months ocean_npes use_lag_fluxes	True	True							
dt_atmos dt_cpld months ocean_npes use_lag_fluxes	True True	False True							
dt_cpld months ocean_npes use_lag_fluxes	1800	7200							
months ocean_npes use_lag_fluxes	7200	7200							
use_lag_fluxes	12	0							
	96	0							
	True	True							
&data_override_nml debug_data_override						False			
		'diag integral.out'				False			
output_interval time_units	'diag integral.out'	1.0 'days'							
&diag_manager_nml append_pelist_name	integral.out' 1.0	uays				False			
conserve_water	integral.out'					True			
debug_diag_manager	integral.out' 1.0				True	True	True		True
do_diag_field_log	integral.out' 1.0				-	False	-		_
issue_oor_warnings	integral.out' 1.0 'days'				True	True 60	True	False	True
max_axes max_field_attributes	integral.out' 1.0	False 100	False	False				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_acces- som2 1deg jra55_ryf input.nml	original/ kiss_acces- som2 025deg jra55_ryf log- file.000000.ou	new_acces- som2 025deg jra55_ryf input.nml	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new_acces- som2 01deg jra55_ryf input.nml
	max_file_attributes						2		4000	
	max_files	50	600				31		1000	
	max_input_fields max_num_axis_sets	800 200	699 100				300 25		700 40	
	nax_out_per_in_field	200	100				150		10	
	max_output_fields	1300	699				300		700	
mix_snap	shot_average_fields	False	False				False			
	oor_warnings_fatal prepend_date						False True			
region	n_out_use_alt_value						True			
	use_cmor						False			
0.0	write_bytes_in_file	Falas	F-1				False			
&flux_exchange_nm	l debug_stocks divert_stocks_report	False True	False True							
	_area_weighted_flux	False	False							
	nblocks	4								
&fms_io_nml	checksum_required						True		False	
	debug_mask_list dr_set_size						False 10			
	fileset_write		'single'	'single'	'single'	'single'	'single'	'multi'	'multi'	'multi'
f	fms_netcdf_override		. 3	. 3	. J	. .	True			
	fms_netcdf_restart						True			
	format iospec_ieee32						'netcdf' '', 'N',			
	iospec_ieee32						'ieee_32'			
	max_files_r	300	200				40		700	
	max_files_w	300	200				40		700	
	print_chksum						False True			
	read_all_pe read_data_bug						False			
show_open_na	melist_file_warning						False			
	threading_read	'multi'	'multi'	'multi'	'multi'	'multi'	'multi'	'multi'	'multi'	'multi'
	threading_write		'single'	'single'	'single'	'single'	'single'	'multi'	'multi'	'multi'
&fms_nml	time_stamp_restart clock_flags						True 'NONE'			
G.IIII	clock_grain	'COMPONENT'	'L00P'	'LOOP'	'LOOP'	'COMPONENT'	'LOOP'	'COMPONENT'	'LOOP'	'COMPONENT'
	domains_stack_size	5000000	8000000			115200	0	115200	115200	115200
ņ	iospec_ieee32 rint_memory_usage						"; 'N', 'ieee_32' False		False	
	read_all_pe						True		raise	
	stack_size	0	0				0			
	warning_level						'warning'			
&generic_tracer_nm	<pre>do_generic_cfc do_generic_topaz</pre>	False True	False True						False False	
	do_generic_tracer	True	True						False	
&get_cal_time_nml							True			
allow_calendar_conv										
&horiz_interp_nml &ice_albedo_nml	reproduce_siena t_range	10.0	10.0				False			
&ice_model_nml	add_diurnal_sw	False	True							
	alb_ice	0.65	0.615							
	alb_sno	0.85	0.825							
	channel_viscosity cm2_bugs	500 000.0 False	False							
	do_icebergs	True	False							
	h_lo_lim	1×10^{-10}	1×10^{-10}							
	heat_rough_ice		0.0005							
	ice_bulk_salin	0.005	0.005							
	io_layout layout	1, 2 15, 2								
	nsteps_adv	1	1							
	nsteps_dyn	72	108							
	num_part	6 Falso	6 False							
	spec_ice t_range_melt	False 1.0	False 10.0							
	wd_turn	0.0	0.0							
&icebergs_nml			0.0							
bergy_bit_erosion_fr			F .							
make	debug e_calving_reproduce	True	False							
make	parallel_reprod	iiue	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_acces- som2 1deg jra55_ryf input.nml	original/ kiss_acces- som2 025deg jra55_ryf log- file.000000.ou	new_acces- som2 025deg jra55_ryf input.nml	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new_acces- som2 01deg jra55_ryf input.nml
really_debug		False				iile.000000.01			
sicn_shift		0.1							
speed_limit	0.5								
time_average_weight	False								
traj_sample_hrs	0	0							
use_operator_splitting use_roundoff_fix	True	True							
verbose	True	False							
verbose_hrs	120	2400							
&mom_oasis3_interface_nml fields_in			'u_flux',	'u_flux',	'u_flux',	'u_flux',	'u_flux',	'u_flux',	'u_flux',
			'v_flux', 'lprec', 'fprec', 'salt_flx', 'mh_flux', 'sw_flux', 'q_flux', 't_flux', 'lw_flux', 'runof', p', 'aice', 'wfimelt',	'v_flux', 'lprec', 'fprec', 'salt_flx', 'mh_flux', 'sw_flux', 'q_flux', 't_flux', 'lw_flux', 'runof', p', 'aice', 'wfimelt',	'v_flux', 'lprec', 'fprec', 'salt_flx', 'mh_flux', 'sw_flux', 'q_flux', 't_flux', 'lw_flux', 'runof', p', 'aice', 'wfimelt',	'v_flux', 'lprec', 'fprec', 'salt_flx', 'mh_flux', 'sw_flux', 'q_flux', 't_flux', 'lw_flux', 'runof', 'p', 'aice', 'wfimelt',	'v_flux', 'lprec', 'fprec', 'salt_flx', 'mh_flux', 'sw_flux', 'q_flux', 't_flux', 'lw_flux', 'runof', p', 'aice', 'wfimelt',	'v_flux', 'lprec', 'fprec', 'salt_flx', 'mh_flux', 'sw_flux', 'q_flux', 't_flux', 'lw_flux', 'runof', p', 'aice', 'wfimelt',	'v_flux', 'lprec', 'fprec', 'salt_flx', 'mh_flux', 'sw_flux', 'q_flux', 't_flux', 'lw_flux', 'runof', 'p', 'aice', 'wfimelt',
			'wfiform'	'wfiform'	'wfiform'	'wfiform'	'wfiform'	'wfiform'	'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', 'v_surf',	'u_surf', 'v_surf',	'u_surf', 'v_surf',	'u_surf', 'v_surf',	'u_surf', 'v_surf',	'u_surf', 'v_surf',	'u_surf', 'v_surf',
			'dssldx',	'dssldx',	'dssldx',	'dssldx',	'dssldx',	'dssldx',	'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
num_fields_out			7	7	7	7	7	7	7
send_after_ocean_update			True	True	True	True	True	True	True
send_before_ocean_update &monin_obukhov_nml neutral		True	False	False	False True	False	False True	False True	False True
rich_crit	10.0	iiue			iiue		iiue	iiue	iiue
stable_option	2								
zeta_trans	0.5								
&mpp_io_nml deflate_level					5	1 _	5	5	5
global_field_on_root_pe						True			
header_buffer_val io_clocks_on						16384 False			
shuffle					1	0	1	1	1
&ocean_adv_vel_diag_nml 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	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
verbose_cfl	False	False	False	True	True	True	True	True	True
&ocean_advection_velocity_nml constant_advection_velocity						False			
debug_this_module						False			
inflow_nboundary						False			
max_advection_velocity	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.2	0.5
read_advection_transport						False			
read_advection_velocity		2			2	False	2	2	2
&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
barotropic_leap_frog		False	False						
barotropic_pred_corr	_	True	True	_	_	_	_	_	_
barotropic_time_stepping_a	True			True	True	True	True	True	True
barotropic_time_stepping_b barotropic_time_stepping_mom4p0	False	True	True	False	False	False	False	False	False
barotropic_time_stepping_mom4p1		False	False						
debug_this_module	False	False	False	False	False	False	False	False	False
diag_step	1200	12	120	4320	4320	4320	4320	576	576
do_bitwise_exact_sum	True					False			
eta_max	8.0	8.0	8.0	8.0	0.8	8.0	8.0	0.8	0.8
eta_offset	0.3	0.2	0.3	0.2	0.2	1×10^{-12}	0.2	0.2	0.2
frac_crit_cell_height geoid_forcing	0.2	0.2	0.2	0.2	0.2	0.2 False	0.2	0.2	0.2
geold_forcing ideal_initial_eta						False			
ideal_initial_eta_amplitude						5.0			

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_acces- som2 1deg jra55_ryf input.nml	original/ kiss_acces- som2 025deg jra55_ryf log- file.000000.o	new_acces- som2 025deg jra55_ryf input.nml	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new_acces- som2 01deg jra55_ryf input.nml
ideal_initial	_eta_xwidth						100 000.0			
ideal_initial							100 000.0			
initsum_with_b							False			
initsum_with_b							True			
prod	pbot_offset corr_gamma	0.2	0.2	0.2	0.2	0.2	1×10^{-12} 0.2	0.2	0.2	0.2
smooth_anompb_bt		0.2	0.2	0.2	0.2	0.2	False	0.2	0.2	0.2
smooth_anompb_							False			
smooth_eta_diag	_biharmonic						False			
smooth_eta_dia		True	True	True	True	True	True	True	True	True
smooth_eta_t smooth_eta_t_bt		True	True	True	False	False	False False	False	False	False
smooth_eta_t_bt							False			
	_t_laplacian	False	False	False	True	True	True	True	True	True
smooth_pbot_t		True	True	True	False	False	False	False	False	False
smooth_pbot_t_biharn							False			
smooth_pbot		False	False	False	True	True	True	True	True	True
	al_forcing_8 orcing_ideal						False False			
	_forcing_m2						False			
	runcate_eta	False	False	False	False	False	False	False	False	False
	udrho_bih						False			
udrho_bih	_vel_micom						0.01			
	drho_bt_bih						False			
u	drho_bt_lap						False			
udaha lau	udrho_lap						False			
udrno_lap use_legacy_baro	_vel_micom				False	False	0.05 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_diaq	0.01	0.01	0.01	0.01	0.01	0.1	0.01	0.01	0.01
	_micom_lap	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
vel_mico	m_lap_diag	1.0	1.0	0.2	0.2	0.2	0.2	0.2	0.5	0.2
	verbose_init	_	_	_	_	_	True		_	
	se_truncate	True	True	True	True	True	True	True	True	True
	te_a_restart o_coriolis_bt						True False			
ZCI	zero_eta_ic						False			
	zero_eta_t						False			
zero_e	ta_tendency						False			
	zero_eta_u						False			
	o_forcing_bt						False			
zero_nonlinea		Falsa	Falsa	F-1		Falsa	False	F-1	Falsa	F-I
	ro_tendency omf_implicit	False	False	False		False True	False True	False True	False True	False True
Woccan_bbc_nint	bmf_max					iiuc	1.0	iiuc	Huc	Huc
	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						1100.0			
	cdbot_hi					0.007	0.007	0.007	0.007	0.007
cdbot_	law_of_wall			False	False		False			
cdbot_rough	cdbot_lo					False	0.001 False	False	False	False
	ness_uamp					True	True	True	True	True
cabotiloug	cdbot_uu					11 40	1.0	iide	iide	iiuc
	cdbot_wave						False			
	.geothermal						0.001			
	this_module						False			
law_of_wall_ro		0.05	0.05			۸۸۲	0.01	0.05	0.05	0.05
use_geother	uresidual mal heating	0.05 True	0.05 True	False	False	0.05 False	0.05 False	0.05 False	0.05 False	0.05 False
	uvmaq_max	IIUC	iluc	ו מנגד	ו מנטכ	ו מנטכ	10.0	ו מנטכ	ו מנאכ	i alse
&ocean_bbc_ofam_nml read				False	False		False			
ures	sidual2_max			1.0	1.0		0.05			
&ocean_bih_friction_nml b scheme	ih_friction	'general'	'general'	'general'	'general'	'general'	'general'	'general'	'general'	'general'
debug_:	this_module						False			
	te_a_restart						True			
	abih						0.0			
&ocean_bih_tracer_nml	and a diff.									
ho	rz_s_diffuse						True			
ho ho	rz_s_diffuse rz_z_diffuse usivity_mask						False False			

Group (continued) Variabl	e 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_acces- som2 1deg jra55_ryf input.nml	original/ kiss_acces- som2 025deg jra55_ryf log- file.000000.ou	new_acces- som2 025deg jra55_ryf input.nml	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new_acces- som2 01deg jra55_ryf input.nml
use_this_modul		False	False	False	False	False	False	False	False
&ocean_bihcst_friction_nml	m False	False	False	False	False	0.001	False	0.001 False	False
<pre>use_this_module &ocean_bihgen_friction_nml</pre>	True	True	True	True	False	False	False	False	False
bottom_5point									
<mark>debug_this_modul</mark> eg_lat_micol		0.0	0.0	0.0	0.0	False 0.0	0.0	0.0	0.0
eq_vel_micom_anis		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
eq_vel_micom_is		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
equatorial_zon equatorial_zonal_la		False	False	False	False	False 0.0	False	False	False
k_smag_anis		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
k_smag_is	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
ncar_boundary_scalin		True	True	True	True	True	True	True	True
ncar_boundary_scaling_rea ncar_rescale_powe		2	2	2	True 2	True 2	True 2	True 2	True 2
ncar_vconst_	0	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	5	5	5	5	5	5	5
neptur						False			
neptune_depth_mi neptune_length_e						100.0 4200.0			
neptune_length_pol	•					17 000.0			
neptune_scalin	-					1.0			
neptune_smoot						True			
neptune_smooth_nu read_aiso_bih_bad						1 False			
side_drag_friction_ma						1.0			
side_drag_friction_scalin	•					1.0			
side_drag_friction_uvmag_ma use_side_drag_frictio						10.0 False			
use_side_drag_mctio		True	True	True	True	True	True	True	True
vel_micom_anis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
vel_micom_botto		0.01	0.01	0.01	0.0	0.0	0.0	0.0	0.0
vel_micom_is visc_crit_scal		0.04 0.25	0.04 0.25	0.04 0.25	0.0 1.0	0.0 1.0	0.0 1.0	0.0 1.0	0.0 1.0
visc_diverge_scalin	g	0.23	0.23	0123	2.0	0.0	2.0	2.0	1.0
&ocean_blob_nml bitwise_reproduction						False			
blob_small_mas						1000.0			
debug_this_modu do_bitwise_exact_su						False False			
max_prop_thicknes						0.7			
really_debu	g					False			
&ocean_convect_nml convect_full_scalar			False	False		True		True	
convect_full_vecto			True	True		False		False	
convect_nco nco						False 7			
use_this_modul		False	False	False	False	False	False	False	False
&ocean_coriolis_nml acc	or 0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
debug_this_modul		Т	T	T	T	False	Т	Т	T
use_this_modul &ocean_density_nml alpha_linear_ed		True	True	True	True	True 0.255	True	True	True
beta_linear_ed						0.0			
buoyfreq_smooth_ve						True			
debug_this_modul						False			
density_equal_potrh do_bitwise_exact_su						False False			
drhodz_diag_stabl	le					True			
eos_linea				False	False	False	False	False	False
eos_preteos1 eos_teos1				True	True	True False	True	True	True
epsln_drhod						1×10^{-10}			
epsln_drhodz_dia						1×10^{-10} 1×10^{-10}			
grad_nrho_lrpotrho_comput	ie					False			
grad_nrho_lrpotrho_ma						10.0			
<mark>grad_nrho_lrpotrho_mi</mark> layer_r		80	80	80	80	1.0 80	80	80	80
linear_ec		False	False					- 00	
mask_domain_resta						False			
neutral_density_omeg						False			
neutral_density_potrh	U					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_acces- som2 1deg jra55_ryf input.nml	original/ kiss_acces- som2 025deg jra55_ryf log-	new_acces- som2 025deg jra55_ryf input.nml	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new_acces- som2 01deg jra55_ryf input.nml
	40700	10700	40700	40700	40700	file.000000.oı	10700	40700	10700
neutralrho_max neutralrho_min	1030.0 1020.0	1030.0 1020.0	1030.0 1020.0	1030.0 1020.0	1030.0 1020.0	1038.0 1028.0	1030.0 1020.0	1038.0 1028.0	1030.0 1020.0
num_121_passes	1020.0	1020.0	1020.0	1020.0	1020.0	1028.0	1020.0	1028.0	1020.0
p_test						1000.0			
potrho_max	1038.0	1038.0	1038.0	1038.0	1038.0	1038.0	1038.0	1038.0	1038.0
potrho_min	1028.0	1028.0	1028.0	1028.0	1028.0	1028.0	1028.0	1028.0	1028.0
potrho_press press_standard						2000.0 0.0			
rho0_density						False			
s_test						20.0			
smax_diag						-1.0			
smax_min_in_column						False			
smooth_stratification_factor						False 35.0			
sn_test t_test						20.0			
teos10_eos			False			20.0			
theta_max			. 4.50			30.0			
theta_min						-2.0			
tn_test						20.0			
update_diagnostic_factors						False			
write_a_restart &ocean_domains_nml halo						True			
&ocean_domains_nml halo max_tracers			20	10	5	1 5	5	5	5
x_cyclic_offset						0			
y_cyclic_offset						0			
&ocean_drifters_nml output_interval	F-1	Falas				1			
use_this_module &ocean_form_drag_nml agm_form_drag	False	False				False 600.0			
cprime_aiki			0.6	0.6		0.3			
debug_this_module						False			
form_drag_aiki_bottom_klevels						3			
form_drag_aiki_bottom_layer						False			
form_drag_aiki_gradh_max						0.05			
form_drag_aiki_gradh_power form_drag_aiki_scale_by_gm						1.0 False			
form_drag_aiki_scale_by_gradh						False			
form_drag_gbatch_alpha						300 000 000.0			
form_drag_gbatch_alpha_f2						False			
form_drag_gbatch_f2overn2						False			
form_drag_gbatch_f2overnb2						False			
form_drag_gbatch_f2overno2 form_drag_qbatch_no						False 0.005			
form_drag_qbatch_smooth_n2						False			
form_drag_gbatch_surf_layer						False			
ksurf_blayer_min						3			
n_squared_min						1×10^{-10}			
num_121_passes						1			
use_form_drag_aiki use_form_drag_gbatch						False False			
use_this_module	False	False	False	False	False	False	False	False	False
vel_form_drag_max	1 4.50	. 4.50	. 4.50		. 4.50	1.0	1 4130		
verbose_init						True			
visc_cbu_form_drag_max						1.0			
&ocean_frazil_nml air_saturated_water	F-1	Falas			Falsa	True	F-I	Falsa	F-1
debug_this_module frazil_factor	False	False			False	False 1.0	False	False	False
frazil_only_in_surface	True	True	False		False	False	False	False	False
freezing_temp_accurate	1140	False	True		. 4150	. 3.50	. 4150	. uisc	. 4130
irecznią_teinp_acearate					True	True	True	True	True
freezing_temp_preteos10	_	True	False	True	False	False	False	False	False
freezing_temp_preteos10 freezing_temp_simple	True			-	-	False	-	-	-
freezing_temp_preteos10 freezing_temp_simple freezing_temp_teos10		7	_		True	True	True	True	True
freezing_temp_preteos10 freezing_temp_simple freezing_temp_teos10 use_this_module	True	True	True	True		Ealco	Ealco	Ealco	Falco
freezing_temp_preteos10 freezing_temp_simple freezing_temp_teos10 use_this_module &ocean_grids_nml debug_this_module	True True	True True	True True	True	False	False False	False	False	False
freezing_temp_preteos10 freezing_temp_simple freezing_temp_teos10 use_this_module &ocean_grids_nml debug_this_module do_bitwise_exact_sum	True True True	True	True	True		False	False	False	False
freezing_temp_preteos10 freezing_temp_simple freezing_temp_teos10 use_this_module &ocean_grids_nml debug_this_module	True True						False	False	False
freezing_temp_preteos10 freezing_temp_simple freezing_temp_teos10 use_this_module &ocean_grids_nml debug_this_module do_bitwise_exact_sum read_rho0_profile verbose_init write_grid	True True True	True	True False	True False		False False	False	False	False
freezing_temp_preteos10 freezing_temp_simple freezing_temp_teos10 use_this_module &ocean_grids_nml debug_this_module do_bitwise_exact_sum read_rho0_profile verbose_init write_grid &ocean_increment_eta_nml	True True True	True	True	True		False False True	False	False	False
freezing_temp_preteos10 freezing_temp_simple freezing_temp_teos10 use_this_module &ocean_grids_nml debug_this_module do_bitwise_exact_sum read_rho0_profile verbose_init write_grid &ocean_increment_eta_nml days_to_increment	True True True	True	True False	True False		False False True False	False	False	False
freezing_temp_preteos10 freezing_temp_simple freezing_temp_teos10 use_this_module &ocean_grids_nml debug_this_module do_bitwise_exact_sum read_rho0_profile verbose_init write_grid &ocean_increment_eta_nml	True True True	True	True False	True False		False False True	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_acces- som2 1deg jra55_ryf input.nml	original/ kiss_acces- som2 025deg jra55_ryf log- file.000000.or	new_acces- som2 025deg jra55_ryf input.nml	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new_acces- som2 01deg jra55_ryf input.nml
&ocean_increment_tracer_nml			0	0		1			
days_to_increment fraction_increment			1.0	1.0		1.0			
secs_to_increment			3600	1800		0			
use_this_module &ocean_increment_velocity_nml	False	False	False 0	False	False	False	False	False	False
days_to_increment			U	U		1			
fraction_increment			1.0	1.0		1.0			
secs_to_increment use_this_module	False	False	3600 False	1800 False	False	0 False	False	False	False
&ocean_lap_friction_nml	1 4 4 5 6			1 4.50	1 4130	False	. 4130	1 4130	1 4.50
debug_this_module	'aanaral'	'aanaral'	'aanaval'	'a an aval'	'aanaval'	'aanaral'	'a a n a val'	'a an aval'	'aanaral'
lap_friction_scheme write_a_restart	'general'	'general'	'general'	'general'	'general'	'general' True	'general'	'general'	'general'
&ocean_lap_tracer_nml alap						0.0			
horz_s_diffuse horz_z_diffuse						True False			
read_diffusivity_mask						False			
tracer_mix_micom						False			
use_this_module vel_micom	False	False	False	False	False	False 0.0	False	False	False
verbose_init						True			
&ocean_lapcst_friction_nml use_this_module	False	False	False	False	False		False	False	False
&ocean_lapgen_friction_nml						False			
async_domain_update blocksize						10			
bottom_5point	True	True	True	True	True	False			
debug_ncar_a						False			
debug_ncar_b debug_this_module						False False			
divergence_damp						False			
divergence_damp_vel_micom						0.0			
eq_lat_micom eq_vel_micom_aniso						0.0			
eq_vel_micom_iso						0.0			
equatorial_no_smag						False			
equatorial_zonal equatorial_zonal_lat						False 0.0			
k_smag_aniso	0.0	0.0	0.0	0.0	0.0	0.0			
k_smag_iso	0.0	0.0	0.0	0.0	0.0	2.0 False		2.0	
ncar_isotropic_at_depth ncar_isotropic_at_depth_visc						10 000.0			
ncar_isotropic_depth						4000.0			
ncar_isotropic_off_equator ncar_only_equatorial			True	True		False False			
ncar_onty_equatoriat neptune			irue	irue		False			
neptune_depth_min						100.0			
neptune_length_eq neptune_length_pole						1200.0 3000.0			
neptune_tengtn_pote neptune_smooth						True			
neptune_smooth_num	_	_	_	_		_ 1			
restrict_polar_visc restrict_polar_visc_lat	True 60.0	True 60.0	True 60.0	True 60.0	True 60.0	False 60.0			
restrict_potar_visc_ratio	0.35	0.35	0.35	0.35	0.35	0.35			
side_drag_friction_max						1.0			
side_drag_friction_scaling side_drag_friction_uvmag_max						1.0 10.0			
use_side_drag_friction						False			
use_this_module	True	True	True	True	True	False	False	False	False
vconst_1 vconst_2			0.000 000 8	8 000 000.0 0.0		10 000 000.0			
vconst_3			0.8	0.8		0.16			
vconst_4			5×10^{-9}	5×10^{-9}		2×10^{-8}			
vconst_5			3 300 000 000.0	300 000 000.0		3 10 000 000.0			
vconst_6 vconst_7			100.0	100.0		10 000 000.0			
vconst_8			_00.0			45.0			
vel_micom_aniso	0.4	0.4	0.4	0.4	0.4	0.0			
vel_micom_iso visc_vel_scale_length	0.1	0.1	0.1	0.1	0.1	0.0 150 000.0			
viscosity_ncar	False	False	False	True	False	False			

Group (continued) Var	iable	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_acces- som2 1deg jra55_ryf input.nml	original/ kiss_acces- som2 025deg jra55_ryf log- file.000000.o	new_acces- som2 025deg jra55_ryf input.nml	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new_acces- som2 01deg jra55_ryf input.nml
viscosity_ncar_	2000			False	False		True			
viscosity_ncar_				True	True		False			
viscosity_scale_by_r		True	True	True	True	True	False			
<pre>viscosity_scale_by_rossby_p &ocean_mixdownslope_nml</pre>	ower	4.0 False	4.0 False	4.0 False	4.0 False	4.0 False	2.0 False		False	
debug_this_module		raise	raise	raise	raise	raise	raise		raise	
do_bitwise_exact	_sum						False			
mixdownslope_frac_ce		_	_				0.25			
mixdownslope_mask	_	True 4	True 4	False 4	False 4	False 4	False 1			
mixdownslope mixdownslope_weigh		7	4	7	4	7	False			
mixdownslope_\							1			
read_mixdownslope_		True	True	False	False	False	False			
use_this_m		True	True	True	True	True	False	False	False	False
&ocean_model_nml baroclinic barotropic	•	1 80	1 80	1 80	1 80	1 80	1 80	1 80	1 80	1 80
cmip_	•	False	80	True	True	True	True	True	80	True
d	ebug	False	False	False	False	False	False	False	False	False
	cean	7200	7200	3600	3600	3600	1800	1200	150	150
horizontal impose_init_from_re		True	False				'bgrid' False			
	ayout	1, 4	raise		4, 3	4, 3	6, 5	6, 5	10, 15	10, 15
	ayout	12, 8	6, 4	12, 10	16, 15	16, 15	48, 40	48, 40	80,75	80,75
mask_	table	•	,	,	,	,	'INPUT'	,	,	•
reinitialize_thic			_		_		False		_	
surface_height time_tend		1 'twolevel'	1 'twolevel'	1 'twolevel'	1 'twolevel'	1 'twolevel'	1 'twolevel'	1 'twolevel'	1 'twolevel'	1 'twolevel'
	blobs	twotevet	twotevet	twotevet	twotevet	twotevet	False	twotevet	twotevet	twotevet
use_velocity_ove							False			
vertical_coord	inate	'zstar'	'zstar'	'zstar'	'zstar'	'zstar'	'zstar'	'zstar'	'zstar'	'zstar'
&ocean_momentum_source_nml							False			
debug_this_module rayleigh_damp_exp_from_bo	ttom					False	False	False	False	False
rayleigh_damp_exp_						raise	100.0	raise	raise	raise
rayleigh_damp_exp.							864 000.0			
use_rayleigh_damp_				True	True	True	True	True	True	True
use_this_mo verbosi		False	False	True	True	True	True	True	True	True
&ocean_nphysics_new_nml	e_IIIIL						True False			
drhodz_smooth_horz							i disc			
drhodz_smooth	_vert						False			
	smax						0.01			
use_this_mo vel_micom_sn							False 0.2			
&ocean_nphysics_nml debug_		False	False	False	False	False	False	False	False	False
module										
use_nphy		False	False	False	False	False	False	False	False	False
use_nphy use_nphy		False True	True False	False True	False True	False True	False False	False False	False False	False False
use_this_mo		True	True	True	True	True	False	False	False	False
write_a_re							True			
&ocean_nphysics_util_new_nml							1			
num_121_passes		0000	0000	(000	(000	(00.0		1000	1000	1000
&ocean_nphysics_util_nml agm_cli	agm osure	800.0 True	800.0 True	600.0 True	600.0 True	600.0 True		100.0 True	100.0 True	100.0 True
agm_closure_baro		True	True	True	True	True		True	True	True
agm_closure_buoy	_freq	0.004	0.004	0.004	0.004	0.004		0.004	0.004	0.004
agm_closure_eady_ave_n		True	True	True	True	True				
agm_closure_ead agm_closure_eady_smooth		True True	True True	True True	True True	True True				
agm_closure_eady_smooth		True	True	True	True	True				
agm_closure_eden_ga	ımma	0.0	0.0	0.0	0.0	0.0				
agm_closure_eden_great		False	False	False	False	False				
agm_closure_grid_sc		True	True	True	True	True		EU 000 0	FO 000 0	E0 000 0
agm_closure_le agm_closure_length_bo		50 000.0 False	50 000.0 False	50 000.0 False	50 000.0 False	50 000.0 False		50 000.0 False	50 000.0 False	50 000.0 False
agm_closure_length_		False	False	False	False	False		False	False	False
agm_closure_length_r	ossby	False	False	False	False	False		False	False	False
agm_closure_lower_c		2000.0	2000.0	2000.0	2000.0	2000.0		2000.0	2000.0	2000.0
agm_closure agm_closure		800.0 100.0	800.0 100.0	600.0 50.0	600.0 50.0	600.0 50.0		600.0 100.0	600.0 100.0	600.0 100.0
agm_closure_sc		0.07	0.07	0.07	0.07	0.07		0.07	0.07	0.07
agiii_ctosurc_sc		5.07	5.07	0.07	0.07	0.07		0.07	0.07	0.07

agm_closure_upper_depth agm_damping_time agm_smooth_space agm_smooth_time aredi aredi_equal_agm drhodz_mom4p1 drhodz_smooth_horz	100.0 45.0 False False 600.0 False True False	100.0 45.0 False False 600.0 False	100.0 45.0 False False	100.0 45.0 False	100.0	file.000000.oı			
agm_damping_time agm_smooth_space agm_smooth_time aredi aredi_equal_agm drhodz_mom4p1 drhodz_smooth_horz	45.0 False False 600.0 False True False False	45.0 False False 600.0 False	45.0 False False	45.0			100.0	100.0	100.0
agm_smooth_space agm_smooth_time aredi aredi_equal_agm drhodz_mom4p1 drhodz_smooth_horz	False False 600.0 False True False False	False False 600.0 False	False False		45.0		100.0	100.0	100.0
aredi aredi_equal_agm drhodz_mom4p1 drhodz_smooth_horz	600.0 False True False False	600.0 False		raise	False				
aredi_equal_agm drhodz_mom4p1 drhodz_smooth_horz	False True False False	False	/ ^ ^ ^	False	False				
drhodz_mom4p1 drhodz_smooth_horz	True False False		600.0	600.0	600.0		600.0	600.0	600.0
drhodz_smooth_horz	False False		False True	False True	False True		False False	False False	False False
	False	True False	False	False	False		False	False	False
drhodz_smooth_vert	Т	False	False	False	False		False	False	False
nphysics_util_zero_init	True	True	True	True	True				
rossby_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
rossby_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	
swidth tracer_mix_micom	0.002 False	0.002 False	False	False	False		False	0.002 False	False
vel_micom	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
&ocean_nphysicsa_nml debug_this_module	False	False	0.0	0.0	0.0		0.0	0.0	0.0
neutral_linear_gm_taper	True	True							
neutral_physics_limit	True	True							
neutral_physics_simple	False	False							
neutral_sine_taper	True	True							
tmask_neutral_on use_this_module	True False	True False	False	False	False		False	False	False
&ocean_nphysicsb_nml debug_this_module	False	False	raise	raise	raise		raise	raise	raise
nblayer_smooth	True	True							
neutral_physics_limit	True	True							
surf_turb_thick_min	50.0	50.0							
surf_turb_thick_min_k	5	5							
use_this_module	False	True	False	False	False		False	False	False
&ocean_nphysicsc_nml bv_freq_smooth_vert	True 2		True 2	True 2	True 2				
bvp_bc_mode bvp_min_speed	0.1		0.1	0.1	0.1				
bvp_speed	0.0		0.0	0.0	0.0				
debug_this_module	False		False	False	False				
do_gm_skewsion	True		True	True	True				
do_neutral_diffusion	True		True	True	True				
epsln_bv_freq	1×10^{-12}		1×10^{-12}	1×10^{-12}	1×10^{-12}				
gm_skewsion_bvproblem	True		True	True	True				
gm_skewsion_modes	False True		False	False	False				
neutral_eddy_depth neutral_physics_limit	True		True True	True True	True True				
number_bc_modes	2		2	2	2				
regularize_psi	False		False	False	False				
smax_psi	0.01		0.01	0.01	0.01				
smooth_psi	True		True	True	True				
tmask_neutral_on	True		True	True	True				
turb_blayer_min	50.0	False	50.0	50.0	50.0		False	False	Falsa
&ocean_obc_nml ctrop_inc	True	False	True	True	True	00 00 00	False	False	False
&ocean_obc_nml ctrop_inc ctrop_max						0.0, 0.0, 0.0, 0.0 1.5, 1.5, 1.5,			
ctrop_min						1.5 0.1, 0.1, 0.1,			
ctrop_smooth						0.1 0.7, 0.7, 0.7,			
direction						0.7 None			
enh_fac_d						1.0, 1.0, 1.0,			
enh_fac_v						1.0			
enh_pnts						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'			

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_acces- som2 1deg jra55_ryf input.nml	original/ kiss_acces- som2 025deg jra55_ryf log-	new_acces- som2 025deg jra55_ryf input.nml	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new_acces- som2 01deg jra55_ryf input.nml
1	filename_tracer						file.00000.ou 'INPUT'			
	filename_ud						'obc_ud', '.nc',			
							'none', 'none',			
	ie						'none' -999, -999,			
	ie						-999, -999			
	iere						-999, -999,			
							-999, -999			
	iers						-999, -999, -999, -999			
	is						-999, -999,			
							-999, -999			
	itre						-999, -999,			
	54						-999, -999			
	itrs						-999, -999, -999, -999			
	je						-999, -999,			
							-999, -999			
	jere						-999, -999,			
	jers						-999, -999 -999, -999,			
	jeis						-999, -999			
	j <mark>s</mark>						-999, -999,			
							-999, -999			
	jtre						-999, -999, -999, -999			
	jtrs						-999, -999, -999, -999,			
	Ju 3						-999, -999			
	name						'test_obc',			
							'none', 'none',			
	nobc						'none' 0			
obc_ac	djust_forcing_bt						False, False,			
							False, False			
obc_	.consider_convu						False, False, False, False			
obc_co	onsider_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,			
obc ent	hance_diff_back						False, False 'NONE',			
50020111							'NONE',			
							'NONE',			
ahs anh	nance_visc_back						'NONE' 'NONE',			
ooc_en	IGHCC_VISC_UdCK						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_acces- som2 1deg jra55_ryf input.nml	original/ kiss_acces- som2 025deg jra55_ryf log- file.000000.ou	new_acces- som2 025deg jra55_ryf input.nml	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new_acces- som2 01deg jra55_ryf input.nml
	obc_flow_relax						1,1,1,1,1, 1,1,1,1,1, 1,1,1,1,1, 1,1,1,1,1, 1,1,1,1,1, 1,1,1,1,1, 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'			

## 0,0000.00 ***ORGAUT** ***NOGRAUT** ***NO	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_acces- som2 1deg jra55_ryf input.nml	original/ kiss_acces- som2 025deg jra55_ryf log-	new_acces- som2 025deg jra55_ryf input.nml	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new_acces som2_ 01deg_ jra55_ryf_ input.nml
NOGRACY NOGRAC		ohe tra				F · · · ·		file.000000.oı			
NOGRAD; NOGRAD		UUL_LIA									
NOGRAD, NOGRAD								'NOGRAD',			
NOCRAD, NOCRAD											
NOGRAD, NOGRAD								'NOGRAD'.			
"NOCRAD, NOCRAD, NOCRA								'NOGRAD',			
NOGBAUT, NOG								'NOGRAD',			
NOGRACY NOGRAC											
NOGRAD, NOGRAD											
NOGRAD, NOGR								'NOGRAD',			
NOCARD False, Fals								'NOGRAD',			
NOGRAD, NOGRAD											
NOGRAD, NOGRAD											
NOGRAD, NOGRAD								'NOGRAD',			
NOGRAD False, Fa								'NOGRAD',			
NOGRAD False, Fa											
NOGRAD; NOGR								'NOGRAD',			
NOGRAD' NOGRAD								'NOGRAD',			
NOGRAD											
NOGRAD' NOGRAD								NOGRAD,			
NOGRAD, False, F								'NOGRAD',			
NOGRAD, False, Fal								'NOGRAD',			
NOGRAD; Nogr											
NOGRAD; State, False, F								NOGRAD,			
NOGRAD; NOGR											
NOGRAD; NOGR								'NOGRAD',			
NOGRAD; NOGR											
"NOGRAD", "Alse, False, False											
"NOGRAD", "NOGRAD", "NOGRAD" "NOGRAD" "NOGRAD" "NOGRAD" "Talse, False, Fals											
NOGRAD; NOGRAD; NOGRAD; NOGRAD; NOGRAD; NOGRAD; Palse, False, Fal								'NOGRAD',			
NOGRAD **obc.tracer_no_inflow** **False, False, Fals											
obc_tracer_no_inflow False, F											
False, False	obc_t	racer_no_inflow									
False, False Obc_ud Obc_vert_advel_t False, False False, False								False, False,			
False, False False, False Obc_ud NOGRAD; NOGRAD; NOGRAD; NOGRAD; NOGRAD; NOGRAD; False, Fal											
False, False Obc_ud 'NOGRAD', 'NOGRAD', 'NOGRAD', 'NOGRAD', 'NOGRAD' Obc_vert_advel_t False, False											
False, False Obc_ud 'NOGRAD',											
False, False False, False False, False Obc_ud 'NOGRAD', 'NOGRAD', 'NOGRAD', 'NOGRAD' 'NOGRAD' Obc_vert_advel_t False, False, False, False, False, False, False											
False, False Obc_ud NOGRAD', NOGRAD', NOGRAD', NOGRAD' Obc_vert_advel_t False,											
False, False False, False False, False False, False Obc_ud NOGRAD; NOGRAD; NOGRAD; NOGRAD; NOGRAD; False, False											
False, False Obc_ud 'NOGRAD', 'NOGRAD', 'NOGRAD', 'NOGRAD', 'NOGRAD' False,								False, False,			
False, False VNOGRAD', VNOGRAD', VNOGRAD' VNOGRAD' Sobc_vert_advel_t False, False											
False, False Obc_ud 'NOGRAD', 'NOGRAD', 'NOGRAD', 'NOGRAD' 'NOGRAD' False,											
False, False Obc_ud NOGRAD; NOGRAD; NOGRAD; NOGRAD THOGRAD Sobc_vert_advel_t False, False, False, False, False, False											
False, False, False, False, False, False Obc_ud 'NOGRAD', 'NOGRAD', 'NOGRAD' Obc_vert_advel_t False, False, False, False, False, False								False, False,			
False, False, False, False obc_ud 'NOGRAD', 'NOGRAD', 'NOGRAD', 'NOGRAD' obc_vert_advel_t False, False, False, False											
False, False obc_ud 'NOGRAD', 'NOGRAD', 'NOGRAD', 'NOGRAD' obc_vert_advel_t False, False, False, False											
obc_ud 'NOGRAD', 'NOGRAD', 'NOGRAD', 'NOGRAD' obc_vert_advel_t False, False, False, False								False, False			
'NOGRAD', 'NOGRAD' obc_vert_advel_t False, False, False, False		obc_ud						'NOGRAD',			
'NOGRAD' obc_vert_advel_t False, False, False											
obc_vert_advel_t False, False, False								NOGRAD, 'NOGRAD'			
False, False	O	bc_vert_advel_t									
obs vert adval u								False, False			
odc_vert_advet_u False, False, False, False	ol	bc_vert_advel_u						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_acces- som2 1deg jra55_ryf input.nml	original/ kiss_acces- som2 025deg jra55_ryf log-	new_acces- som2 025deg jra55_ryf input.nml	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new_acces- som2 01deg jra55_ryf input.nml
rel_clin_pnts						file.00000.ot 1,1,1,1,1, 1,1,1,1,1, 1,1,1,1,1, 1,1,1,1,1, 1,1,1,1,1, 1,1,1,1,1, 1,1,1,1,1, 1,1,1,1,1, 1,1,1,1,1, 1,1,1,1,1,			
rel_coef_eta_in						0.0, 0.0, 0.0,			
rel_coef_eta_out						0.0, 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,			
<mark>rel_eta_pnts</mark> &ocean_operators_nml	True				False	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0,	False	False	False
use_legacy_div_ud					-				
&ocean_overexchange_nml debug this_module	False	False	False	False	False	False	False	False	False
do_bitwise_exact_sum overexch_check_extrema overexch_min_thickness overexch_npts	False 4	False 4	False 4	False 4	4	False False 4.0 4	4	4	4
overexch_stability		-	-	-		0.25	-		
overexch_weight_far overexch_width overflow_delta overflow_mu overflow_umax	False 5.0	False 5.0	False 5.0	False 5.0	False 5.0	False 1 0.3333 0.0001 5.0	False 5.0	False 5.0	False 5.0
use_this_module	False	False	False	False	False	False	False	False	False
&ocean_overflow_nml debug_this_module	False	False	False	False		False False		False	
no_return_flow overflow_delta overflow_mu overflow_umax transport_units						False 0.3333 0.0001 0.01 'Sv'			
use_this_module	False	False	False	False	False	False	False	False	False
&ocean_overflow_ofp_nml debug_this_module diag_step								False 5760	
do_entrainment_para_ofp do_mass_ofp frac_exchange_src max_vol_trans_ofp								False True 1.0 10 000 000.0	

Group (continued) Varia	able 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_acces- som2 1deg jra55_ryf input.nml	original/ kiss_acces- som2 025deg jra55_ryf log-	new_acces- som2 025deg jra55_ryf input.nml	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new_acces- som2 01deg jra55_ryf input.nml
use_this_mod	tulo				False	file.000000.oı	False	False	False
&ocean_parameters_nml	Juic				Taisc	4218.0	Taisc	Tatsc	1 8130
cp_liquid_runoff									
cp_oc	ean					3992.103 223			
cp_solid_ru						2106.0			
	grav					9.8 7.2921 ×			
omega_e	di ti i					10^{-5}			
ľ	ho0					1035.0			
	eze					273.15			
&ocean_polar_filter_nml use_this_module	False	False	False	False	False		False	False	False
&ocean_pressure_nml						False			
debug_this_module						F.1			
zero_correction_term_q zero_diagonal_press_q	, ,					False False			
zero_eta_over_h_zstar_press						False			
zero_pressure_f	orce				False	False	False	False	False
&ocean_rivermix_nml	40.0	40.0				0.0			
calving_insertion_thickness						F. 1			
debug_all_in_top_ debug_this_mo		False	False	False	False	False False	False	False	False
debug_this_module_l		False	raise	False	raise	False	raise	raise	raise
discharge_combine_runoff_c		True				True			
do_bitwise_exact_						False			
river_diffuse_		False	False	False	True	False	True	True	True
<mark>river_diffuse_t</mark> c river_diffusion_thick	•	False 0.0	False 0.0	False 0.0	True 0.0	False 0.0	True 0.0	True 0.0	True 0.0
river_diffus		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
river_insertion_thick		40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
runoff_insertion_thick	ness 40.0	40.0				0.0			
use_this_mo	dule True	True	True	True	True	True	True	True	True
&ocean_riverspread_nml						False		False	
debug_this_module riverspread_diffu	sion					False			
riverspread_diffusion_pa						0			
use_this_mod	<mark>dule</mark> False	False	True	True	False	False	False	True	False
vel_micom_smo						0.2			
&ocean_rough_nml rough_sch	,	'beljaars'	T	T	'beljaars'	т	'beljaars'	'beljaars'	'beljaars'
&ocean_sbc_nml avg_sfc_temp_salt avg_sfc_velo		True True	True True	True True	True True	True True	True True	True True	True True
calvingspi		False	iiue	iiue	False	False	False	False	False
constant						True			
constant						True			
constant_sss_for_res constant_sst_for_res						35.0			
constant_sst_ror_res convert_river_to_						12.0 False			
debug_water_flu						False			
do_bitwise_exact_					False	False	False	False	False
do_flux_correc					False	False	False	False	False
do_langr						False			
eta_restore_ts ice_salt_concentra			0.005			-30.0 0.005			
land_model_heat_flu		False	0.003		False	False	False	False	False
max_delta_salinity_res	tore		0.5	0.5	0.5	0.5	0.5	0.5	0.5
max_ice_thick		8.0	8.0	8.0	0.0	0.0	0.0	0.0	0.0
read_restore_n			False	False	False	False	False	False	False
read_stokes_ restore_mask_			False	False	False	False False	False	False	False
rotate_w			ו מנגיל	ו מנטכ	า สเรต	False	1 0135	ו מנטכ	ו מנטכ
runoff_sali			0.0	0.0	0.0	0.0	0.0	0.0	0.0
runoff_temp_	min					0.0			
runoffspi		False				False			
salinity					0.0	35.0 0.0	0.0	0.0	0.0
salt_correction_s salt_restore_as_salt_			True	True	0.0 True	0.0 True	0.0 True	0.0 True	0.0 True
salt_restore_ts		-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_c						False			
sbc_heat_fluxes_const_sease						False			
sbc_heat_fluxes_const_vature tau_x_correction_s						0.0 0.0			
tau_x_correction_s	U.U					U.U			

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_acces- som2 1deg jra55_ryf input.nml	original/ kiss_acces- som2 025deg jra55_ryf log-	new_acces- som2 025deg jra55_ryf input.nml	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new_acces- som2 01deg jra55_ryf input.nml
tau_y_correction_scale	0.0					file.00000.ou			
tau_y_correction_scate taux_sinx	0.0					False			
tauy_siny						False			
temp_correction_scale	1.0					0.0			
temp_restore_tscale	-10.0	-10.0	-1.0	-1.0	-10.0	-10.0	-10.0	-10.0	-10.0
use_constant_sss_for_restore use_constant_sst_for_restore						False			
use_constant_sst_for_restore use_full_patm_for_sea_level	True	True			False	False False	False	False	False
use_ideal_calving	nuc	iiuc			Talsc	False	raisc	raisc	raisc
use_ideal_runoff						False			
use_waterflux	True	True	True	True	True	True	True	True	True
use_waterflux_override_calving	False					False			
use_waterflux_override_evap use_waterflux_override_fprec	False False					False False			
waterflux_tavq	False	False	False	False		False			
zero_calving_fluxes	ruse	raise	ruise	rabe		False			
zero_heat_fluxes			False	False	False	False	False	False	False
zero_net_pme_eta_restore	False					False			
zero_net_salt_correction			-	T	False	False	False	False	False
zero_net_salt_restore zero_net_water_correction			True	True	True False	True False	True False	True False	True False
zero_net_water_couple_restore			True	True	True	True	True	True	True
zero_net_water_coupler			True	True	True	True	True	True	True
zero_net_water_restore			True	True	True	True	True	True	True
zero_pme_fluxes						False			
zero_river_fluxes						False			
zero_runoff_fluxes						False			
zero_surface_stress			False	False	False	False	False	False	False
<pre>&ocean_sbc_ofam_nml</pre>			False False	False False	False	False False	False	False	False
restore_mask_ofam			1 0130	raise		i atse			
river_temp_ofam &ocean_shortwave_csiro_nml			False True	False True		False			
read_depth use_this_module	False	False	True	True	False		False	False	False
zmax_pen	i alse	Taise	7000	7000	i alse		1 0130	i alse	1 0130
&ocean_shortwave_gfdl_nml						0.08			
chl_default									
debug_this_module	False	False	False	False	False	False	False	False	False
enforce_sw_frac optics_for_uniform_chl	True	True	True	True	True	True False	True	True	True
optics_manizza	True	True	True	True	True	True	True	True	True
optics_morel_antoine	False	False	Huc	Huc	False	False	False	False	False
override_f_vis	False	False				True			
read_chl	False	False	False	False	True	True	True	True	True
sw_frac_top						0.0			
sw_morel_fixed_depths			Ealco	False		False			
sw_pen_fixed_depths use_this_module	True	True	False 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_jerlov_nml use_this_module	False	False	False	False	False		False	False	False
&ocean_shortwave_nml use_shortwave_csiro use_shortwave_ext	False	False	True	True	False	False False	False	False	False
use_shortwave_ext use_shortwave_qfdl	True	True	False	False	True	True	True	True	True
use_shortwave_jerlov	False	False	False	False	False	False	False	False	False
use_this_module	True	True	True	True	True	True	True	True	True
&ocean_sigma_transport_nml campingoose_delta						0.3333			
campingoose_mu						0.0001			
debug_this_module sigma_advection_check						False True			
sigma_advection_cneck	False	False	False	False		False		False	
sigma_advection_sqs_only	False	False	False	False		False		False	
sigma_diffusion_on	True	True	True	True		True		True	
sigma_diffusivity						1000.0			
sigma_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	
sigma_umax smooth_sigma_thickness	0.01 True	0.01 True	0.01 True	0.01 True		0.01 True		0.01 True	
smooth_sigma_tnickness smooth_sigma_velocity	True	True	True	True		True		True	
smooth_sigma_velocity	nue	itue	iiue	iiue		itue		IIUE	

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_acces- som2 - 1deg - jra55_ryf input.nml	original/ kiss_acces- som2 025deg jra55_ryf log- file.000000.oı	new_acces- som2 025deg jra55_ryf input.nml	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new_acces- som2 01deg jra55_ryf input.nml
smooth	_velmicom	0.2	0.2	0.2	0.2		0.2		0.2	
thickness_s	igma_layer	100.0	100.0	100.0	100.0		100.0		100.0	
thickness_	sigma_max	100.0	100.0	100.0	100.0		100.0		100.0	
thickness_	sigma_min	100.0	100.0	100.0	100.0		100.0		100.0	
tmask	c_sigma_on	False	False	False	False		False		False	
	mix_micom	True	True	True	True		True		True	
use_th	nis_module	True	True	True	True	False	False	False	False	False
	vel_micom	0.05	0.05	0.05	0.05		0.05		0.05	
V	erbose_init						True			
writ	e_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	1460	0	31	30	30
debug_th	nis_module				False		False			
	dt_cpld			3600	3600	3600	1800	1200	150	600
	hours			0	0	0	0	0	0	0
lā	iyout_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_acces- som2 1deg jra55_ryf input.nml	original/ kiss_acces- som2 025deg jra55_ryf log-	new_acces- som2 025deg jra55_ryf input.nml	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new_acces som2. 01deg. jra55_ryf. input.nm
	mask_list						file.000000.ot			
	- Individual Control						0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
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							0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0			
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							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
					56		0, 0, 0, 0, 0,			
					50		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_acces- som2 1deg jra55_ryf input.nml	original/ kiss_acces- som2 025deg jra55_ryf log- file.000000.ou	new_acces- som2 025deg jra55_ryf input.nml	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new_acces- som2 01deg jra55_ryf input.nml
minutes			0	0	0	0	0	0	0
months			12	0	0	0	0	0	0
n_mask						0			
restart_interval seconds			0	0	0	0, 0, 0, 0, 0, 0	0	0	0
years			U	0	0	1	0	0	0
&ocean_sponges_eta_nml use_this	False	False	False	False	False	False	False	False	False
module									
&ocean_sponges_eta_ofam_nml athresh						0.5 1			
days_to_restore lambda						0.0083			
npower						1.0			
secs_to_restore						0			
taumin						720.0			
use_adaptive_restore use_hard_thump						False False			
use_normalising						False			
use_sponge_after_init						False			
&ocean_sponges_tracer_nml	False	False	False	False		False		False	
damp_coeff_3d	Ealaa	Enlan	Ealaa	Falsa	Falsa	Ealaa	Enlan	Falsa	Fala-
use_this_module &ocean_sponges_tracer_ofam_nml	False	False	False	False	False	False 0.5	False	False	False
athresh						0.5			
days_to_restore						1			
deflate						False			
deflate_fraction						0.6 0.0083			
lambda limit_salt						False			
limit_salt_min						0.01			
limit_salt_restore						3600.0			
limit_temp						False			
limit_temp_min						-1.8 10 800.0			
limit_temp_restore npower						10 800.0			
secs_to_restore						0			
taumin						720.0			
use_adaptive_restore						False			
use_hard_thump						False False			
use_normalising use_sponge_after_init						False			
&ocean_sponges_velocity_nml damp_coeff_3d						False			
use_this_module	False	False	False	False	False	False	False	False	False
&ocean_sponges_velocity_ofam_nml						0.5			
athresh days_to_restore						1			
lambda						0.0083			
npower						1.0			
secs_to_restore						0			
taumin use_adaptive_restore						720.0 False			
use_hard_thump						False			
use_normalising						False			
use_sponge_after_init						False			
&ocean_submesoscale_nml coefficient_ce					0.05	0.05	0.05	0.05	0.05
constant_hblt debug_this_module	False	False	False	False	False	100.0 False	False	False	False
debug_tills_inodute diag_step	i alsc	ו מנטכ	1 0136	ו מנטכ	i alsc	1200	i alsc	ו מנטכ	1 0136
front_length_const	5000.0	5000.0	5000.0	5000.0	5000.0	5000.0	5000.0	5000.0	5000.0
front_length_deform_radius	True	True	True	True	True	True	True	True	True
limit_psi limit_psi_velocity_scale	True 0.5	True 0.5	True 0.5	True 0.5	True 0.5	True 0.5	True 0.5	True 0.5	True 0.5
min_kblt	0.5 4	4	0.5 4	0.5 4	4	4	0.5 4	0.5 4	4
minimum_hblt	•	'		•	'	0.0		•	,
smooth_advect_transport					True	True	True	True	True
smooth_advect_transport_num	F. 1	F. 1		F 1	4	4 False	4 False	4 False	4 False
smooth_hblt smooth_hblt_num	False	False	False	False	False	False 2	False	False	False
smooth_psi					True	True	True	True	True
smooth_psi_num					3	3	3	3	3
submeso_advect_flux					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_acces- som2 1deg jra55_ryf input.nml	original/ kiss_acces- som2 025deg jra55_ryf log- file.000000.ot	new_acces- som2 025deg jra55_ryf input.nml	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new_acces- som2 01deg jra55_ryf input.nml
cuhmeco	_advect_limit					True	True	True	True	True
	dvect_sweby					iiuc	False	iiuc	nuc	iiuc
	vect_upwind					True	True	True	True	True
submeso_adv						True	True	True	True	True
submeso_diffusior	eso_diffusion					False True	False True	False True	False True	False True
	ffusion_scale					10.0	10.0	10.0	10.0	10.0
subme	so_limit_flux	True	True	True	True		True			
	so_skew_flux					True	True	True	True	True
	me_constant iblt_constant						86 400.0			
	lt_equal_mld	True	True	True	True	True	False True	True	True	True
	e_psi_legacy	True	iiuc	nuc	nuc	False	False	False	False	False
use.	_this_module	True	True	True	True	True	True	True	True	True
&ocean_tempsalt_nml		False	False		False	False	False	False	True	False
debug_this_module	and itemstica	Truce	Terra	Turra	Tour	Tuus	True	Tura	Tura	Terra
	2nd_iteration ual_contemp	True	True	True	True	True True	True True	True True	True True	True True
	:s_with_ideal					iiuc	False	nuc	Huc	iiuc
reinit_ts_with							1000.0			
reinit_ts_with_							30.0			
reinit_ts_with.		EE 0	EEO	EE 0	EE 0	70.0	10.0 70.0	70.0	70.0	70.0
	s_max s_max_limit	55.0 42.0	55.0 42.0	55.0 42.0	55.0 42.0	70.0 42.0	70.0 42.0	70.0 42.0	70.0 42.0	70.0 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 t_min_limit	-5.0 -1.9	-5.0 -1.9	-5.0 -2.0	-5.0 -2.0	-20.0 -5.0	−20.0 −5.0	-20.0 -5.0	-20.0 -5.0	-20.0 -5.0
tempera	ture_variable	'potential	'potential	'conservative		'potential	'potential	'potential	'potential	'potential
	teos10	temp'	temp'	temp' False	temp'	temp'	temp' False	temp'	temp'	temp'
	debug_this	False	False	False	False	False	False	False	False	False
module	and the state of	Falsa	F-I	Falsa	F-1	Falsa	F-1	F-1	Falsa	Falsa
debug_this_m	in_for_sigma	False	False	False	False	False	False 0.01	False	False	False
	_positive_dzt						False			
epsilon_ii	nit_thickness						1×10^{-5}			
	_topography						False			
	lize_zero_eta _free_surface	False	False	False	False		False			
	im_bad_print						False 25			
	bot0_simple						False			
	e_rho0_mask	True	True	False	False		False			
	_rho0_profile						False			
rescale_mass_to	_	7.0	7.0	7.0	7.0	False	False —1.0	False	False	False
	_basin_label O_mask_qfdl	7.0 True	7.0 True	7.0 False	7.0 False		— 1.0 False			
	e_rhoO_value	0.75	0.75	0.75	0.75		1.0			
	ness_dzt_min	2.0	2.0	1.0	1.0		2.0		2.0	
	_dzt_min_init	2.0	2.0	2.0	2.0		10.0		10.0	
	ness_method ate_dzwu_k0	'energetic'	'energetic'	'energetic'	'energetic'	'energetic'	'energetic' True	'energetic'	'energetic'	'energetic'
	rite_a_restart						True			
&ocean_time_filter_nml use_this_module		False	False							
&ocean_topog_nml debug_	_this_module						True			
	flat_bottom						False			
	hottom_ht						5500.0			
	_bottom_kmt it_recompute						50 False			
	mpute_offset						0			
	nin_thickness	5.0	5.0	25.0	25.0		1.0			
	write_topog						False			
&ocean_tracer_advect_nml		False	False	True	True		False			
advect_sweby_all asvnc_do	main_update				True		False			
compute_gyre_overtu				True	iiuc		i disc			
debug	_this_module	False	False	False	False	False	False	False	False	False
	ast_compute		F 1	True			E. I			
limit_	with_upwind	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_acces- som2 1deg jra55_ryf input.nml	original/ kiss_acces- som2 025deg jra55_ryf log-	new_acces- som2 025deg jra55_ryf input.nml	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new_acces- som2 01deg jra55_ryf input.nml
ncom	limit prather						file.000000.ou False			
	_limit_prather d_basin_mask			True		False	False	False	False	False
	rite_a_restart						True			
	r_advect_horz						False			
	r_advect_vert						False			
&ocean_tracer_diag_nml	nose_mixinga						0.0003 False			
	nose_mixingb						False			
	nose_mixingc						False			
debug_diag	nose_mixingd	4222	10	400	4700	4-00	False	4700		
do hituri	diag_step se_exact_sum	1200 False	12 False	120 False	4320 False	4320 False	4320 False	4320 False	576 False	576 False
UO_DILWI	dtheta_crit	raise	raise	raise	raise	raise	2.0	raise	raise	raise
	frazil_factor						1.0			
	psu2ppt						1.004 867			
	rho_grad_max						$1 \times 10^{+28}$			
	rho_grad_min						1×10^{-5}			
SIIIOOI	th_kappa_sort smooth_mld	True	True				False			
smooth_mld_fo		nuc	iiuc				True			
tracer_c	conserve_days	100.0	100.0	1.0	1.0	30.0	30.0	30.0	30.0	30.0
&ocean_tracer_nml age_tr		$1 imes 10^{+40}$	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	mask_limit_on						True			
•	_this_module	False	False	False	False	False	False True	False	False	False
frazil_heating_a frazil_heating_be		True False	True False	True False	True False	True False	False	True False	True False	True False
	w_nboundary	raise	ratsc	ruisc	ruse	ration	False	Tuisc	ruisc	Tuisc
interpolate_t	diag_to_pbott	False					False			
	prog_to_pbott	False					True			
	nit_age_tracer	True	True	True	True	True	True	True	True	True
	n_tpm_debug epth_to_s_init	False	False	False	False	False	False False	False	False	False
	limit_ts_same	True	True	Taisc	1 8130	raisc	True	Taisc	raisc	1 disc
use_tempsalt	:_check_range				True	True	True	True	True	True
	rite_a_restart						True			
	rero_tendency _tracer_source	False False	False False	False False	False False	False False	False False	False False	False False	False False
&ocean_tracer_util_nml	udcei_source	raise	raise	raise	raise	raise	False	raise	raise	raise
debug_diagnose_mass_of_	layer						raise			
epsln_diagnose_r	mass_of_layer						1×10^{-5}			
	ho_all_values						True			
&ocean_velocity_advect_n	ml						False			
debug_this_module	vect_centered						True			
	dvect_upwind						False			
zero_velocity	y_advect_horz						False			
	y_advect_vert						False			
&ocean_velocity_diag_nml module	debug_this	False	False	False	False	False	False	False	False	False
module	diag_step	1200	12	120	4320	4320	4320	4320	576	576
do_bitwi	se_exact_sum	1200	12	120	1320	1320	False	1320	570	570
ene	rgy_diag_step	1200	12	120	4320	4320	4320	4320	5760	5760
	cell_num_max						100			
	nrge_cfl_value max_cfl_value	10.0 100.0	10.0 100.0	10.0 100.0	10.0 100.0	10.0 100.0	10.0 100.0	10.0 100.0	10.0 100.0	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	TCIDOSC_CIT						0.6			
adams_bashforth_epsilon										
adams_ba	ashforth_third	True	True	True	True	True	True	True	True	True
	constant_u constant_v						0.0 0.0			
dehun	this_module						False			
acoug	max_cgint			1.0	1.0	1.0	1.5	1.0	1.0	1.0
	ncate_velocity	False	False	False	True	False	False	False	False	False
	e_velocity_lat	2.2	2.0	2.2	2.2	2.2	0.0	2.2	2.2	
	velocity_value	2.0 Truo	2.0 Truo	2.0 Truo	2.0 True	2.0 Truo	2.0 Truo	2.0 Truo	2.0 Truo	2.0 Truo
trur update_veloci	ncate_verbose	True	True	True	True	True	True True	True	True	True
	stant_velocity						False			
	rite_a_restart						True			
							nuc			
2	rero_tendency ncy_explicit_a	False	False	False	False	False False	False False	False False	False False	False False

Group (continued) Variabl	e 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_acces- som2 1deg jra55_ryf input.nml	original/ kiss_acces- som2 025deg jra55_ryf log- file.000000.o	new_acces- som2 025deg jra55_ryf input.nml	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new_acces- som2 01deg jra55_ryf input.nml
zero_tendency_explicit_	0				False	False	False	False	False
zero_tendency_implic	t				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 byf_from_below						False			
calc_visc_on_cgri	d					False			
conc						1.8			
cw_ debug_this_modul						0.15 False			
debug_tilis_modut diff_cbt_iv				0.0	0.0	0.0	0.0	0.0	0.0
diff_cbt_lim						0.005			
diff_con_lim				0.1		0.1			
do_langmui				_	_	False	_	-	-
double_diffusio hbl_with_ri				True	True	True False	True	True	True
kbl_standard_metho				False	False	False	False	False	False
kl_mi				raise	. 4.50	2	1 4130	. 4.50	1 4150
l_smyt	1					2.0			
lgar 						1.04			
limit_ghat						False			
limit_with_hekma linear_ht						True True			
ltma						5.0			
non_local_kp						True			
radiation_iov						False			
radiation_larg						False			
radiation_zer ric				0.3	0.3	False 0.3	0.3	0.3	0.3
shear_instabilit				0.5	0.5	True	0.5	0.5	0.5
smooth_blm	•			False	False	False	False	False	False
smooth_ri_kmax_eq_km	J			True	True	True	True	True	True
use_max_shea						False			
use_sbl_bottom_flu use_this_modul				True	True	False True	True	True	True
variable_vt				iiue	iiue	False	iiue	iiue	iiue
visc_cbu_iv				0.0	0.0	0.0	0.0	0.0	0.0
visc_cbu_lim	t					0.005			
visc_con_limi				0.1		0.1			
wsfc_combine_runoff_calv wstfa						True 0.6			
&ocean_vert_kpp_nml diff_cbt_iv		0.0	0.0			0.0			
diff_con_lim		0.0	0.1						
double_diffusio		True	True						
kbl_standard_metho			True						
ric		0.3	0.3						
smooth_blm use_this_modul		True True	True True						
visc_cbu_iv		0.0	0.0						
visc_con_lim			0.1						
&ocean_vert_mix_nml afkph_0		0.675	0.65	0.65		0.55			
afkph_9		0.725	0.75	0.75	4.0	0.55			
aid bryan_lewis_diffusivit		1.0 True	1.0 False	1.0 False	1.0 False	1.0 False	1.0 False	1.0 False	1.0 False
bryan_lewis_lat_depen		True	True	True	False	False	False	False	False
bryan_lewis_lat_transitio		35.0	35.0	35.0	ruise	35.0	ruisc	raise	ruise
debug_this_modul	e					False			
dfkph_0		1.15	1.15	1.15		1.05			
dfkph_9		1.15	0.95	0.95		1.05			
diff_cbt_tan diff_cbt_tanh_ma						False 0.001			
diff_cbt_tanh_mi						2×10^{-5}			
diff_cbt_tanh_zmi						150.0			
diff_cbt_tanh_zwi						30.0			
hwf_30_diffusivit						2×10^{-5}			
hwf_depth_transitio						25 000 000.0		F .	
hwf_diffusivity 7					False	False	False	False	False
hwf_diffusivity_3 hwf_min_diffusivit					2×10^{-6}	False $2 imes 10^{-6}$	2×10^{-6}	2×10^{-6}	2×10^{-6}
hwf_n0_2omeg					20.0	20.0	20.0	20.0	20.0

Group (continued) Varia	ble 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_acces- som2 1deg jra55_ryf input.nml	original/ kiss_acces- som2 025deg jra55_ryf log-	new_acces- som2 025deg jra55_ryf input.nml	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new_acces- som2 01deg jra55_ryf input.nml
linear_taper_diff_cbt_ta	ble False	False	False	False		file.000000.ou False			
num_121_pas		ruisc	ruise	rube		1			
quebec_2009_10_l						False			
sfkph		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}			
sfkph smooth_rho		4.5 × 10	4.5 × 10 °	4.5 × 10 °		4.5 × 10 °			
use_diff_cbt_ta		False	False	False	False	False	False	False	False
use_explicit_vert_diff						True			
<mark>verbose_</mark> vert_diff_back_via_r		True	True	True	True	True True	True	True	True
vert_mix_sche		'kpp'	'kpp'	'kpp	'kpp	'kpp	'kpp	'kpp	'kpp
vert_visc_b	mom4p1'		,,,	mom4p1'	mom4p1'	mom4p1' False	mom4p1'	mom4p1'	mom4p1'
visc_cbu_back_r						0.01			
visc_cbu_back_ı visc_cbu_back_zı						0.001 50.0			
visc_cbu_back_z						30.0			
vmix_min_diss_bvfreq_so						0.0006			
vmix_min_diss_co						1×10^{-7}			
vmix_min_diss_flux_ri_r						0.2			
vmix_rescale_nonbo vmix_set_min_dissipat						False False			
zfkph		250 000 000.0	250 000.0	250 000.0		250 000.0			
zfkph			250 000.0	250 000.0		250 000.0			
&ocean_vert_tidal_nml	0.0	0.0	5×10^{-6}	5×10^{-6}	0.0	0.0	0.0	0.0	0.0
packground_diffusivity background_visco	sity 0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
bottom_drag	•	0.0001	0.0001	0.0001	0.0001	0.0024	0.0001	0.0001	0.0001
debug_this_mod						False			
decay_so		300.0	300.0	300.0	500.0	500.0	500.0	500.0	500.0
default_roughness_len default_tide_sp						25.0 0.01			
drag_dissipation_el						True			
drag_dissipation_tide_per						43 200.0			
drag_dissipation_use_cd					True	True	True	True	True
drag_mask_d drag_mask_deep_ra						True 0.1			
drhodz_	4.3	1×10^{-12}	1×10^{-12}	1×10^{-12}	1×10^{-10}	1×10^{-10}	1×10^{-10}	1×10^{-10}	1×10^{-10}
fixed_wave_dissipat		False	False	False	False	False	False	False	False
max_drag_diffusi		0.04	0.01	0.01	0.04	0.005	0.04	0.04	0.04
max_wave_diffusi mixing_efficie		0.01	0.01	0.01	0.01	0.01 0.2	0.01	0.01	0.01
mixing_efficiency_n2dep	,	True	True	True	True	True	True	True	True
munk_anderso	ı_p					0.25			
munk_anderson_sig						3.0			
num_121_pas read_leewave_dissipat						1 False			
read_roughn		True	True	True	True	True	True	True	True
read_tide_sp		True	True	True	True	True	True	True	True
read_wave_dissipat		False	False	False	False	False	False	False	False
reading_roughness_a reading_roughness_len		True False	True False	True False	True False	True False	True False	True False	True False
roughness_sc		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_depth_cu		160.0	160.0	160.0	-1000.0	-1000.0	-1000.0	-1000.0	-1000.0
smooth_bvfreq_bott smooth_rho						True True			
speed_i						0.005			
tidal_diss_efficie	ncy					0.333 33			
tide_speed_data_on_t_o		True	True	True	True	True	True	True	True
use_drag_dissipat use_leewave_dissipat		True	True	True	True	True False	True	True	True
use_legacy_meth					False	False	False	False	False
use_this_mod	ule True	True	True	True	True	True	True	True	True
use_wave_dissipat		True	True	True	True	True	True	True	True
vel_micom_smo wave_diffusivity_monoto						0.2 True			
wave_unrusivity_monou wave_energy_flux_r		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
&ocean_vert_util_nml debug_this_module						False			- 12
num_n2_smo						1			
num_ri_smo smooth						1 True			
SIIIOOTN	JIZ.					irue			

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_acces- som2 1deg jra55_ryf input.nml	original/ kiss_acces- som2 025deg jra55_ryf log- file.000000.or	new_acces- som2 025deg jra55_ryf input.nml	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new_acces- som2 01deg jra55_ryf input.nml
S	mooth_ri_number						True			
&ocean_wave_nml	damp_where_ice						True			
de	bug_this_module						False			
	filter_wave_mom						True			
	use_this_module						False			
	use_tma						True			
	wavedamp						-10.0			
	write_a_restart						True			
&ocean_xlandinsert_n use_this_module	ml	True	True	False	False	False		False	False	False
	verbose_init	True	True	True	True					
&ocean_xlandmix_nml		True	True	False	False	False		False	False	False
	verbose_init	True	True	True	True					
	xlandmix_kmt	True	True	True	True					
&sat_vapor_pres_nml construct_table_wrt_lice	1	True	True							
construct_table	e_wrt_liq_and_ice	True	True							
	w_all_bad_values								True	
&surface_flux_nml	ncar_ocean_flux								True	
	old_dtaudv	False								
	raoult_sat_vap								True	
&time_interp_external debug_this_module	_nml						False			
	max_fields						100			
	max_files						40			
	num_io_buffers						2			
· · · · · · · · · · · · · · · · · · ·	erthlike_behavior						False			
&topography_nml	topog_file	'INPUT/	'INPUT/							
		navy_topog-	navy_topog-							
		ra-	ra-							
		phy.data.nc'	phy.data.nc'							
&xgrid_nml	do_alltoall								True	True
	do_alltoallv	1	2			2		2	True	True
	interp_method	'second order'	'second order'		'second order'	'second order'		'second order'	'second order'	'second order'
make_exc	:hange_reproduce	True	True		False	False		False	False	False
	nsubset xgrid_log					16		16	16 False	16

6 All variables in new configs (differences highlighted)

Group	Variable	new_acces- som2 1deg jra55_ryf input.nml	new_acces- som2 025deg jra55_ryf input.nml	new_acces- som2 01deg jra55_ryf input.nml
&auscom_ice_nml	aice_cutoff	0.15		0.15
	chk_i2o_fields chk_o2i_fields	False False		False False
	do_ice_once	False		False
	dt_cpl	3600		600
	fixmeltt	False	False	False
	frazil_factor	1.0	1.0	1.0
	iceform_adj_salt	False		False
	icemlt_factor	1.0		1.0
	kmxice pop_icediag	5 True		5 True
	redsea_gulfbay_sfix	True	iiue	iiue
	sign_stflx	1.0	1.0	1.0
	tmelt	-0.216	-0.216	-0.216
	use_ioaice	True	True	True
&diag_manager_nml	debug_diag_manager	True	True	True
	issue_oor_warnings	True		True
&fms_io_nml	fileset_write	'single' 'multi'	input.nml 0.15 False False False False False 1800 False 1.0 False	'multi' 'multi'
	threading_read threading_write	'multi' 'single'		'multi' 'multi'
&fms_nml	clock_grain	'COMPONENT'		'COMPONENT'
	domains_stack_size	115200		115200
&mom_oasis3_interface_nml	fields_in	'u_flux',		'u_flux',
		'v_flux',		'v_flux',
		'lprec', 'fprec',		'lprec', 'fprec',
		'salt_flx',	•	'salt_flx',
		'mh_flux', 'sw_flux',		'mh_flux', 'sw_flux',
		'q_flux',		'q_flux',
		't_flux',		't_flux',
		'lw_flux',		'lw_flux',
		'runof', 'p',		'runof', 'p',
		'aice',		'aice',
		'wfimelt',	•	'wfimelt',
	fields_out	'wfiform' 't_surf',		'wfiform' 't_surf',
	nctu3_out	's_surf',		's_surf',
		'u_surf',		'u_surf',
		'v_surf',		'v_surf',
		'dssldx',		'dssldx',
		'dssldy',		'dssldy',
	num_fields_in	'frazil' 15		'frazil' 15
	num_fields_out	7		7
	send_after_ocean_update	True	-	True
	send_before_ocean_update	False		False
&monin_obukhov_nml	neutral	True	True	True
&mpp_io_nml	deflate_level	5		5
Possan advival diagram	shuffle	4720		576
&ocean_adv_vel_diag_nml	diag_step large_cfl_value	4320 10.0		10.0
	max_cfl_value	10.0	som2 025deg jra55 ryf input.nml	10.0
	verbose_cfl	True		True
&ocean_advection_velocity_nml	max_advection_velocity	0.5		0.5
&ocean_albedo_nml	ocean_albedo_option	2	2	2
&ocean_barotropic_nml	barotropic_halo	10		10
	barotropic_time_stepping_a	True		True
	barotropic_time_stepping_b	False		False
	debug_this_module <mark>diag_step</mark>	False 4320		False 576
	eta_max	8.0		8.0
	frac_crit_cell_height	0.2		0.2
	pred_corr_gamma	0.2	0.2	0.2
	smooth_eta_diag_laplacian	True	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
	smootn_poot_t_laplacian truncate_eta	rue False		True False
	use_legacy_barotropic_halos	False		False
	vel_micom_bih	0.01	0.01	0.01

Group (continued)	Variable	new_acces- som2 1deg jra55_ryf input.nml	new_acces- som2 025deg jra55_ryf input.nml	new_acces- som2 01deg jra55_ryf input.nml
	vel_micom_lap	0.05	0.05	0.05
	vel_micom_lap_diag	0.2	0.2	0.2
	verbose_truncate	True	True	True
9 acces blog and	zero_tendency	False	False	False
&ocean_bbc_nml	bmf_implicit cdbot	True 0.001	True 0.001	True 0.001
	cdbot_hi	0.007	0.007	0.001
	cdbot_roughness_length	False	False	False
	cdbot_roughness_uamp	True	True	True
	uresidual	0.05	0.05	0.05
&ocean_bih_friction_nml	use_geothermal_heating bih_friction_scheme	False 'general'	False 'general'	False 'general'
&ocean_bih_tracer_nml	use_this_module	False	False	False
&ocean_bihcst_friction_nml	use_this_module	False	False	False
&ocean_bihgen_friction_nml	bottom_5point	False	False	False
	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 k_smaq_aniso	False 0.0	False 0.0	False 0.0
	k_smag_iso	2.0	2.0	2.0
	ncar_boundary_scaling	True	True	True
	ncar_boundary_scaling_read	True	True	True
	ncar_rescale_power	2	2	2
	ncar_vconst_4	2×10^{-8}	$2 imes 10^{-8}$	2×10^{-8}
	ncar_vconst_5	_ 5	_ 5	_ 5
	use_this_module	True	True	True
	vel_micom_aniso vel_micom_bottom	0.0 0.0	0.0 0.0	0.0
	vel_micom_iso	0.0	0.0	0.0
	visc_crit_scale	1.0	1.0	1.0
&ocean_convect_nml	use_this_module	False	False	False
&ocean_coriolis_nml	acor	0.5	0.5	0.5
	use_this_module	True	True	True
&ocean_density_nml	eos_linear	False	False	False
	eos_preteos10	True	True	True
	layer_nk neutralrho_max	80 1030.0	80 1030.0	80 1030.0
	neutralrho_min	1020.0	1020.0	1020.0
	potrho_max	1038.0	1038.0	1038.0
	potrho_min	1028.0	1028.0	1028.0
&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 freezing_temp_preteos10	False True	False True	False True
	freezing_temp_preteos10 freezing_temp_simple	False	False	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	lap_friction_scheme	'general'	'general'	'general'
&ocean_lap_tracer_nml	use_this_module	False	False	False
&ocean_lapcst_friction_nml	use_this_module	False	False	False
&ocean_lapgen_friction_nml	bottom_5point k_smag_aniso	True 0.0		
	k_smag_iso	0.0		
	restrict_polar_visc	True		
	restrict_polar_visc_lat	60.0		
	restrict_polar_visc_ratio	0.35		
	use_this_module	True	False	False
	vel_micom_iso	0.1		
	viscosity_ncar	False True		
	viscosity_scale_by_rossby viscosity_scale_by_rossby_power	4.0		
&ocean_mixdownslope_nml	wiscosity_scate_by_rossby_power debug_this_module	False		
accession and the second secon	mixdownslope_mask_gfdl	False		
	mixdownslope_npts	4		
	read_mixdownslope_mask	False		
	use_this_module	True	False	False
&ocean_model_nml	baroclinic_split	1	1	1
	barotropic_split	80 True	80 True	80 True
	cmip_units	True	True	True

Group (continued)	Variable	new_acces- som2 1deg jra55_ryf input.nml	new_acces- som2 025deg jra55_ryf input.nml	new_acces- som2 01deg jra55_ryf input.nml
	debug	False	False	False
	dt_ocean	3600	1200	150
	jo_layout layout	4, 3 16, 15	6, 5 48, 40	10, 15 80, 75
	surface_height_split	10, 13	1	1
	time_tendency	'twolevel'	'twolevel'	'twolevel'
	vertical_coordinate	'zstar'	'zstar'	'zstar'
&ocean_momentum_source_nml	rayleigh_damp_exp_from_bottom	False	False	False
	use_rayleigh_damp_table	True	True	True
&ocean_nphysics_nml	use_this_module debug_this_module	True False	True False	True False
xocean_npnysics_nnic	use_nphysicsa	False	False	False
	use_nphysicsb	False	False	False
	use_nphysicsc	True	False	False
	use_this_module	True	False	False
&ocean_nphysics_util_nml	agm .	600.0	100.0	100.0
	agm_closure	True	True	True
	agm_closure_baroclinic agm_closure_buoy_freq	True 0.004	True 0.004	True 0.004
	agm_closure_eady_ave_mixed	True	0.004	0.004
	agm_closure_eady_cap	True		
	agm_closure_eady_smooth_horz	True		
	agm_closure_eady_smooth_vert	True		
	agm_closure_eden_gamma	0.0		
	agm_closure_eden_greatbatch	False		
	agm_closure_grid_scaling	True	F0 000 0	F0 000 0
	agm_closure_length agm_closure_length_bczone	50 000.0 False	50 000.0 False	50 000.0 False
	agm_closure_length_fixed	False	False	False
	agm_closure_length_rossby	False	False	False
	agm_closure_lower_depth	2000.0	2000.0	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	0.07	0.07
	agm_closure_upper_depth agm_damping_time	100.0 45.0	100.0	100.0
	agm_smooth_space	False		
	agm_smooth_time	False		
	aredi	600.0	600.0	600.0
	aredi_equal_agm	False	False	False
	drhodz_mom4p1	True	False	False
	drhodz_smooth_horz	False	False	False
	drhodz_smooth_vert nphysics_util_zero_init	False True	False	False
	rossby_radius_max	100 000.0	100 000.0	100 000.0
	rossby_radius_min	15 000.0	15 000.0	15 000.0
	tracer_mix_micom	False	False	False
	vel_micom	0.0	0.0	0.0
&ocean_nphysicsa_nml	use_this_module	False	False	False
&ocean_nphysicsb_nml	use_this_module	False	False	False
&ocean_nphysicsc_nml	bv_freq_smooth_vert	True		
	bvp_bc_mode bvp_min_speed	2 0.1		
	byp_speed	0.0		
	debug_this_module	False		
	do_gm_skewsion	True		
	do_neutral_diffusion	True		
	epsln_bv_freq	1×10^{-12}		
	gm_skewsion_bvproblem	True		
	gm_skewsion_modes	False		
	neutral_eddy_depth neutral_physics_limit	True True		
	number_bc_modes	rue 2		
	regularize_psi	False		
	smax_psi	0.01		
	smooth_psi	True		
	tmask_neutral_on	True		
	turb_blayer_min	50.0		
	use_this_module	True	False	False
0	use_legacy_div_ud	False	False	False
&ocean_operators_nml			Ealaa	Fals-
&ocean_operators_nml &ocean_overexchange_nml	debug_this_module	False 4	False 4	False 4
				False 4 False

Group (continued)	Variable	new_acces- som2 1deg jra55_ryf input.nml	new_acces- som2 025deg jra55_ryf input.nml	new_acces- som2 01deg jra55_ryf input.nml
	use_this_module	False	False	False
&ocean_overflow_nml	use_this_module	False	False	False
&ocean_overflow_ofp_nml	use_this_module	False		False
&ocean_polar_filter_nml	use_this_module	False		False
&ocean_pressure_nml &ocean_rivermix_nml	zero_pressure_force debug_this_module			False False
&ocean_nvermix_ninc	river_diffuse_salt	True		True
	river_diffuse_temp	True	True	True
	river_diffusion_thickness	0.0	0.0	0.0
	river_diffusivity			0.0
	river_insertion_thickness use_this_module			40.0
&ocean_riverspread_nml	use_this_module	False		True False
&ocean_rough_nml	rough_scheme	'beljaars'		'beljaars'
&ocean_sbc_nml	avg_sfc_temp_salt_eta	True	True	True
	avg_sfc_velocity	True	True	True
	calvingspread	False	False	False
	do_bitwise_exact_sum	False		False
	do_flux_correction	False		False
	land_model_heat_fluxes max_delta_salinity_restore			False 0.5
	max_detta_satinity_restore max_ice_thickness			0.0
	read_restore_mask	False		False
	restore_mask_gfdl	False	False	False
	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
	salt_restore_under_ice			True —10.0
	temp_restore_tscale use_full_patm_for_sea_level			- 10.0 False
	use_rutt_pattri_tot_sea_tevet use_waterflux	True		True
	zero_heat_fluxes	False		False
	zero_net_salt_correction	False	False	False
	zero_net_salt_restore	True	True	True
	zero_net_water_correction	False	False	False
	zero_net_water_couple_restore	True		True
	zero_net_water_coupler			True
	zero_net_water_restore zero_surface_stress			True False
	zero_surface_stress 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	True
	optics_manizza	True	True	True
	optics_morel_antoine	False		False
	read_chl	True		True
	use_this_module		alse False alse False alse False alse False True True True True 0.0 0.0 40.0 40.0 True True alse False aars' 'beljaars' True True True True alse False 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	True
&ocean_shortwave_jerlov_nml	zmax_pen use_this_module			300.0 False
&ocean_shortwave_nml	use_triis_inodute use_shortwave_csiro			False
A DECEMBRICATION	use_shortwave_csfl0	True		True
	use_shortwave_jerlov	False	025deg jra55 ryf input.nml False False False False False False False False True True False 'beljaars' True False False False False False False False True	False
	use_this_module	True	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			30
	dt_cpld hours			600
	minutes			0
	months			0
	seconds			0
	years			0
&ocean_sponges_eta_nml	use_this_module	False		False
	use_this_module	False	False	False
&ocean_sponges_tracer_nml				
&ocean_sponges_tracer_nml &ocean_sponges_velocity_nml	use_this_module	False		False
&ocean_sponges_tracer_nml	use_this_module coefficient_ce	0.05	0.05	0.05
&ocean_sponges_tracer_nml &ocean_sponges_velocity_nml	use_this_module coefficient_ce debug_this_module	0.05 False	0.05 False	0.05 False
&ocean_sponges_tracer_nml &ocean_sponges_velocity_nml	use_this_module coefficient_ce debug_this_module front_length_const	0.05 False 5000.0	0.05 False 5000.0	0.05 False 5000.0
&ocean_sponges_tracer_nml &ocean_sponges_velocity_nml	use_this_module coefficient_ce debug_this_module front_length_const front_length_deform_radius	0.05 False 5000.0 True	0.05 False 5000.0 True	0.05 False 5000.0 True
&ocean_sponges_tracer_nml &ocean_sponges_velocity_nml	use_this_module coefficient_ce debug_this_module front_length_const	0.05 False 5000.0	0.05 False 5000.0 True True	0.05 False 5000.0

Group (continued)	Variable	new_acces- som2 1deg jra55_ryf input.nml	new_acces- som2 025deg jra55_ryf input.nml	new_acces- som2 01deg jra55_ryf input.nml
Sr	nooth_advect_transport	True	True	True
	_advect_transport_num	4	4	4
	smooth_hblt	False	False	False
	smooth_psi			True
	smooth_psi_num submeso_advect_flux	False		3 False
	submeso_advect_limit	True	True	True
SI	ubmeso_advect_upwind	True	True	True
sub	omeso_advect_zero_bdy	True	True	True
	submeso_diffusion	False		False
	o_diffusion_biharmonic ubmeso_diffusion_scale			True 10.0
5	submeso_skew_flux			True
	use_hblt_equal_mld	True		True
	use_psi_legacy	False	False	False
	use_this_module	True	True	True
&ocean_tempsalt_nml	debug_this_module	False	False	False
	pottemp_2nd_iteration	True	True	True
p	ottemp_equal_contemp	True	True	True
	s_max			70.0
	s_max_limit s_min			42.0 0.0
	s_min_limit			2.0
	t_max	55.0		55.0
	t_max_limit	32.0	32.0	32.0
	t_min	—20.0	-20.0	-20.0
	t_min_limit	-5.0	-5.0	-5.0
	temperature_variable	'potential	•	'potential
		temp'	temp'	temp'
&ocean_thickness_nml	debug_this_module	False		False
	oug_this_module_detail e_mass_to_get_ht_mod		True 70.0 42.0 0.0 2.0 55.0 32.0 —20.0 —5.0 'potential temp' False False False 'energetic' False False True False True False True False True False False False True False False True False	False False
lescal	thickness_method	'energetic'		'energetic'
&ocean_tracer_advect_nml	debug_this_module	False		False
Wooding Education and American State of the Control	read_basin_mask	False		False
&ocean_tracer_diag_nml	diag_step	4320		576
	do_bitwise_exact_sum	False	False	False
	tracer_conserve_days	30.0		30.0
&ocean_tracer_nml	age_tracer_max_init			0.0
	debug_this_module	False		False
	_heating_after_vphysics			True
IId2IL_I	eating_before_vphysics limit_age_tracer			False True
	remap_depth_to_s_init	False		False
USE	_tempsalt_check_range	True		True
	zero_tendency	False		False
	zero_tracer_source	False	False	False
&ocean_velocity_diag_nml	debug_this_module	False		False
	diag_step	4320		576
	energy_diag_step	4320		5760
	large_cfl_value max_cfl_value	10.0 100.0	025deg jra55 ryf input.nml e True 4	10.0 100.0
&ocean_velocity_nml	adams_bashforth_third			True
docum_retotity_liiit	max_cgint		Imput.nml	1.0
	truncate_velocity	False		False
	truncate_velocity_value	2.0		2.0
	truncate_verbose	True		True
	zero_tendency	False	yf jra55_ryf nml input.nml frue True 4 4 4 4 4 4 4 4 4 5 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 10 10 10 11 10 12 11 12 12 13 13 14 12 15 13 <	False
	ero_tendency_explicit_a	False		False
	ero_tendency_explicit_b	False		False
	zero_tendency_implicit	False		False
&ocean_vert_kpp_iow_nml &ocean_vert_kpp_mom4p1_nml	use_this_module diff_cbt_iw			False 0.0
woccan_vert_kpp_mom*pt_mm	diπ_cot_iw double_diffusion			0.0 True
	kbl_standard_method	False		False
	ricr			0.3
	smooth_blmc	False		False
SI	nooth_ri_kmax_eq_kmu	True		True
	use_this_module	True		True
	visc_cbu_iw			0.0
&ocean_vert_mix_nml	aidif			1.0
	bryan_lewis_diffusivity	False		False
	oryan_lewis_lat_depend	False		False
	hwf_diffusivity	False	True False False False False 4320 4320 10.0 100.0 True 1.0 False 2.0 True False False False False False False False True True False 0.0 True False O.0 True False True False False False False	False

Group (continued)	Variable	new_acces- som2 1deg jra55_ryf input.nml	new_acces- som2 025deg jra55_ryf input.nml	new_acces- som2 01deg jra55_ryf input.nml
	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	$1 imes 10^{-10}$	1×10^{-10}	1×10^{-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	True	True	True
	use_wave_dissipation	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 do_alltoallv			True True
	interp_method	'second	'second	'second
	merpinetiou	order'	order'	order'
	make_exchange_reproduce	False	False	False
	nsubset	16	16	16